



ROYAL COMMISSION ON THE DISTRIBUTION OF THE INDUSTRIAL POPULATION

REPORT

*Presented to Parliament by Command of His Majesty
January 1940*

LONDON

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ROYAL WARRANTS.

GEORGE R.I.

GEORGE THE SIXTH, by the Grace of God, of Great Britain, Ireland and the British Dominions beyond the Seas, KING, Defender of the Faith, to

Our Right Trusty and Well-beloved Counsellor Sir Montague Barlow, Baronet, Knight Commander of Our Most Excellent Order of the British Empire, Doctor of Laws:

Our Trusty and Well-beloved:—

Sir William Arthur Robinson, Knight Grand Cross of Our Most Honourable Order of the Bath, Commander of Our Most Excellent Order of the British Empire;

Sir Francis L'Estrange Joseph, Knight Commander of Our Most Excellent Order of the British Empire;

Sir William Edward Whyte, Knight, Officer of Our Most Excellent Order of the British Empire, Fellow of the Royal Society of Edinburgh;

Leslie Patrick Abercrombie, Esquire, Master of Arts, Fellow of the Royal Institute of British Architects, Professor of Town Planning in the University of London;

Ernest Bevin, Esquire;

Francis D'Arcy Cooper, Esquire;

Hermione, wife of William Lionel Hichens, Esquire, upon whom has been conferred the Decoration of the Second Class of the Royal Red Cross;

Margaret Neville, wife of Archibald Vivian Hill, Esquire;

John Harry Jones, Esquire, Master of Arts, Professor of Economics and Head of the Commerce Department of the University of Leeds;

George Parker Morris, Esquire, Bachelor of Laws;

Sydney Arthur Smith, Esquire, Fellow of the Chartered Surveyors' Institution, Fellow of the Auctioneers' Institute; and

George Walker Thomson, Esquire,

Greeting!

Whereas We have deemed it expedient that a Commission should forthwith issue to inquire into the causes which have influenced the present geographical distribution of the industrial population of Great Britain and the probable direction of any change in that distribution in the future; to consider what social, economic or strategical disadvantages arise from the concentration of industries or of the industrial population in large towns

or in particular areas of the country; and to report what remedial measures if any should be taken in the national interest:

Now know Ye that We, reposing great trust and confidence in your knowledge and ability, have authorized and appointed, and do by these Presents authorize and appoint you the said Sir Montague Barlow (Chairman); Sir William Arthur Robinson; Sir Francis L'Estrange Joseph; Sir William Edward Whyte; Leslie Patrick Abercrombie; Ernest Bevin; Francis D'Arcy Cooper; Hermione Hichens; Margaret Neville Hill; John Harry Jones; George Parker Morris; Sydney Arthur Smith and George Walker Thomson to be Our Commissioners for the purposes of the said inquiry:

And for the better effecting the purposes of this Our Commission, We do by these Presents give and grant unto you, or any three or more of you, full power to call before you such persons as you shall judge likely to afford you any information upon the subject of this Our Commission; to call for information in writing; and also to call for, have access to, and examine all such books, documents, registers and records as may afford you the fullest information on the subject, and to enquire of and concerning the premises by all other lawful ways and means whatsoever:

And We do by these Presents authorize and empower you, or any one or more of you, at the request of the Chairman, to visit and inspect personally such places as you may deem it expedient so to inspect for the more effectual carrying out of the purposes aforesaid:

And We do by these Presents will and ordain that this Our Commission shall continue in full force and virtue, and that you, Our said Commissioners, or any three or more of you, may from time to time proceed in the execution thereof, and of every matter and thing therein contained, although the same be not continued from time to time by adjournment:

And We do further ordain that you have liberty to report your proceedings under this Our Commission from time to time if you shall judge it expedient so to do:

And Our further Will and Pleasure is that you do, with as little delay as possible, report to Us your opinion upon the matters herein submitted for your consideration.

Given at Our Court at Holyroodhouse the eighth day of July, one thousand nine hundred and thirty-seven; in the First year of Our Reign.

By His Majesty's Command,
Samuel Hoare.

GEORGE R.I.

GEORGE THE SIXTH, by the Grace of God, of Great Britain, Ireland and the British Dominions beyond the Seas, **KING**, Defender of the Faith, to Our Trusty and Well-beloved Herbert Henry Elvin, Esquire,

Greeting!

Whereas We did by Warrant under Our Royal Sign Manual bearing date the eighth day of July, one thousand nine hundred and thirty-seven appoint Commissioners to inquire into the causes which have influenced the present geographical distribution of the industrial population of Great Britain and the probable direction of any change in that distribution in the future; to consider what social, economic or strategical disadvantages arise from the concentration of industries or of the industrial population in large towns or in particular areas of the country; and to report what remedial measures if any should be taken in the national interest:

And whereas a vacancy has been caused in the body of Commissioners appointed as aforesaid by the resignation of Our Trusty and Well-beloved Ernest Bevin, Esquire:

Now know Ye that We reposing great confidence in your knowledge and ability do by these Presents appoint you the said Herbert Henry Elvin to be a Commissioner for the purposes aforesaid, in the room of the said Ernest Bevin.

Given at Our Court at Saint James's the twenty-third day of June, 1938; In the Second Year of Our Reign.

By His Majesty's Command,

Samuel Hoare.

Note.—This Report was completed in August, 1939, but, owing to the outbreak of war with Germany, it was not possible to have it printed and signed until December, 1939. This fact should be borne in mind in reading the Report; for example, “the war” frequently mentioned in the Report means the war of 1914-1918.

The total expenditure incurred by the Royal Commission up to the date of the printing of this Report is estimated at approximately £10,627 os. od. of which £360 os. od. represents the estimated cost of printing this Report. A sum of £845 os. od. has already been recovered by the sale of the Minutes of Evidence.

ROYAL COMMISSION ON THE DISTRIBUTION OF THE INDUSTRIAL POPULATION

REPORT

TO THE KING'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

We, the undersigned Commissioners appointed under Your Majesty's Royal Warrants of the 8th July, 1937, and the 23rd June, 1938,

“ to inquire into the causes which have influenced the present geographical distribution of the industrial population of Great Britain and the probable direction of any change in that distribution in the future; to consider what social, economic or strategical disadvantages arise from the concentration of industries or of the industrial population in large towns or in particular areas of the country; and to report what remedial measures if any should be taken in the national interest,”

humbly beg leave to submit our Report.

1. An inquiry of the nature and scope of that entrusted to us necessarily involved the collection of a large body of evidence. We have held 29 public meetings at which oral evidence was received from or on behalf of 50 bodies or persons, and we have received written evidence from a further 72 bodies or persons. A list of these, together with the names of those who tendered oral evidence is given in Appendix I. In addition, at our invitation Sir Harriss Firth and Mr. Gerald Eve, Professors C. B. Fawcett, P. Sargant Florence, N. F. Hall and A. C. Pigou and Messrs. H. Campion and S. R. Dennison of the Manchester University, have been good enough to supply us with valuable memoranda upon certain aspects of our problem, and we desire to express our grateful thanks for the skilled assistance they have rendered.

2. With few exceptions, the oral evidence tendered at the Commission's public meetings has been printed and published by Your Majesty's Stationery Office. Certain other evidence which has been submitted to the Commission will be printed and published in a separate volume.

NOTE.—References in footnotes relate, except where the nature of the particular reference otherwise indicates, to the evidence submitted to the Commission. References marked * are to evidence which has not yet been published but will be published in due course.

3. It has been our good fortune to receive full and unstinted help from all those to whom we have turned for evidence or other assistance on the subject of our inquiry and we wish to place on record our keen sense of indebtedness to all who have assisted us by furnishing evidence, or in other ways, and to extend to them our warm thanks for the help they have so readily and generously given to us.

4. At an early stage of our inquiry we were to our regret deprived of the services of Mr. Ernest Bevin who, on the ground that he found himself unable to give as much time as he would wish to the Commission's work, felt impelled to tender his resignation from the Commission. Your Majesty was pleased to appoint Mr. H. H. Elvin to fill the vacancy thus created in our ranks.

PREFACE.

5. It is material, by way of preface, to bear in mind the circumstances attending the appointment of the Royal Commission. Sir Malcolm Stewart, then Commissioner for the Special Areas (England and Wales), in the introduction to his Third Report published in 1936,¹ examined various aspects of the unemployment problem: compulsory location of industry was, he said, advocated by some as a sure cure for unemployment, but in his view this would be "unnecessary and dangerous" and certain, under present conditions, to cause "dislocation, not to say chaos" "Economic considerations must in the main determine the location of industry". At the same time, while deprecating the compulsory location of industry, he drew attention to the danger involved in the continued haphazard growth of a vast industrial and commercial centre such as the Metropolis, the macrocosm of London was spreading with alarming rapidity, much of its growth was not based on strictly economic factors, and a considerable proportion of the industrial production in the Metropolis need not of necessity be carried on there at all. While Government was not, in his view, justified in using compulsion to dictate to industry where it *should* go, was there not, he asked, good ground under certain circumstances for directing where it should *not* go?

6. The Commissioner concluded by recommending:—

Firstly, that an embargo should, subject to certain exemptions, be placed on further factory construction in the Greater London area; such exemptions would probably include small manufacturers, the distributive industries, retail trades and public utility undertakings, and also the manufacture of any particular product that could only be carried on successfully in that area. This embargo would involve the exercise of Government control over the Greater London area together with a system of licensing for new, and for the extension of existing, factories. It was true that this would not increase the volume of production but it would secure a better national distribution of industrial activity, and the Special Areas would benefit by obtaining a share of the diverted development.² (This view was supported by Sir Malcolm Stewart's successor in his Report for the year ended 30th September 1938.)

Secondly, that the State should provide definite "Inducements", financial in character, with a view to

¹ Cmd. 5303, p. 6 et seq. and App. I, p. 165.

² Cmd. 5303, p. 9.

³ Cmd. 5896, p. 3.

attracting industrialists to the Special Areas. These inducements were to take the shape of relief from income tax in certain cases, relief from all local rates, and the grant of long-term loans at a low rate of interest, and they were to be available over a limited period of years.

7. Within a month from the date of issue, the Report came up for discussion in the House of Commons, and Mr. Neville Chamberlain, then Chancellor of the Exchequer, in the course of the Debate made it clear that the Government took the Report seriously and intended to give a thorough and open minded examination to all its proposals.⁴

With regard to the recommendation that further factory extension in Greater London should be subject to some sort of control, the Chancellor said there was not anything very revolutionary in that, because it was really only an extension of a practice (common in town planning schemes in the case of a built-up area) to lay down that in a part of that area no new factory should be erected.

But at the same time he drew attention to the fact that, even if new factories were excluded from London, it by no means followed that they would forthwith spring up, say, in South Wales. This led to the conclusion that it would not be sufficient to consider the problem of Greater London by itself; it might be necessary to carry the inquiry beyond the Metropolis; and in conclusion the Chancellor gave the assurance that, though the wider issue was a "biggish proposition," yet it was one that required examination, "and, therefore, that examination it will have".

8. The subject was again considered the next day on a private member's motion that steps should be taken to prevent further industrial concentration around London by diverting new undertakings to the Special Areas. Mr. (now Lord) Runciman, the President of the Board of Trade, in winding up the Debate for the Government, said he realised that in every section of the House there was strong sympathy with the objects the mover had in view, and the Government welcomed every contribution towards the solution of the difficult problems involved in the motion; he made it clear that the Government were unable to accept the principle of compulsory location but subject to that proviso and on the understanding that it was the spirit rather than the letter of the motion which was involved he agreed to accept the motion without a Division.⁵

⁴ Debate on the Expiring Laws Continuance Bill, Nov. 17th, 1936, Hansard, col. 1595.

⁵ Hansard, 18th Nov., 1936, cols. 1859-1860.

9. On 9th March, 1937, the Minister of Labour in announcing the intention of the Government to appoint a Royal Commission, used these words:—

“ The Commissioner has called attention to the fact of the excessive growth of London, and has expressed the opinion that further extension of industry in Greater London should be controlled, as a means of securing more even distribution of production, in which, he hopes, the Special Areas will share. This extension is occurring, not merely in London, but in other great cities, and it gives rise to grave problems, not merely of industry, but of health, communications, vulnerability from the air, and other problems that go far beyond the issue raised by Sir Malcolm Stewart. The Government feel that these wider issues deserve authoritative and comprehensive study, and they propose to appoint a Royal Commission for this purpose.”

10. On the 7th July, 1937, Mr. Chamberlain, as Prime Minister, announced the constitution of the present Royal Commission. Questioned as to the Terms of Reference, the Prime Minister indicated that in his view the location of industry was directly covered by them,⁷ and, to the suggestion that the Commission was announced as part of the programme to deal with the depressed areas, the Prime Minister replied that he was unable to accept that view of the Commission, which embraced much wider questions although no doubt it had a bearing on the depressed areas: it was taking altogether too narrow a view of the importance of the matter to associate the Commission merely with the depressed areas.

TERMS OF REFERENCE.

11. The Commission's Terms of Reference fall naturally into three sections:—

Section I.

Causes of the present distribution of the industrial population and the probable direction of any change in that distribution in the future.

Section II.

Social, economic or strategical *Disadvantages* of concentration.

Section III.

Remedial measures, if any, to be taken in the national interest.

⁶ Hansard, 9th March, 1937, cols. 1026-27.

⁷ Hansard, 7th July, 1937, col. 342.

12. Section I:—

(a) Causes which have influenced the present distribution of the industrial population, together with

(b) The probable direction of any change in that distribution in the future.

Under this section of the Terms of Reference it is only the "industrial population" that is referred to, while under the next section it is the "concentration of industries or of the industrial population" that has to be considered. It is not necessary to debate whether industry tends to follow population or population industry; in fact there is no difficulty in instancing examples either way. For the present purpose it is sufficient to say that the distinction between industry and the industrial population does not present serious difficulties; it is impossible to contemplate one without the other, and factors which have proved material in the distribution of industry can, generally speaking, hardly fail to have had a material effect also on the distribution of the industrial population concerned.

It is, however, important to note two points. First, no limit is placed on the period during which the causes must be taken to have been in operation. Secondly, as indicated above, the circumstances leading up to the appointment of the Commission pointed to the great industrial concentrations, particularly the Metropolis, as the main objectives of the inquiry; though no mention of such concentrations occurs in Section I of the Terms of Reference, they clearly must be borne in mind, and the causes of the concentrations, as well as of the distribution of the industrial population generally, must, therefore, be examined. For these big concentrations a term, "Conurbation", is now often used. It apparently owes its origin to Professor Patrick Geddes, who wrote many well-known works on Town Planning during the first quarter of the present century. He uses it, but without any precise definition, to indicate what he calls "city-regions", or "town aggregates", such as Greater London, but his use of the term is a wide one; he would, for instance, include Liverpool and Manchester and the Lancashire millions generally in a single conurbation which he christens "Lancastonia".^a Professor C. B. Fawcett defines a conurbation as "an area occupied by a continuous series of dwellings, factories and other buildings . . . which are not separated from each other by rural land".^b This definition seems to place too much emphasis on bricks and mortar as constituting the link: while in many cases it may be an adequate definition, in others a better test would seem to be how far out from a given centre does industry or the industrial population look to that centre as essential to its life and as the focus of its business activities. In this sense, Park Royal and Waltham Abbey (both in the Metropolitan Police District, i.e., in the area commonly known as Greater London)

^a *Cities in Evolution*, 1915, p. 34.

^b *Geographical Journal*, Feb., 1932, p. 100.

are clearly part of the London conurbation; possibly places like Slough and Stevenage, while more distant from the centre and outside Greater London should also for some purposes be regarded as falling within the London conurbation. Similar considerations apply to Manchester and some of the urban units surrounding it.¹⁶ In any case the term is now frequently used without too precise definition, and if, in any given case, a precise definition is necessary, the municipal areas to be included should be enumerated.

13. *Section II* involves consideration of the social, economic and strategical disadvantages of the concentration of industries or of the industrial population in large towns or particular areas of the country. Disadvantages cannot be properly evaluated unless any accompanying advantages are also taken into account. The social and economic factors are in due course dealt with in this Report as far as possible separately but they tend to overlap. With regard to the strategical issue, much of the evidence submitted to the Commission was naturally confidential in character, and in the public interest cannot be disclosed, but we have borne such evidence in mind in drafting our Report and framing our Recommendations.

14. *Section III* directs the Commission to report what remedial measures, if any, should be taken, in the national interest. The Terms of Reference do not state specifically to what the remedial measures are to apply; whether, for instance, they are to be confined to the disadvantages indicated under Section II, or are to include, say, the probable direction of any change under Section I: in other words, should remedial measures be limited to the disadvantages of concentration of industries or of the industrial population in the big cities and in the Greater London area, or should they also embrace one marked change of distribution which is emphasized frequently throughout the evidence, viz., the drift of industrial population to the South Eastern counties of England? The Report, while in no way attempting to enlarge the scope of the Commission, endeavours to give due consideration to any remedial proposals germane to the inquiry.

15. The three sections of the Terms of Reference, as set out above, are dealt with respectively in Part I, paragraphs 41 to 105, Part II, paragraphs 106 to 217, and Part IV, paragraphs 387 to 432, of this Report. In addition, a number of topics which do not naturally fall within any one section of the Terms of Reference, but which are relevant to the Commission's inquiry, are dealt with in Part III of the Report, paragraphs 218 to 386. It is necessary first, however, to consider several broad issues which underlie the whole inquiry and, therefore, require some preliminary examination; these are dealt with in the Introduction which follows.

¹⁶ Manchester, p. 799, Q. 6647.

INTRODUCTION.

SCOPE AND IMPORTANCE OF THE INQUIRY.

THE NATIONAL ASPECT

16. The Commission's inquiry ranges over wide fields, and embraces issues of vital moment for the life of the nation to-day and during the coming years. The concentration of population in the great towns, especially since the Industrial Revolution of more than a century ago, has been marked by a disastrous harvest of slums, sickness, stunted population and human misery from which the nation suffered in Mid-Victorian years, and continues, though fortunately to a much lesser extent, to suffer to-day. Are these vast concentrations a necessary feature of our commercial and industrial life from the point of view of economic prosperity? If so, must they continue to be a menace to the health and well-being of the people? Do they constitute a danger to national defence? These questions probe to the roots of national existence. The growth of the great urban centres—Birmingham, Liverpool, Manchester, Glasgow, and above all, London—has long aroused public anxiety and that anxiety has deepened during recent years.

17. It is half a century since Charles Booth launched his pioneer inquiry into London Life and Labour. He stated that his object was to "attempt to show the numerical relation which poverty, misery and depravity bear to regular earnings and comparative comfort". It is no exaggeration to say that Booth, by the methods he adopted and the results he achieved, made an epoch in the science of social investigation.¹¹

18. After the war the objects of Booth's original researches again came under review and a group of distinguished economists under the direction of Sir Hubert Llewellyn Smith, and centering largely round the London School of Economics, renewed the investigation into the problems of London's area and population, wages and hours of labour, overcrowding, travel and mobility, health, industries, amenities and recreation.

19. Similar careful examination of the local problems of urban growth, of the difficulties entailed and the dangers to be faced, has been conducted in recent years in various parts of the country, and the universities and their professional staffs have taken up this work of industrial and social investigation with enthusiasm.

¹¹ The inquiry commenced in 1886; the first volume, dealing solely with East London poverty, appeared in 1889.

20. Nor has the investigation of possible improvements lagged far behind. Only a few years after Booth had brought out his *London Life and Labour*, Ebenezer Howard published his *Garden Cities of To-morrow*, a book which has inspired his successors not only in this but in other countries. In Great Britain, Howard's ideals find to-day corporate expression in the activities of such bodies as the Garden Cities and Town Planning Association, the Town Planning Institute, the Council for the Preservation of Rural England, and of similar bodies in Scotland.

21. To Cowper's aphorism "God made the country, man made the Town", the cynic added, "and the Devil made the slum". Economists and town planners have fought side by side for the last half century to make of England, if not the New Jerusalem of Blake's poem, at any rate a fairer and a sweeter country. Nor has their persistent propaganda lacked practical result, for two Garden Cities definitely embodying Howard's ideals have come to life—Letchworth in 1903, and Welwyn in 1920. It is, however, only fair to bear in mind that many enthusiasts, while rightly emphasising the evils of slums and overcrowding, have hardly given sufficient attention to the concurrent risks of under-employment and malnutrition.¹²

22. The great municipalities of Liverpool and Manchester in their search for the right solution of the urgent problems of slum clearance and rehousing, when laying out their suburban communities of Speke and Wythenshawe, followed, though with some deviations, along the lines which Howard was the first to indicate.

23. Parliament, too, has not failed to respond to the demand for better housing conditions for the people, for the abolition of slums and overcrowding, and for wiser foresight to obviate similar evils in the years ahead. In addition to the numerous Housing Acts which have been a persistent feature of Parliamentary activity since the war, the policy of planning has been the subject of legislation for over a quarter of a century—from the Town Planning Act of 1909, to the codifying Act of 1925, and the Town and Country Planning Act of 1932. These Acts, as their titles indicate, and as Ebenezer Howard had done, took the town and the evils of town growth as the starting point for inquiry; this was natural because it was the danger resulting from congested and insanitary urban areas that had first aroused anxiety and stimulated investigation. Before long, however, it became apparent that the ambit of inquiry must be enlarged. The earlier Acts enabled planning authorities to plan any land in or near their districts which was in course of development

¹² Registrar-General, (E. and W.), p. 924, par. 38, and p. 928, par. 55.

or likely to be used for building purposes, but modern improvements in transport and communications vastly enlarged the area of country exposed to the probability of development. Criticism made itself heard that a wider region than that adjacent to the town must be brought under examination; and, further, that the built-up part of the town should come within the purview of planning. The Town and Country Planning Act of 1932 gave expression to this wider outlook by bringing both the countryside and the built-up cores of town within the scope of statutory planning, and reinforced it by providing that where two or more local authorities or county councils desired to act jointly in the preparation of a scheme, they might combine by appointing a joint committee out of their respective bodies; and a scheme made by such a joint committee became a regional scheme.¹³

24. But legislation has not yet proceeded so far as to deal with the problem of planning from a *national* standpoint; there is no duty imposed on any authority or Government Department to view the country as a whole and to consider the problems of industrial, commercial, and urban growth in the light of the needs of the entire population. The appointment, therefore, of the present Commission marks an important step forward. The evils attendant on haphazard and ill-regulated town growth were first brought under observation; then similar dangers when prevalent over wider areas or regions; now the investigation is extended to Great Britain as a whole. The Causes, Probable Direction of Change and Disadvantages mentioned in the Terms of Reference are clearly not concerned with separate localities or local authorities, but with England, Scotland and Wales collectively: and the Remedial Measures to be considered are expressly required to be in the national interest.

THE WORLD PHENOMENON OF URBANISATION.

25. Two outstanding features of population growth have marked the last couple of centuries. The first has been the astonishing expansion of the nations of the Western civilisation. It is stated that at the present time peoples of European origin number approximately 625 millions, constituting about one-third of the human race. It is not clear how many people of European descent there were in 1800, or what proportion of the world's population they then constituted, but there is authority for the estimate that the increase in their number since 1800 has amounted to about 400 millions, while that of all the rest of the world has probably not been more than 200 or 300 millions. This clearly is a very remarkable expansion.¹⁴

¹³ Town and Country Planning Act, 1932, Sec. 3 (i).

¹⁴ Warren S. Thompson, *Population Problems*, 1930, p. 220.

26. The death rate in Great Britain in the eighteenth century prior to the Industrial Revolution was undoubtedly high.¹⁵ In London it was probably as high as 50 per 1,000 in 1750, and it was still over 30 per 1,000 in 1800. In the smaller towns and rural districts of England there was a considerably lower death rate than in London and some of the other larger places, but, even so, it was probably not less than 35 per 1,000 in the middle of the eighteenth century for the whole of England. By 1800, it had fallen to between 25 and 30, leaving a considerable margin as compared with the birth rate even if that did not exceed 35 as may well have been the case, and when the second and third censuses had been taken (1811-21) the flood of new life had popularised the phrase, a "redundant population".¹⁶ This decline of the death rate was largely attributable to the Industrial Revolution itself: that Revolution¹⁷ removed two great positive checks which had been operative in greater or less degree until that time, namely, inadequate subsistence and the heavy incidence of disease due to the lack of proper sanitation—sanitation which the growing wealth of the towns was in the succeeding years to provide.

27. The second remarkable feature of population growth has been the even more rapid proportional rate at which the great urban centres of Western civilisation have spread, overflowing their boundaries and forming sprawling agglomerations of humanity, many of dimensions without precedent in the world's history; this concentration of population in great units has been the subject of much scientific investigation in recent years, and Weber, writing in 1899, described it as the most remarkable social phenomenon of the nineteenth century.¹⁸

28. Here again are traceable the effects of the Industrial Revolution. The world in the sixteenth, seventeenth and eighteenth centuries had known teeming cities of traffic and exchange: Venice, the Hansa towns, the City of London, were busy centres of merchandise and population long before steam and the power loom had revolutionised the conditions of industrial production, but the factory and the machine at once gripped, transformed and expanded existing centres of commerce.¹⁹

29. Great Britain, the first country to receive the impact of the Revolution through the discoveries of her sons, was also

¹⁵ *Op. cit.* p. 40 and see Clapham, *Economic History*, Vol. I, 1926, Chaps. 2 and 14, and Vol. II, 1932, Chap. 11.

¹⁶ In 1937 the standardized death rate in England and Wales was 9.3 per 1,000 (*Annual Report of Chief Medical Officer, Ministry of Health, 1937*).

¹⁷ Thompson *op. cit.* p. 48. Clapham, Vol. I, p. 55.

¹⁸ Adna F. Weber, *Growth of Cities*, Columbia University, New York City, 1899, and authorities there mentioned; see also *Migration and Economic Opportunity* ed. by Carter Goodrich, Philadelphia, 1936; *Culture of Cities* Lewis Mumford, 1938, with full bibliography.

¹⁹ Weber, p. 198. Pigou, *Essays in Applied Economics* (1923) No. 10.

the first to experience the phenomenon of uncontrolled urban growth. Up to the end of the eighteenth century, probably no city in the world had reached a population of a million, but at the census of 1801 Greater London is recorded as having reached a population of well over a million²⁰ and since then it has retained its place as the most populous conurbation in the world. Greater London has found many conurbations to follow her example and there are now including Greater London, about 50 numbering a million or more inhabitants: these are mainly to be found in countries of Western civilisation, e.g., greater Manchester, greater Birmingham, Merseyside, Glasgow, West Yorks, and Tyneside in Great Britain; Berlin and Hamburg-Altona in Germany; Milan, Rome and Naples in Italy; Paris in France; Brussels in Belgium; Madrid in Spain; New York, Chicago, Philadelphia, Boston, Detroit and some five others in America; Montreal and probably Toronto in Canada; Buenos Aires in the Argentine; and Sydney and Melbourne in Australia.²¹

30. The East has not remained unaffected by similar influences, and Calcutta and Bombay in India; Shanghai, Canton, Nanking and three or four more cities in China; and Tokio, Kobe and two or three others in Japan have all attained the million mark, or are on the verge of doing so. But it is in Europe and those countries of the New World that have been colonised from Europe that 80 per cent. of these million-mark cities are still to be found, and it is in Western civilisation and particularly in Great Britain that the modern development of urbanisation has secured its chief hold.

31. The nineteenth century was marked by the persistent and rapid enlargement of the great cities and in Great Britain to-day approximately two-fifths of the total population dwell in the seven million-mark conurbations,²² while the corresponding proportion in the United States is only about one-fifth. Generally speaking, during the last hundred years the million-mark cities have tended to increase their populations at rates at least twice as great as the mean rate of increase for their respective countries; and especially is this characteristic of the capital cities.²³

²⁰ Registrar-General (E. & W.).

²¹ Fawcett, "Millionaire Cities" (1935).

²² Fawcett, *Geographical Journal*, Feb., 1932, p. 105.

²³ Fawcett, "Millionaire Cities" (1935), p. 57. Of the seven great conurbations in Great Britain, while London, Birmingham and Merseyside have in recent years shown a relative increase in that their rates were greater than those for the whole country, Glasgow, Tyneside, West Yorks and Manchester experienced a relative decline in that their rates of increase were less than the average for the whole country.

32. This phenomenon of aggregation into great cities which developed so rapidly and so persistently in the last century or more, first in the West and eventually throughout the world, has a vast momentum behind it; the call of the city, and of the big city, to all classes of the community the world over is loud and compelling; it represents a tide of forces social as well as industrial in character, stimulated by men's need not merely for a livelihood, but for the best possible opportunities in respect of education, medical and surgical treatment, mental recreation, professional and business advancement and so forth. A tide of this volume is likely to be difficult either to dam or to direct, and attempts to do so will require the fullest and most careful consideration.

DISTINCTIVE FEATURES OF URBANISATION IN GREAT BRITAIN.

33. The world-wide development of intensive urbanisation presents in the case of Great Britain certain distinctive features, two of which are of great importance. First, the acreage of Great Britain in comparison with other Western countries is exceedingly limited in proportion to the size of its population. This can be most easily illustrated by the following simple table²⁴:—

Country.	Square miles.	Population.	Population per square mile.
Belgium	11,750	8,250,000	702
France	213,000	42,000,000	197
Germany ²⁵	229,000	81,000,000	353
Italy	120,000	43,606,000	360
U.S.A.	3,738,000	137,000,000	36
Great Britain ²⁶ ...	88,750	46,000,000	518

For England alone the figures are even more striking:—

England	50,330	38,552,000	766
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Thus, if England is taken as a unit, the pressure of population shows a figure per square mile of more than 60 in excess of Belgium, which is usually considered the world's most densely peopled national area. As a result of this limited

²⁴ Whitaker, 1939, p. 201.

²⁵ According to preliminary results of the May 1939 census, the population of the German Reich, excluding Memelland, Bohemia and Moravia, is 79,600,000. Including Memelland, Bohemia and Moravia the population is estimated at 86,553,000, representing 136.4 to the square kilometre, or 354 to the square mile. (See "Times" 19 June 1939).

²⁶ Registrar-General's (E. & W.) estimate for 1937.

acreage, the Commission's problem presents a picture set in a narrow background: in a country with millions of unoccupied or sparsely occupied acres, urbanisation can be considered in relation to much wider surroundings.

34. In Great Britain broad issues as to the best disposal of the national resources of land inevitably force themselves into the picture; to take one instance, while some planning enthusiasts advocate compulsory scattering of existing urban populations by the million over unoccupied rural areas in a manner which could not fail seriously to affect agriculture and agricultural productivity, the Ministry of Agriculture express a preference for the fringe extension of existing industrial towns on the ground that the building of satellite towns would probably take more good land from agriculture and would absorb into industry existing agricultural labour over a wide radius instead of taking the existing unemployed from the towns.²⁷

35. In this connection two other problems should be mentioned, both of which affect the utilisation of national resources, and have been arousing public anxiety. The first is the serious and continued drift of labour engaged in agriculture from the land into the towns, and the second is the need of restoring to agricultural uses areas laid bare or left derelict as the result of mining or other industrial development. The evidence of the Ministry of Agriculture, of Sir Daniel Hall, and others made plain the serious menace to agriculture which may be involved if the drift from rural to urban life continues; and the recent Report of Lord Kennet's Committee on the Restoration of Land affected by Iron-ore Working urges that steps should be taken with a view to securing that land laid waste by industry should, as soon as possible, be again rendered available by afforestation or other similar means for the nation's use or enjoyment.

These are both important issues touching closely the problems before the Commission but they are not actually within its Terms of Reference.

36. The belt of the traditional "corn counties" has been seriously reduced by the growth not only of Greater London but also of the much wider residential zone around it. In South Essex, Middlesex and North Kent the belt included market gardening, fruit orchard and potato-growing areas now rapidly vanishing; and areas of exceptional importance devoted to dairying and potato-growing in close proximity to industrial centres in Lancashire, Cheshire and the Midlands are endangered by the zoning for industry and residences of the

²⁷ Ministry of Agriculture, p. 170, Q. 1749.

belts forming the peripheries of the great conurbations."²⁸ The amount of first-class land in Great Britain suitable for market gardening is limited; it has been estimated that the amount of land at present intensively used is only about 2 per cent. of the whole and that only about 5 per cent. could be so used.²⁹ Yet much of it runs severe risk of being absorbed by industrial and housing development, which since 1900 has been so rapid that it is stated to have covered with bricks and mortar an area equal in size to the counties of Buckingham and Bedford combined. Alike in urban extensions and in expropriation of land by Government Departments for military, Royal Air Force, or other national requirements, regard must be had to the agricultural needs of the country.³⁰

37. Nor is it merely the agricultural needs of the country that should be borne in mind. Providence has endowed Great Britain not only with wide tracts of fertile soil, but with mineral wealth in the form of tin, lead, iron-ore, and, above all, coal; with abundant supplies of water, hard and soft, corresponding to the various needs of industry; with rivers and harbours apt for transport and for both foreign and internal trade; and last, but by no means least, with amenities and recreational opportunities, with hills and dales, with forests, moors and headlands—precious possessions for fostering and enriching the nation's well-being and vitality. The movement for the establishment of national parks, though of comparatively recent origin, has secured a large amount of support mainly through the work of the Standing Committee for National Parks. The activities of the National Trust and of such bodies as the Councils for the Preservation of Rural England, Rural Scotland and Rural Wales along similar lines are too well known to call for description here.

38. It is no part of the work of this Commission nor would it be within their Terms of Reference to attempt a survey of national resources or to discuss a national policy either for agriculture or for natural amenities except in so far as those issues may arise in connection with the problems before the Commission. These wider issues must, however, be kept in mind and it is against this national background that solutions of the problems of the location of industry and of urbanisation must be formulated.

39. The second distinctive feature referred to in paragraph 33 above is the vast—and many would add alarming—growth of population in London and South-Eastern England, largely at

²⁸ Royal Geographical Society.*

²⁹ Land Utilisation Survey.*

³⁰ Land Utilisation Survey.* At the request of the Commission Dr. Dudley Stamp prepared a tentative fertility map of England and Wales, and this is reproduced, with other evidence, in a separate volume.

the expense of the rest of the country. It is not necessary to describe this growth at length or to labour the figures here, they will be dealt with later in this Report. It is sufficient to emphasise that one unmistakable modern trend which has emerged in evidence is the great drift of population from the North and West towards the South-East. Not only has the London fringe grown, at the expense both of the centre and of the rest of the country, but the whole South-Eastern area has also rapidly increased: indeed, in the last five years some country towns near London, e.g. Chelmsford, Bedford, Luton and Aylesbury, have shown a growth of insured population faster than London's outer fringe itself.³¹

40. Evidence presented to the Commission indicates also that a stationary condition, or even a decline, of the population will not necessarily arrest this flight to the South-East; it might even accentuate it.³²

³¹ Ministry of Labour, supplementary evidence.*

³² See Chapter XI.

PART I.

CAUSES.

Section I of Terms of Reference:—

"To inquire into the causes which have influenced the present geographical distribution of the industrial population of Great Britain and the probable direction of any change in that distribution in the future."

CHAPTER I.

INTRODUCTION.

41. The present Part of the Report is concerned with changes in the distribution of industry and the industrial population since the beginning of the nineteenth century, and it will be convenient to divide the period into two parts, separated by the war of 1914-18.

The last 50 years before that war was a period during which the railways of the country enjoyed a virtual monopoly of long distance transport, the only competing forms of transport being by canal and coastwise vessels. It was also a period during which, until the last few years, steam enjoyed a practical monopoly as the source of power. Further, it was a period of highly developed and steadily increasing international specialisation of industry and trade.

42. By the middle of the nineteenth century Great Britain had become the workshop of the world, and for the rest of the century the exports of the products of British mines, factories and shipyards increased while the imports of agricultural products and raw materials also increased. Great Britain was not only a steadily increasing exporter of the products of industry; she also exported capital that was invested in one country after another to enable the recipients of such capital to develop their resources more rapidly than would otherwise have been possible. During the early years of the present century the rate at which capital was exported was even more rapid than in the nineteenth century, although the proportion that represented reinvestment of interest upon the accumulated investments of the past also increased until, at the time immediately preceding the war, the margin between the two had become very narrow. Taking a long view, however, the structure of British industry, and in particular the extent and rapidity of the growth of the export trades, was closely associated with the export of capital. Finally it should be pointed out that the steady rise in the standard of living made possible by the Industrial Revolution, dating from the eighteenth century, expressed itself, in turn, not only in a

rapid expansion of the well-known industries of Great Britain—coal-mining, iron and steel production, engineering, shipbuilding and textiles—but also in a steady growth of local services and of light industries producing a large and miscellaneous collection of products by which people are surrounded in their homes and public buildings and on the street.

43. In all these respects the industrial structure of Great Britain has been profoundly changed. In the first place the railways have lost their monopoly of inland transport and are faced with the keen and ever-growing competition of road transport which, among other things, has multiplied the directions in which goods and passengers can be conveyed. Secondly, steam has lost its place as practically the sole source of power. It was the discovery of the internal-combustion engine that destroyed the monopoly of railways by making the road vehicle a competitor with the steam-driven locomotive. Electricity and oil are being increasingly used as sources of power in factories and other large establishments, and the use of coal thereby economised. In the third place the growth of international specialisation in the sphere of industry has been checked, largely on account of a widespread protectionism generally termed economic nationalism. But as far as Great Britain is concerned that is not the only factor in the situation. The growing use of electricity and oil as sources of power and the growth of invention have reduced the advantages enjoyed by this country during the steam age and tended to foster the process of industrialisation in other countries. Moreover, the element of monopoly enjoyed by British trade through being first in the field has disappeared through the industrial growth of other countries possessing similar natural resources and therefore reproducing the industrial structure of this country. Finally, the growth of new industries has been accelerated, to a marked extent, by specific inventions, such as the radio, and by a rapid rise in the standard of living constituting the accumulated effects of all inventions and improvements in industrial organisation in the past, and particularly in the recent past.

44. It is for these reasons that the study of the trends of industry and population may conveniently be divided into two parts, and the dividing point taken as the war of 1914-8. It was not the war itself that produced these changes which, indeed, were already taking shape before the war started. The war partly revealed and partly accelerated the changes and thus marked the end of an era—the era of the monopoly of steam power and of railway transport and of the unimpeded division of labour. The world has now entered upon a new era—the era of oil and electricity, of transport by road and air, and of international specialisation severely controlled and largely restricted. But the new era is also one in which light industries enjoy added

and ever increasing importance, and in these industries the influences governing the location of establishments differ considerably from those that governed the location of the industries that grew rapidly during the nineteenth century.

45. Before proceeding to examine the past and present distribution of the industrial population it should be pointed out that three types of information may be given about an industry in any region. These are (1) the total number of workpeople engaged in it in the region, (2) the proportion that that number bears to the total number in the industry throughout the country, and (3) the proportion that the number of workpeople in the industry in the region bears to the total number of workpeople in all industries in that region. All three types have been submitted in evidence and have been used in the preparation of this Report; but it is clear that the third is the type that indicates the importance of the industry in the economy of the region and therefore the influence of the industry in determining the trend of the industrial population of that region. Throughout the discussion that follows the word "industry" is used in a broad sense and, in the absence of a restricting adjective, includes mining, manufacture, transport, marketing and distribution, both wholesale and retail. The expression "industrial population" is similarly used in a broad sense, and, unless otherwise indicated, includes all persons normally occupied, in whatever capacity, in any of those groups of industry.

46. It should also be pointed out that the importance of an industry in the national economy may be measured either in terms of the quantity or value of its output or in terms of the volume of employment it provides. In consequence of improvements in technical processes and in organisation, or of the concentration, particularly in mining industries, of production in places offering the greatest natural advantages, the output of an industry increases more rapidly than the number of people employed in it: it is indeed possible for the output of an industry to increase at the same time as the number of people employed in it is reduced.

47. We had the advantage, when preparing this Part of our Report, of being able to consider a memorandum by Professor J. H. Jones, one of our members, dealing with some aspects of the economic problem of industrial location in Great Britain. That memorandum appears as Appendix II to the Report. Professor Jones has informed us that in the preparation of material presented by him to the Commission he received invaluable assistance from his colleagues Mr. H. D. Dickinson and Mr. G. D. A. MacDougall of Leeds University. We are glad to make our acknowledgment of the services rendered by these gentlemen.

are only available for the years 1907, 1924, 1930 and 1935. Moreover, they relate to the average number of persons actually employed in the particular Census year, and are open, therefore, to influence by the prevailing state of trade. Further, employment in small industrial undertakings is not within the survey of the Census.

52. If the Commission had had to rely upon the published statistics of those three classes, they would have been seriously handicapped by reason of the fact that the geographical areas used as the statistical units of one Department differ materially from those of other Departments: there is no general uniformity of divisions or areas as between the Board of Trade for the purpose of the Census of Production, the Ministry of Labour for the purpose of Unemployment Insurance statistics and the Registrars-General for the purpose of the Census of Population. Whereas the statistics of the Registrars-General relate to local government areas, such as counties, county boroughs, and burghs, the published statistics of the Ministry of Labour relate to divisional areas which do not coincide with local government areas. The Ministry of Labour enabled that difficulty to be largely overcome by making for the Commission a special analysis of the geographical distribution of insured persons by reference to county areas. Thanks to that action the short range statistics of the insured persons can be linked, so far as area is concerned, with the statistics, of longer range, of the Registrars-General as to the total population and the occupied population.

53. The areas for which the Ministry of Labour specially prepared figures are as follows:—

(a) London and the Home Counties, the Home Counties being taken as Bedfordshire, Buckinghamshire, Essex, Hertfordshire, Kent, Middlesex, and Surrey.

(b) Lancashire.

(c) West Riding of Yorkshire, Nottinghamshire, and Derbyshire.

(d) Staffordshire, Warwickshire, Worcestershire, Leicestershire, and Northamptonshire.

(e) Northumberland and Durham.

(f) Mid-Scotland (i.e., the counties of Lanark, Renfrew, Dumbarton, Midlothian, and West Lothian).

(g) Glamorgan and Monmouthshire.

(h) Rest of Great Britain.

54. The following table, No. 1, shows the total population of those areas in 1801 and in certain subsequent years up to 1937.

Table 1.—Distribution of the total Population.

Area.	Population in thousands:							Proportionate population.						
	1801.	1861.	1901.	1911.	1921.	1931.	1937.	1801.	1861.	1901.	1911.	1921.	1931.	1937.
London and the Home Counties	1,892	4,653	8,655	9,616	10,040	11,123	11,843	18.0	20.1	23.4	23.6	23.5	24.8	25.7
Lancashire	673	2,429	4,387	4,768	4,969	5,039	5,013	6.4	10.5	11.9	11.7	11.6	11.2	10.9
West Riding, Notts. and Derby	891	2,181	3,953	4,415	4,674	4,915	4,964	8.5	9.4	10.7	10.8	10.9	11.0	10.8
Staffs., Warwick, Worcs., Leics. and Northants	851	2,081	3,404	3,740	4,043	4,298	4,482	8.1	9.0	9.2	9.2	9.5	9.6	9.7
Northumberland and Durham	318	852	1,791	2,067	2,238	2,248	2,207	3.0	3.7	4.8	5.1	5.2	5.0	4.8
Mid. Scotland	387	1,174	2,277	2,489	2,639	2,645	2,738	3.7	5.1	6.2	6.1	6.2	5.9	6.0
Glamorgan and Monmouth	116	492	1,158	1,517	1,729	1,663	1,568	1.1	2.1	3.1	3.7	4.0	3.7	3.4
Rest of Gt. Britain ...	5,373	9,267	11,375	12,219	12,436	12,900	13,193	51.2	40.1	30.7	29.8	29.1	28.8	28.7
Total	10,501	23,129	37,000	40,831	42,768	44,831	46,008	100	100	100	100	100	100	100

Table 2.—Distribution of the occupied Population.

Area.	Gainfully occupied population (thousands).						Proportionate number of gainfully occupied persons.					
	1801.	1861.	1901.	1911.	1921.	1931.	1801.	1861.	1901.	1911.	1921.	1931.
London and the Home Counties	519	2,129	3,838	4,361	4,614	5,417	12.3	20.2	23.5	23.8	23.8	25.7
Lancashire	321	1,242	2,090	2,331	2,448	2,591	7.6	11.8	12.8	12.7	12.6	12.3
West Riding, Notts and Derby Staffs., Warwick, Worcs., Leics. and Northants	356	1,038	1,794	2,047	2,153	2,351	8.4	9.8	11.0	11.2	11.1	11.2
Northumberland and Durham...	439	969	1,522	1,716	1,864	2,104	10.4	9.2	9.3	9.4	9.6	10.0
Mid Scotland	92	356	705	810	897	928	2.2	3.4	4.3	4.4	4.6	4.4
Glamorgan and Monmouth	130	543	1,021	1,088	1,197	1,212	3.1	5.1	6.3	5.9	6.2	5.8
Rest of Great Britain	43	222	473	627	692	682	1.0	2.1	2.9	3.4	3.6	3.2
Total	2,316	4,054	4,869	5,371	5,557	5,770	55.0	38.4	29.9	29.2	28.5	27.4
	4,216	10,553	16,312	18,351	19,422	21,055	100	100	100	100	100	100

56. As regards insured persons the information supplied by the Ministry of Labour as to their distribution in the period 1923-1937 is summarised in the next table, No. 3.

Table 3.—*Distribution of Persons insured under the Unemployment Insurance Acts.*

Area.	Insured persons (in thousands).				Proportionate number of insured persons.	
	1923.	1929.	1932.	1937.	1923.	1937.
London and the Home Counties	2,421	2,802	3,027	3,453	22·4	26·0
Lancashire ...	1,697	1,780	1,840	1,826	15·7	13·8
West.Riding, Notts. and Derby ...	1,403	1,501	1,559	1,614	13·0	12·2
Staffs., Warwick, Worcs., Leics. and Northants...	1,212	1,332	1,402	1,554	11·2	11·7
Northumberland and Durham ...	619	613	652	648	5·7	4·9
Mid-Scotland ...	792	794	832	868	7·3	6·6
Glamorgan and Monmouth ...	457	435	457	437	4·2	3·3
Rest of Great Britain ...	2,225	2,443	2,631	2,844	20·5	21·5
Total... ..	10,826	11,700	12,400	13,244	100	100

57. These three tables illustrate the outstanding feature of the geographical distribution of the industrial population in modern times, namely, its concentration to an increasing extent in particular areas of the country. The seven specified areas constitute only 27 per cent. of the total area of Great Britain. In 1801 they contained about 45 per cent. and in 1931 (the latest year for which figures are available) 73 per cent. of the occupied population (Table 2). In 1937 the same areas contained about 79 per cent. of the insured population (Table 3). The areas are defined by means of county boundaries and it is to be remembered that, although they are the areas of greatest concentration, they contain within themselves large tracts of agricultural and sparsely-populated land. Similarly, the "Rest of Great Britain" contains some areas of high concentration but those areas are limited in regard to size and population as compared with the seven specified areas: the chief ones are the ports of Bristol, Southampton and Hull, the naval centres of Portsmouth and Plymouth, and the cities of Aberdeen and Dundee.

58. Over the nineteenth century the total and occupied population (Tables 1 and 2) of all the specified areas, except the Midland group of counties, increased both absolutely and proportionately to the country as a whole. Early in the present century signs of a change began to appear in some areas; both Lancashire and Mid-Scotland lost ground between 1901 and 1911 in relation to the country as a whole. Since the war that experience has become more widespread: between 1921 and 1931 the proportion of the total occupied population of Great Britain (Table 2) declined in Lancashire from 12.6 to 12.3, in Northumberland and Durham from 4.6 to 4.4, in Mid-Scotland from 6.2 to 5.8, and in Glamorgan and Monmouth from 3.6 to 3.2. In the last-named area the occupied population decreased absolutely as well as relatively, but no other area experienced an absolute decrease. On the other hand the proportion of the occupied population of the country contained in the West Riding, Nottinghamshire and Derbyshire area has remained fairly stable, but the total population table indicates that since 1931 the area has lost some ground. For a long time the proportion of the occupied population contained within the Midland group of counties has been rising. So far as the distribution of the industrial population is concerned, those changes are completely overshadowed by the experience of London and the Home Counties where the occupied population has increased both absolutely and relatively, to a far greater extent than in any other part of Great Britain.

59. The trend in the post-war period, as indicated by the statistics of the total population and the occupied population, is generally confirmed by the statistics of insured persons (Table 3). Over the period 1923-37 all the specified areas, except London and the Home Counties and the Midland Counties, lost position relatively to the country as a whole. The figures for Lancashire, Northumberland and Durham, and Glamorgan and Monmouth, show an absolute reduction in the numbers of the insured persons between 1932 and 1937.

On the other hand, in that same period of five years the insured population of London and the Home Counties increased by more than 420,000 persons.

CHAPTER III.

THE PRE-WAR PERIOD.

MARKET AND TECHNOLOGICAL FACTORS.

60. At the outset it may be desirable to draw attention to certain axioms. The first is that the extent of the market for any product is limited by the facilities for transport, and the cost of transport in relation to the value of the product. If there were no means of transport people would be compelled to supply their own needs, and if they lived in settled communities those communities would need to be small and self-supporting. Under such a state the population of a country would tend to settle on the most fertile lands and to form scattered agricultural and village communities. There might be improvements in the arts of agriculture and even in the handicrafts, but unless and until means of transport were discovered there could be no local specialisation and concentration of industry and therefore no appreciable concentration of population in a small area. In early days the chief means of transport was by sea and river, with the result that the earliest concentrations of population were trading centres established on the coast and on the banks of navigable rivers. Long before the development of effective road transport, commercial centres had been established in this country, the chief being London, which was the great centre of trade with the continent of Europe. The difficulties of transport by land were so serious that only valuable merchandise was conveyed long distances and the population was widely distributed over the country and lived in agricultural communities that were largely self-sufficing. It was only at a later stage, when road transport began to be improved, that industrial centres, as distinguished from commercial centres, became important.

61. The second axiom is that as the result of improvements in the methods of production the output of an industry increases more rapidly than the number of people employed in it: it is indeed possible, as already stated, that the output may increase at the same time as the number employed in the industry diminishes. Without such economy of labour the growth of new industries, representing a rise in the standard of living of the community, would be impossible. The earliest industries, namely, the production of food and elementary clothing, grew as the number of the people increased, and so long as the methods of production remained unaltered they absorbed a constant proportion of the growing numbers. It was only when and as improvements in those industries were introduced that some members of the community were set free to provide additional comforts. In its early stages a new industry may

grow so rapidly that the number of people employed in it may increase at a higher rate than the population as a whole but sooner or later the growth in employment becomes slower than the growth in total population.

62. The third axiom is that changes in methods of production produce changes in the kind of labour that the industry requires: for example, the introduction of the steam plough and other kinds of machinery in agriculture not only changed the character of the work of the farmer and his workpeople but also created an engineering industry which was essentially a part of the agricultural industry. Thus, progress or decline in the agricultural industry is not to be measured wholly by changes in the number of people employed on the land itself. Closely associated with changes in technique are changes in the degree of specialisation that may take place. Agriculture even in the eighteenth century was less an industry in the modern sense than a mode of living or a combination of industries, including road making, cottage building, spinning and weaving, all of which have now become separate industries. Changes of this kind make comparisons, particularly statistical comparisons, between past and present extremely difficult; but it is clear that they tend to foster close aggregations of people, in villages and towns, to form industrial and market centres of agricultural regions.

63. Before the factory system had been established Great Britain was mainly an agricultural country, and its population was already widely distributed among the various areas for which statistics have been given. While largely or mainly engaged in agriculture several of these areas already claimed localised industries such as iron manufacture, and other areas contained widely distributed industries such as textile manufacture. Moreover coal had already become a widely used commodity and the outcrops of seams in such areas as the county of Durham were already being worked. To some extent, therefore, the Industrial Revolution meant a change in the practice of existing industries rather than the introduction of new industries. Thus, for example, in the textile industry of Lancashire and Yorkshire the cottage industry was gradually squeezed out by the factory industry in which the machinery was driven first by water and afterwards by steam. In all the areas that were affected by the process of industrialisation at the beginning of the nineteenth century the transformed or new industries obtained the necessary supply of labour either in the immediate neighbourhood or in the surrounding district. Migration meant a movement from the country to the growing town rather than from one region to another, for in those days, when travel was costly and difficult, long distance migration was probably highly exceptional.

64. In the absence of any special reason to the contrary it is natural or obvious that a commodity should be produced at, or as near as possible to, the place at which it is to be sold, that is to say, there is a strong presumption that the industry will be established as close to the market as possible. There are indeed many services that must be provided on the spot: they cannot be supplied from a distance. In every community a considerable proportion of the occupied population are engaged in what are termed "local services," including retail distribution, local transport, public services, professional services, entertainment, etc. In a rapidly growing community, such as London, a considerable proportion of the working population are engaged in the building industry. Many are also employed in the production of highly perishable or very bulky goods. In none of these cases is there any real choice of location. Where a choice does exist the industry will be established at that place at which the cost of supplying the market will be at a minimum; and in that case a concentrated market is bound to exercise a more powerful influence than a widely diffused market.

65. The industries which, for purposes of exchange, send their products to places outside the area in which they are situated, may be termed "basic" industries. They are here termed "basic" in the sense that no community in Great Britain can exist without one or more of that type, for the simple reason that the products are needed to pay for the numerous goods and services that are supplied to that community by other communities. They are "basic" industries because they are the foundation of the economy of the areas in which they are established, and they include all those industries that send their products to other areas. The size of these industries in any given area determines the population that can be maintained within it, for it sets a limit to the total amount of commodities that can be brought into that area from outside. Thus, in the last resort, the distribution of "basic" industries in Great Britain determines the distribution of the industrial population.

COMMERCIAL AND INDUSTRIAL CONCENTRATION.

66. In discussing the distribution of such industries it is desirable to make a double distinction—first the distinction between the original causes of the location of the industry and those advantages that are the result of concentration and are largely if not entirely the creation of man: and, secondly, the distinction between the region or large area within which the industry is established and the precise part of the region that is selected as the site of the establishment or group of establishments comprising the industry. These distinctions are themselves connected.

When an industry has been established in a region it creates conditions favourable to its own growth; concentration brings advantages and these advantages in turn strengthen the attraction not only of the region but also of the locality in which the industry has started. Thus, regional concentration, due in the first place to natural advantages, fosters local concentration and the growth of large urban areas. But these, in turn, for reasons to be presently indicated, not only offer further advantages to the "basic" industries but also offer advantages to other industries. Thus the chosen district tends to grow like a snowball and become a large conurbation.

67. The concentrations of population in Great Britain may be divided into two groups, namely, the shipping and commercial centres and the centres of mining and manufacturing industry. The two main shipping centres, London and Liverpool, import commodities from all parts of the world, with the result that they have large docks, warehouses and other storage facilities, together with the remaining technical equipment required for unloading and distributing on a large scale. This commercial and distributing function alone provides employment for a considerable population, which in turn gives employment in local industries to a further group. But London, in particular, is more than that. In quite early days it became a centre of handicrafts and cottage industries that have since become factory industries, with the result that it is now an important centre of such industries as leather tanning and dressing; boot and shoe manufacture; the finishing sections of a number of iron and steel trades; tailoring, dressmaking, millinery, etc.; the production of paper and of chemicals, dye stuffs and drugs. As a port it was once largely engaged in the building of wooden vessels and it is still an important ship repairing centre; it has also become one of the chief grain milling centres. It is also the largest centre of the timber trade. Having always been the main commercial centre of this country London has grown to be a large factory centre. Its growth as a manufacturing centre has also been fostered by the fact that it is the capital city and the centre of the British commonwealth, the chief centre of the printing and publishing trades, and the Mecca of tourists both from within the country and from other parts of the world, with the result that it maintains public utility services and miscellaneous services on a scale unknown elsewhere in this country. Other large commercial centres, such as Liverpool and Hull, have also built up manufacturing industries, either industries of a local character or "basic" industries using imported materials. The oil and oilcake industry, grain milling and copper production may be quoted as illustrations of such industries.

68. The second group of concentrations of population is based upon mining and manufacture. The main concentrations are the Clyde Valley, the North East Coast, East Lancashire, the West Riding and the West Midlands. Other less pronounced concentrations are to be found in other parts of the country, such as South Wales and the East Midlands. It will be observed that every one of these is situated on a coalfield. In the case of some, more particularly South Wales and the North East Coast, the economy of the community is largely based upon coal production and the sale of coal outside the area. In the case of others, coal is the foundation of manufacturing industries the products of which are the main products that are sold outside the area. Thus, for example, in West Yorkshire the supremacy of coal is challenged by the wool textile industry, which is itself largely based on coal; in South Yorkshire the mining industry has helped to build up a large and still growing steel industry; in the West Midlands the coal industry exists mainly as the handmaid of a large group of miscellaneous metal industries. Thus the coal industry performs a double function by providing a commodity for export to other areas or other countries and by attracting other industries to its own neighbourhood. It may be broadly stated that throughout the nineteenth century coal acted as the great magnet to the industrial population other than that which was concentrated in the chief shipping and commercial areas.

69. In most of the coalfields iron ore was to be found in close proximity to the coal, with the result that the coal producing areas also became iron producing areas and, in later years, steel producing areas. Deposits of iron ore also existed in places at some distance from the coalfields, the chief examples being Cleveland, Lincolnshire and Northamptonshire. In such cases the location of the resulting iron (and afterwards steel) industry was determined by the cost of collecting the raw materials and the source of power. It is clear that the larger the quantity of coal required in the production of a ton of pig iron the greater the attraction of the coalfield; the lower the iron content in a ton of iron ore the greater the attraction of the ore-field. Towards the end of the nineteenth century economies were being effected in the consumption of coal, so that the attraction of the coalfield was correspondingly weakened. Moreover, as the supplies of ore in the older ore-fields were diminishing the iron and steel industry became increasingly dependent upon imported ore or imported pig iron. The iron and steel industry, therefore, tended to grow more rapidly in coastal regions than in inland regions, and this tendency was strengthened by the concentration of the industry upon steel required for the manufacture of products to be exported. Thus, for example, the iron and steel industry of South Wales, being, in the main, the

producer of bar for the manufacture of tin-plate for export, moved steadily westward and towards the coast. During the present century further important changes have taken place in the location of the steel industry. Blast furnaces and steel producing plants were erected as a single establishment and pig iron was conveyed in molten form to the steel furnaces. In these conditions it became profitable to develop the Lincolnshire field containing low grade ore and to erect iron and steel plants near the ore and carry the coal from a distance. Further economies of the same type, combined with an import duty on steel, have recently fostered the growth of the industry not only in Lincolnshire but also in Northamptonshire.

70. In the days of wooden vessels the shipbuilding industry flourished in many places at which rivers entered the sea and adequate supplies of timber were available. The use of steam as a source of power and of iron as the material of construction led to a rapid concentration of the industry at a few tidal rivers, of which the Clyde is the chief example. The district through which the Clyde flows contains coal and iron ore, with the result that it became an iron and steel producing centre. The steel industry specialised largely upon the market provided by the shipbuilding industry, with the result that each facilitated the growth of the other. The same statement may be made of the North East coast where, as in the Clyde region, the steel industry flourished through the availability of cheap iron and the shipbuilding industry provided a market. In the West Midlands the existence of coal and iron resulted in the development of a large variety of industries, such as hollow-ware, locks, chains, nails, needles, pins, etc.,²⁵ which, by virtue of the central position occupied by Birmingham, could be conveyed to all parts of the country.

71. It will thus been seen that in the location of the iron and steel and shipbuilding industries natural conditions played a decisive part. Nevertheless, that the market also exercised an important influence is shown by the line of specialisation followed by the iron and steel industry in different parts of the country. The coastal regions specialised upon steel produced either directly for export or as material for shipbuilding or for industries producing finished products for export. In the Sheffield area the industry concentrated upon special classes of steel needed not only in the cutlery trade, but also in armament work and other classes of work in which the cost of transport of the final product was not a major consideration. In the Birmingham area, as already indicated, another line of specialisation was followed, but a line determined by the same

²⁵ Board of Trade, page 58, par. 25.

considerations as those governing the development of the Sheffield area. The engineering industry also shows the influence of the market. Taken as a whole it is a widely distributed industry, but some branches are highly concentrated, including marine engineering, which is associated with shipbuilding, and textile engineering, which has developed in the textile producing districts. The Birmingham area built up a large and varied engineering industry based partly upon the finishing industries already indicated yet, because it was already varied, concentrating upon variety rather than upon a special branch. This characteristic of its development proved advantageous in the early days of the motor car industry, which was established mainly in Coventry and was able to obtain the component parts in the Birmingham area. It will also be shown that it has been an important advantage in the rapid development of new industries during the last twenty years.

72. The location of the textile industries cannot be similarly explained in terms of natural resources. It is true that in Lancashire the climate was suitable for cotton spinning, that water power was available for driving the early mills and for bleaching, and that coal and iron, employed at a later stage, were within easy reach. Moreover, Liverpool became the great importing centre for raw cotton. The Lancashire district was thus admirably suited for cotton manufacture, and in the middle of the nineteenth century the pressure of depression and competition resulted in a growing concentration of the industry in that region. Nevertheless, the industry first "settled in Lancashire for no particular reason, except perhaps that the woollen industry was already there, that foreigners were kindly received, and that Manchester was not a Corporation".³⁴ If by accident it had first settled in some other part of the country or if Manchester had been subject to the restrictive influences of the Corporations of those days it is possible that the history of the industry and of Lancashire would have been different. Similarly, in the case of the woollen industry, which is now concentrated in the West Riding, there were no decisive natural advantages to explain its growth. Speaking of the growth of that industry in the eighteenth century Professor J. H. Clapham states that "it is the ordinary case of a pushing, hardworking locality with certain slight advantages, attacking the lower grades of an expanding industry. Meanwhile Norfolk was well employed in the higher branches of the industry, which were also growing thanks to the increase of wealth and foreign trade. Among the advantages of Yorkshire were nearness to raw material supplies and the absence of that corporate conservatism

³⁴ Board of Trade, p. 69, par. 52.

which is often found among the workers in an established 'industrie de luxe'. We may feel fairly confident too that labour was cheaper about Bradford than in Norwich before 1770".⁷⁷

EXTERNAL ECONOMIES.

73. In the preceding paragraphs an attempt has been made to show the influence of natural conditions upon the location of industry in this country, by using outstanding illustrations rather than by an exhaustive analysis. It has been shown that in some cases, such as iron and steel production, natural factors have been decisive, while in others what may be termed historical accident has played an important part. But when an industry has been established it creates for itself, or has created for it, man-made advantages or, to use the term employed by the late Alfred M. Marshall, external economies, which he defined as "those dependent on the general development of the industry."

74. The external economies enjoyed by an industry may be divided into two groups, namely, those that are due to the growth of the industry itself, rather than some other type of industry, and those that are due to the growth of any industry and the aggregation of people dependent upon it. These may be termed special economies and general economies. As an industry grows it builds up a body of highly specialised workers and in turn provides a market for such workers. Thus, for example, in the nineteenth century the textile industries trained a large supply of skilled workers in spinning, weaving, bleaching, etc., and the existence of such workers in turn fostered the growth of the industry.⁷⁸ That growth also led to the growth of a large number of subsidiary industries, including textile engineering, and these in turn added to the attraction of the textile area. In Liverpool the Cotton Exchange and in Manchester the facilities for marketing cotton piece-goods also strengthened the attraction of the district for the cotton industry. Again, the subsidiary industries fostered by one main industry may be similar to those required by another industry, with the result that the

⁷⁷ Board of Trade, p. 70, par. 56.

⁷⁸ Marshall. "Principles of Economics, 8th Edition, page 271." "When an industry has chosen a locality for itself, it is likely to stay there long, so great are the advantages which people following the same skilled trade get from near neighbourhood to one another. The mysteries of the trade become no mysteries; but are as it were in the air, and children learn many of them unconsciously. Good work is rightly appreciated, inventions and improvements in machinery, in processes and the general organization of the business have their merits promptly discussed: if one man starts a new idea, it is taken up by others and combined with suggestions of their own; and thus it becomes the source of further new ideas. And presently subsidiary trades grow up in the neighbourhood, supplying it with implements and materials, organizing its traffic, and in many ways conducing to the economy of its material."

growth of the first in a particular area may lead to the growth of others. This has been particularly the case in the Birmingham area, which has built up a number of light and cognate industries all fostered by the same group of subsidiary industries. In the Glasgow district the development of marine engineering was an important factor favouring the growth of other branches of heavy engineering, such as the construction of mining machinery and sugar crushing machinery. In this way specialisation beyond a certain stage tends to promote diversity—a diversity which is rendered necessary where the growth of the main industry is no longer sufficiently rapid to absorb the growing population.

75. The "general" economies tend to increase in importance. In coastal regions they include facilities for loading and unloading at the docks, while everywhere they include transport facilities. They also include technical, professional and educational services and many other advantages that are to be found in thickly populated districts. It need hardly be stated that if there are no decisive factors determined by nature the existence of economies of this type are of the first importance, particularly in view of the fact that large aggregations of people may also provide markets for the commodities that are produced. The location of industries producing finished articles, many of which contain much value in small bulk and may therefore be conveyed a great distance at a relatively low cost, is not largely influenced by natural conditions, for which reason such industries tend to concentrate in districts that are already thickly populated and therefore offer important external economies of a general character. The attraction of those districts is strengthened if, in addition to such economies, there also exist special economies due to the existence of cognate industries, as illustrated in the case of the Birmingham area in recent years. In that respect the Birmingham area differs from the London area, in which the decisive factor has been the existence of a large market.

NATURE OF THE CHIEF INDUSTRIAL CONCENTRATIONS.

76. The previous paragraphs have been devoted mainly to industries, to the parts of the country in which the chief basic industries are located, and to the influences by which their location was determined in the past. Even in a short general discussion, however, some reference should be made to the chief population groups and the nature of their industrial economy.

77. Lancashire and Cheshire contain two distinct population groups, namely, the Liverpool area and the Manchester area. The former is essentially a shipping and distributing centre, and

the basic manufacturing industries established in the neighbourhood during the nineteenth century were largely those (such as copper manufacture) which utilised raw material imported from abroad. But the Manchester area is essentially a manufacturing area, the chief industries being cotton spinning and weaving and textile finishing. Its history illustrates the tendency not only for an area to specialise upon one main industry but also for the industry to be split up into specialised sections, each concentrated in one part of the area. Thus the "cotton towns" north of Manchester specialised upon sections of the cotton industry, while Manchester itself became a sub-capital and the centre both of the commercial activities of the industry and of a large variety of industries, such as engineering, that were attracted to the city by the existence of external economies (both special and general) and of a large market represented by the cotton manufacturing towns.

78. The West Riding also contains two population groups, namely, West Yorkshire and South Yorkshire. West Yorkshire is the centre of the wool textile industry which, like the cotton industry, is carried on in a group of towns and villages each specialising, in greater or less degree, upon one section of the industry. But it differs from the cotton area in that the commercial centre of the industry (Bradford) is distinct and separate from Leeds, an important railway centre and the chief centre of the miscellaneous industries, including the construction of railway engines. West Yorkshire is also an important centre of the coal mining industry, with its commercial centre at Leeds, which has become the sub-capital of the region. South Yorkshire is now an even more important centre of coal mining and one of the most important steel producing centres in the country. The steel industry of Sheffield is intimately connected with a group of finishing industries, such as cutlery manufacture and engineering, located in the same district. It will thus be seen that the West Riding is a two-pyramid area, and that West and South Yorkshire are built upon different foundations, textiles and coal in the West and coal and steel in the South. In that respect it is closely resembled by South Wales, where the eastern industrial area is mainly based upon coal mining and the western area upon a group of metal and metallurgical industries.

79. Northumberland and Durham (including a strip of North Yorkshire) contain three rivers at the mouths of which large population groups have grown up. The economy of all three is similar, and is based upon coal mining, iron and steel production, engineering and shipbuilding, and chemicals. It differs from that of the Clyde area in that coal mining is absolutely and relatively far more important, and engineering and

shipbuilding less important than in the latter. It differs also from the economy of the Birmingham area which is based upon the production of miscellaneous metals and metal products, including iron and steel production, engineering and the construction of vehicles, and the non-ferrous metal industries, which employ more than half the total number employed in Great Britain in those (non-ferrous metal) industries.

80. With one exception all the population groups to which reference has been made depend very largely upon one or two "basic" industries, the exception being that contained in the Birmingham area. These, with their subsidiary industries, employ a relatively large proportion of the occupied members of such groups. The growth of the group is thus mainly determined by the growth of one industry or a small group of industries, some being related industries. But it has already been shown that the increase in output is more rapid than the increase in the number employed in an industry. It follows that when the period of rapid expansion was at an end and the rate of growth in output was no higher than that of the population of the country as a whole, not only did the rate of relative growth of population in the area fall but an increasing number of the population of that area became available for new industries. Moreover, the external economies created by the growth of the major industries proved an attraction for such new industries. Thus a period of specialisation was followed by a period in which real diversification became marked, so that, by the end of the period under review, the newer and more miscellaneous industries were represented, in greater or less degree, in all the main population groups, such as those in East Lancashire, the West Riding, and the Clyde area.

81. Nevertheless, even at the outbreak of the 1914-1918 war the economy of most of such groups was still highly specialised, so that their liability to persistent depression remained high.

CHAPTER IV.

THE POST-WAR PERIOD.

RECENT POPULATION CHANGES.

82. Between 1921 and 1937 the population of Great Britain increased from about 42½ to 46 millions, that is to say, by 7½ per cent., or rather less than one-half of 1 per cent. per annum. But the increase was very unequally distributed. Thus, for example, in London and the Home Counties the increase was about 18 per cent., while in the Midland group of counties, viz.,

Staffs., Warwicks., Worc., Leic., and Northants, it was about 11 per cent. No other area shows a comparable rate of increase. In the West Riding, Notts and Derby group the increase was of the order of 6 per cent., and in Mid-Scotland of 4 per cent. In Lancashire the increase was less than 1 per cent., while in Glamorgan and Monmouth there was a decrease of about 9 per cent., and in Northumberland and Durham of 1 per cent. In the "Rest of Great Britain" there was an increase of 6 per cent. The rate of increase of population in London and the Home Counties was nearly $2\frac{1}{2}$ times that of the population of the country as a whole; although it contains only slightly more than 25 per cent. of the total population it includes about 55 per cent. of the population added during the sixteen years in question. Although London and the Home Counties and the Midland group of counties contain between them only about 35 per cent. of the total population of Great Britain, they contain nearly 70 per cent. of the population added during the period. (See Table 1, para. 54.)

83. Between 1923 and 1937 the estimated number of persons insured against unemployment increased by 22.3 per cent. in Great Britain as a whole, by 42.7 per cent. in London and the Home Counties, by 28.2 per cent. in the Midland group of counties, by 15 per cent. in the West Riding, Notts and Derby, by 9.5 per cent. in mid-Scotland, by 7.6 per cent. in Lancashire and by 4.7 per cent. in Northumberland and Durham. In Glamorgan and Monmouth there was a decrease of 4.3 per cent., while in the "Rest of Great Britain," i.e., excluding the areas already specified, there was an increase of 27.8 per cent.**

84. The rate of increase in the number of insured persons was nearly twice as high in London and the Home Counties as in the whole country. In the Midland group of counties it was higher by about 6 per cent. than in the country as a whole and nearly twice as high as in any other area, excluding the "Rest of Great Britain." In all the other specified areas the rate of increase was considerably below the national rate, the highest rate being in the West Riding, Notts and Derby area. It is important to observe that these figures relate to the total number of insured persons, not to the number actually employed at the dates for which the figures were taken. If the number actually in employment at the two dates be substituted for the number insured the percentage increase is changed from 42.7 to 49.0 in London and the Home Counties combined; from 28.2 to 36.0 in the five Midland counties; from 15.0 to 12.0 in West Riding, Notts and Derby; from 9.5 to 9.2 in mid-Scotland; from

** Ministry of Labour, p. 290, Table 1.

7.6 to 10.0 in Lancashire, from 4.7 to 4.5 in Northumberland and Durham; from (a fall of) 4.3 to (a fall of) 20.5 in Glamorgan and Monmouth; from 27.8 to 28.8 for the Rest of Great Britain; and from 22.3 to 24.2 for the whole of Great Britain.⁴⁶

85. The foregoing statistics are concerned with trends in the regional distribution of the total population and of persons insured against unemployment. Between July, 1923, and July, 1937, the insured population in Great Britain, as a whole, increased by 22.3 per cent. At July, 1923, the estimated number of insured persons in London and the Home Counties was 2,420,510, and by July, 1937, it had increased by 1,032,500 to 3,453,010. If the rate of growth in this area had been no higher than the national rate of growth the increase in the number of insured persons would have been, not 1,032,500 but 539,800, so that the difference between the two, i.e., 492,700, represents the extent to which the rate of increase in London and the Home Counties exceeded the rate of increase in Great Britain as a whole.

INDUSTRIAL DEVELOPMENT OF LONDON AND THE HOME COUNTIES.

86. Trends in the geographical distribution of the industrial population are clearly related to industrial trends. But it does not necessarily follow that the relative increase in the number of insured persons in the London and Home Counties area is due to a rate of growth in the industries of that area higher than the rate of growth in the same industries in other parts of the country. The explanation of that relative increase is, indeed, to be found mainly in the fact that the area does not include a complete sample of all the industries of the country. Its industrial population consists to a much greater extent than that of any other area of persons employed in the expanding industries, while a much larger proportion of such industries is included in that area than in any other area in the country. The expanding industries have shown expansion wherever they are located, and the table given below which was prepared by the Ministry of Labour shows that their rate of expansion in the London and Home Counties area has not been abnormal. In other areas, however, they give employment to a smaller proportion of the total industrial population, and the declining industries normally employ a much larger proportion of the total. Thus the relative expansion of the London and Home Counties area cannot be regarded as an isolated phenomenon; part of its explanation must be sought in the decline of the declining industries of other parts of the country.

⁴⁶ *Ibid.*, p. 291, Table II.

Analysis of 23 industries in which, according to the evidence of the Ministry of Labour, the rate of expansion between 1923 and 1937 in Great Britain was greater than the average for all industries.

	London and Home Counties.	Lancashire.	West Riding, Notts. and Derby.	Staffs., Warwick, Worcester, Leicester and Northants.	Northumberland and Durham.	Mid Scotland.	Glamorgan and Monmouth.
Number of the 23 industries found in each area in 1923...	23	23	23	23	23	23	22
Total insured population in the 23 industries in 1923 ...	1,342,270	456,080	329,750	497,910	139,300	255,220	83,460
Number in the 23 industries as percentage of total insured population in area 1923 ...	55.5	26.9	23.5	41.1	22.5	32.2	18.3
Total insured population in the 23 industries as percentage of total insured in the same industries in Great Britain:—							
1923 ...	33.3	11.3	8.2	12.3	3.5	6.3	2.1
1937 ...	32.9	11.3	8.6	12.0	3.7	5.7	2.3
Percentage increase in the 23 industries between 1923 and 1937 as percentage of total increase in Great Britain in those industries ...	32.2	11.2	9.3	11.4	4.1	4.8	2.6

Note.—The 23 industries in question include 7 "Local" industries such as:—

Distributive trades,
Tramway and Omnibus service,
Laundries, job dyeing and dry cleaning,
Building;

and 16 "Basic" industries such as:—

Motor Vehicles, cycles and aircraft,
Silk and artificial silk,
Electric cables, apparatus, lamps, etc.,
Electrical engineering,
Hotel, public house, restaurant, etc. service.

87. While the relative increase in the insured population in London and the Home Counties is mainly due to the importance of the expanding industries in the economy of that area, it is also partly due to the fact that the area has offered greater attraction than others to such industries as the distributive trades, general engineering, dressmaking and millinery, miscellaneous metal goods industries, motor vehicles, cycle and aircraft, and

chemicals.⁴¹ Nor should it be forgotten that the statistics refer only to insured persons and do not include non-insured workers employed in the business professions, in the central offices of national organisations, in central administration, etc. Although complete statistics for this group are not available there appears to be little doubt that the rate of increase of the group has been higher in London and the Home Counties area than in the country as a whole.

THE DEPRESSED INDUSTRIES.

88. While it is no part of our problem to discuss the deeper causes of the depression in the depressed basic industries it is necessary to take note of such depression in so far as it has a bearing upon industrial trends. Partly on account of its importance as a factor in the distribution of population and partly on account of the fact that it illustrates, more sharply than any other industry, some conclusions that may be applied to other industries, it may be desirable to draw attention to recent trends in the coal mining industry. First it may be pointed out that, assuming no change in the methods of production and the rate of output per man, the output of the industry would need to increase at the same rate as the total occupied population if the industry was to absorb the same proportion as before of the occupied population. On the assumption that technological changes were taking place the growth in employment would not keep pace with the growth in output. Since 1913 the output of the industry has fallen, practically the whole of the difference representing a fall in exports. It is clear that if the amount of employment had remained stationary after 1913 the growth in the population in the mining districts would still have meant a growing surplus of workers available for other forms of employment. But there was a reduction in employment far greater than the fall in output. The Mines Department publishes annually the numbers employed in the coal mining industry "below and above ground" and the following figures are taken from its annual reports. Comparing the two periods 1911-3 and 1935-7⁴² it is found that while output fell by 15.7 per cent. employment was reduced by 28 per cent. Again, comparing the year 1937 with the year 1923, while output fell by 12.9 per cent. employment was reduced by 34.2 per cent. Finally, a comparison between the two boom years 1929 and 1937 shows that output fell about 7 per cent. and employment by over 17 per cent.

⁴¹ It is impossible to indicate the precise extent to which the relative growth of the London and Home Counties area is due to this factor, but the statistical analysis in Appendix II suggests that while it is doubtless of considerable significance it has probably been exaggerated in public discussion.

⁴² These are perhaps the best years available for comparison, for each of the two periods represented the last years of improving trade.

It is clear from these figures that changes in the manner of producing coal were even more important factors than trade depression.⁴³ Nor should it be forgotten that changes in the methods of producing coal include not only mechanisation but also concentration of production at the well-endowed mines and the abandonment of uneconomic mines. Again, the fall in the export trade affected the exporting areas, such as Durham and South Wales, far more than the inland regions, such as South Yorkshire and Notts. Further, while such exporting areas were suffering from extreme depression others, such as South Yorkshire and Notts., were expanding at a sufficient rate to maintain the volume of employment even in the face of progressive mechanisation. Thus the depression caused by a fall in the output of coal and the further surplus of workers created by mechanisation and concentration produced far-reaching changes upon the distribution of the mining population that remained at work. It should be observed also that in spite of the growth in general industrial activity the demand for coal in Great Britain remained practically stationary, after allowing for temporary fluctuations. The failure of home demand to increase was due to economies in the utilisation of coal and to the growing competition of oil and electricity as sources of power in transport and manufacturing industry. But this competition represented a substitution of one industry for another, not a fall in the total demand for the services previously provided by coal.

89. Railway transport, which is one of the largest contracting industries, and the cotton and wool textile industries provide two outstanding examples of the competition of substitutes. Railway transport has lost its pre-war monopoly and has long been faced with the growing competition of road transport. The number employed in the railway transport industry has steadily contracted, but the transport industry in its wider sense has rapidly expanded. The increase in employment in road transport is far greater than the reduction in employment on the railways, although it is difficult to estimate whether the increase in the total number of people employed in all forms of transport has increased at the same rate as the total population between the ages of 16 and 64. The cotton industry and (to a less extent) the wool textile industry have suffered from the loss of foreign markets, which is the main cause of the decline in employment, particularly in the cotton industry. They have also probably suffered to a small extent from the competition of artificial silk, but the growth of employment in the silk and artificial silk industry has only compensated in small measure for the total

⁴³ The statement of this statistical fact is not of course intended to imply criticism of the policy of introducing technical changes or any other kind of real economy in the conduct of industry. Changes of this kind have been introduced from time immemorial; they have, indeed, made economic and social progress possible.

decline in employment in the textile industry. Thus, for example, in the cotton and woollen industries employment declined from approximately 715,000 to approximately 570,000, a decline of 145,000, while the number employed in the silk and artificial silk industry only increased from approximately 39,000 to approximately 76,000, an increase of 37,000. The fall in the numbers employed in shipbuilding and repairing, from approximately 174,000 in 1924 to approximately 133,000 in 1937, was due mainly to a fall in output,⁴⁴ which in turn was due to the reduction in international trade and the fall in the export trade in ships; but it was also associated with technological changes in the shipyards and to the growing efficiency of ships, which were larger and faster and, on account of harbour improvements, were able to load and unload more quickly than in pre-war days. Again, in the case of the iron industry, which also suffered from a decline in output, the decline in employment was greater on account of the growth in the size of the furnaces and other technological changes and the consequent increase in output per worker.

90. It will thus be seen that the state of trade in the depressed exporting industries of this country does not provide a full explanation of the state of employment in those industries in the areas in which they are situated. They had passed through a long period of rapid expansion, during which the growth in output was accompanied by an increase in employment in many cases greater than the rate of increase in the occupied population. At that time, in spite of economies effected by invention and organisation, the areas in which the industries were situated attracted labour from other parts. Depression since the war has intensified changes that meant an economy of human effort with the result that instead of being able to attract workers from outside the industries find themselves with a continuing surplus representing both a decline in output and the immediate effect of technical changes. In some cases the decline was due to the growth of industries (such as rayon) producing substitute products. But such industries were not in all cases located in the same regions. At the same time there is a material difference between a decline in output due to the growth of an industry providing a substitute and the decline in output due to the contraction of foreign markets. In the former case there is specific employment within sight as at least a partial alternative to the employment that it destroys; in the latter markets are destroyed and alternatives have to be sought. The one change is an incident of growth, the other an incident of a change in

⁴⁴ By comparing the tonnage launched during the three year periods 1911-13, 1928-30 and 1936-38 (each being the "boom" period in its own cycle of change), and representing 1911-13 by 100, the index numbers for the two other periods are 81.2 and 51.3 respectively.

the larger world which may be a real and lasting injury to the exporting community. This, however, is a wide problem of national unemployment which goes far beyond the issues placed before the Commission.

91. The migration of the industrial population from other areas to London and the Home Counties must be considered in the light of the changing trends in the chief industries. Before the war those industries were expanding so rapidly as to provide normal employment for the growing population of those parts of the country in which they were situated, which meant a rate of growth in those industries on the one side and the lighter industries on the other determined by their relative profitability, while in London and the Home Counties the rate of growth of the expanding industries was determined by the industrial population upon which they were able to draw. After the war the decline of the "basic" industries removed a population restriction upon the expanding industries, and this took place at a time when a spate of new inventions brought new light, or relatively light, industries into being. The substitution of electricity for coal during the same period reduced the attracting power of the coalfields to some extent, though it is impossible to measure that extent. It certainly reduced the capital expenditure needed to start a new industrial enterprise, but it did so in all parts of the country. It may also be that the substitution of electricity for coal reduced local variations in the cost of providing power, but the gain in this respect was obviously less important in the case of the lighter finishing industries than in the heavier manufacturing industries. While it is probably true that the pull of areas (including London and the Home Counties) remote from the coal field was to some degree strengthened by the introduction of electricity the new source of power probably exercised less influence than other factors. In its evidence the Board of Trade stated: "The widening of the area of cheap power is probably one of the factors which has contributed to the expansion of the lighter (including the electrical) engineering trades in the region of Greater London in recent years." In the course of his evidence the Board's witness expressed the view that electricity both attracted industries to the London area and acted as a decentralising influence. Some of the industries that are highly concentrated in Greater London—manufactured stationery; musical instruments; scientific instruments; leather goods; fancy articles; fur—would have been in that area even without the development of electricity, but in other cases—such as vacuum cleaners, wireless apparatus, and light engineering generally—the use of electricity is an important cause of their growth there.⁴⁶

⁴⁶ Board of Trade, p. 80, par. 89; and Q. 894-941.

TRANSPORT.

92. The influence of changes and development in transport since the war upon the distribution of industry and population is difficult to estimate. It is clear that no trade could be carried on between two communities separated by an impassable barrier. Each would be compelled to provide for itself all the things that were needed for its own existence. If the physical barrier were partly removed some inter-community trade would spring up, but it would be restricted to that in which the economy of specialisation was greater than the remaining obstacle of transport. If the barrier were completely removed and the goods of the two communities could be interchanged without any cost of transport, specialisation would be carried still further, being based upon narrower differences in physical and other advantages. Further, if the people of the two communities as well as the goods that they produced could be moved from one place to the other there would inevitably be migration from the less richly endowed area to the other.

93. This simple hypothetical case is of assistance in endeavouring to mark the effects of changes in the transport system of this country. As has already been pointed out, the growth of railway transport enlarged the markets for the products of the various parts of the country, promoted specialisation and fostered the growth, in appropriate places, of those industries that constituted the industrial economy of the nation. Thus, for example, textile manufacture concentrated in increasing degree upon Lancashire and Yorkshire and the products of the industry were sent not only to other parts of the country but to the ends of the earth; coal mined in the Midland area was sent by rail to London. But industries only develop where there are transport facilities. They followed the railways and in particular concentrated upon ports and railway junctions, the railways and the junctions having themselves been constructed where industrial development based upon other and earlier forms of transport had already taken place.

94. Thus it may be said that railway development removed, or partly removed, the obstacle to the regional specialisation and concentration of industry. But that was not all. The method of charging employed by the railway companies possessed two characteristics, each of which tended to reduce the obstacle to the movement of goods over long distances. In the first place, commodities were classified "having regard to value, to the bulk in comparison to weight, etc.,"⁶⁶ the low value commodities, such as coal and other raw materials, being charged a lower ton mile rate than high value commodities, such as consumption

⁶⁶ Railway Companies' Association, p. 666, par. 10.

goods and other finished products. In the second place, the railway companies employed what is termed the tapering system, under which the rate per ton mile was reduced as the distance over which the goods were conveyed was increased. Thus it may be stated, in general terms, that railway policy tended to reduce to a minimum the obstacle of transport and in that way to foster regional specialisation and long distance traffic.

95. After the war, railway transport was subjected to a rapidly growing competition of road transport, which has played a large and increasing part in the economy of the nation. The effect of the growth of road transport in mechanically-driven vehicles has been threefold. In the first place transport facilities have been created in areas and between points that are not being served, or served in the same manner, by railway transport. This extension of transport facilities (as distinguished from a reduction in transport costs between places already enjoying railway facilities) has created new possibilities of industrial development in areas not previously served. In the second place the competition of road transport between points already served by railways has seriously affected railway rates and, within the area of competition, has necessitated a rapid increase in the amount of traffic carried by the railways at exceptional rates, that is to say, at rates that the particular traffic could bear and below the standard rates. Road transport began by invading the monopoly of railway transport over comparatively short distances, but the competition spread until now exceptional rates are quoted for traffic conveyed between places over 100 miles apart. The need for exceptional rates has tended to reduce the effectiveness of the tapering system as an encouragement to long distance traffic and regional specialisation of industry,⁴⁷ and to attract new industries into the area in or around London. The exceptional rates are not the cause of this attraction; the cause is to be found rather in the development of road transport, which largely reduced the monopoly of railways as carriers of goods and thereby rendered exceptional rates inevitable if the railways were to continue to provide the service.

96. In the third place, the growth of road transport has played a part in such decentralisation of population as has already taken place. Residential areas beyond easy reach of trains have grown up around most of the big cities as a result of the creation of new transport facilities. Similarly industrial

⁴⁷ The recent Report of the Transport Advisory Council on the proposals of the Main Line Railway Companies as to the conveyance of merchandise by rail, which the Government have accepted in principle, proposes a considerable relaxation of the existing statutory control of railway freight charges. It is impossible at this stage to estimate what practical effect this will have on the present basis of railway rates or on the location of industry

establishments have been removed from the congested parts of large towns to outlying areas partly because a supply of labour can be assured, if necessary, by road transport and partly because road transport reduces the disadvantage of distance from the heart of the market. For these two reasons the growth of road transport and other forms of local transport may be said to be among the most important of the factors leading to outward movement.

DEVELOPMENT OF LIGHT INDUSTRIES.

97. Reference has been made to three of the four changes which, in combination, mark the change from the old to a new industrial era, these being the decline of the principal "basic" industries constituting the foundation of the industrial economy of the chief industrial areas in the North and West; the destruction of the monopoly of steam power through the growing use of electricity and oil, and the destruction of the monopoly of railway transport through the discovery of the internal combustion engine and the growth of road transport. The fourth change has been the rapid expansion of miscellaneous industries, most of which are of a relatively light character and give employment to relatively large proportions of women workers. Many of these industries were already in existence before the war while some of them have been fostered in this country since the war by the tariff policy employed by the Government. The remainder are either industries that have come into existence in this country and elsewhere as the result of recent inventions, or industries already existing elsewhere but created in this country by the tariff policy of the Government.⁴⁸ This group of industries is so miscellaneous in character that their location must be influenced by numerous factors; nevertheless, it is possible to submit broad general influences that jointly help to explain the extent to which they have grown in London and the Home Counties and in the Midlands during the postwar period.

98. In the first place, the cost of power is a relatively small element in the total cost of supply, so that in so far as the growth of electricity has exercised an influence upon their regional location, that influence is indirect rather than direct. In the second place, a considerable proportion of these industries fall into a group of which it may be said that they are assembling industries based largely upon steel. The production of steel, which is the intermediate standardised

⁴⁸ To the growth of these industries should be added the spread of the holiday habit and the growth of many seaside and other holiday resorts. Evidence suggests that the growth of the services represented by such resorts, including the service of transport, has been among the most rapid forms of economic growth since the war, and that its effect upon the movement of population has been of the first importance.

material, is carried on in areas that are still determined by those natural and other factors discussed in the preceding chapter. But the cost of steel itself forms a relatively small proportion of the final cost of the finished article, so that it may be obtained in most parts of the country without serious differences in the cost of the final product; in other words, steel is not a factor in the location of this group of industries. The steel itself is converted into component parts of the finished product, which is often bulky and, therefore, in order to reduce transport costs, is constructed as near the market as possible. But the assembling industry is itself the market for the component parts, so that even if such parts are not made in the establishment in which they are afterwards assembled, they are likely to be made in the vicinity. It is in this sense that steel may be regarded as the intermediate product; on the one side natural factors and transport, and, on the other side, the market and transport are the determining considerations in the location of the successive industrial processes.

99. In some respects the case of clothing resembles that of metal products. The location of the industries producing textile materials is determined by factors already indicated in the previous chapter and the industries are largely concentrated in Lancashire and Yorkshire. The materials themselves command a wide market and are, therefore, not an important factor in the location of the tailoring and dressmaking industries. The introduction of the bandsaw and of electrically driven machines converted a large part of a handicraft into a factory industry. In the case of women's clothes, fashion counts with the result that the industry has grown in London (i.e. near the largest market) relatively to other parts of the country. The case of men's ready-made clothes, however, is an exception: fashion and the market have exercised less influence, and the main factories are located in Leeds and other places near the textile industries.

100. These examples show the part played by the market as a factor in the location of certain types of industries. But the market may be an equally strong factor for other reasons. A large market represents a large aggregation of people and of industries. It therefore offers those facilities for production which in the previous chapter were termed external economies. They include an adequate supply of the right kind of labour and of subsidiary industries. They also include, in greater or less degree, cognate industries. There can be no doubt that the existence of cognate industries is a factor of the first importance. An industry may be defined by process or by product. The Birmingham district contains a large collection of industries based upon the capstan and the press but differing in their final products. It is clear that the existence of such

industries acts as an attracting influence upon others based upon similar manufacturing processes. Similarly the Birmingham district, producing a large miscellaneous group of similar products, attracts other industries of the same type. It is largely this factor, namely, the existence of cognate industries, whether defined by process or by product, that creates the further attraction described in the evidence of the Board of Trade as industrial atmosphere. In such an area as that already indicated the existence of a large group of cognate industries also means the existence of a large group of industrialists accustomed to frequent changes and possessing an adaptability, in relation to new industries, that cannot be expected in, say, a highly specialised mining district, or an iron and steel producing district. The advantage of such an area is still further strengthened if, as in the case of London, it constitutes a large part of the national market for the product.

101. The importance of London as a market is not fully measured by its population. It has those advantages that are associated with a capital city—probably in greater measure than any other capital city. For some new industries London is the first market in point of time; it provides a sort of initial goodwill and is the first which the industrialist seeks to capture. It contains a large body of wealthy potential consumers and attracts many others from the provinces; these constitute the first approach to the national market. Further, many industrialists wish to be near the pooling centre of experience and initiative and the centre of discussion and communication. Finally, the raw material of some industries is imported into London from overseas; such industries are attracted to the London area for much the same reason as the cotton industry has been built up in Lancashire, the grain milling industry at Hull and the oil and oil cake industry near the ports.

CONCLUSION.

102. The above considerations are concerned with the regional distribution of industry, which, in turn, determines the regional distribution of the industrial population. They may be summed up in the statement that in the absence of decisive natural factors, such as the existence of coal or of an adequate supply of suitable water, industries tend to be located within easy reach of the market. The industries that have shown a relative expansion since the war are either local industries or industries in the location of which natural factors have not been decisive. The cost of power and transport is relatively low; in the past such industries tended to settle in places, like London and Birmingham, that were not suitable for the development of those "basic" industries that are now declining; such places therefore became the legatees of the remainder of the industrial estate,

particularly as they constituted, or were near, large markets. This factor or advantage has been cumulative in its effect. The existence of cognate industries, or common subsidiary industries, of industrial atmosphere and of a large and growing market have perpetuated and even accelerated a growth that was already taking place long before the war.

PROBABLE FUTURE TRENDS.

103. The movement of the industrial population towards London and the Home Counties within recent years has been associated with an outward movement of industry and population from the congested parts of London to the suburbs and the surrounding country. In general, it may be said that up to a point the advent of a new industrial establishment in a large town or urban area often adds to the advantages enjoyed by those already settled there. But local concentration may reach such a stage as to bring disadvantages, such as rising land values and increasing difficulties of local transport, to the industries already established, and these disadvantages may become so serious as to make it economical for some firms to seek new sites at a distance from the centre. That stage has been reached in London and in some other large towns, and the advantages to be gained by the removal of an industrial establishment to the outskirts or beyond have been strengthened by the improvement in transport facilities. Apart from this factor it should be noted that the growth of an urban area has influenced its industrial system by necessitating increasing expenditure and increasing employment on local transport. It will thus be seen that a large urban area exercises a double influence. Being a large market it tends to attract miscellaneous industries of a relatively light character to itself, but it also tends towards location of those industries on its outskirts, or migration to the outskirts of industries already established near the centre.

104. In the present troubled and uncertain condition of world affairs, it is difficult to attempt to predict the probable future course of trade or industry in this country or elsewhere. If, however, normal international conditions, with a reasonable degree of stability, are once more established, the probable future trends of industry and the industrial population in Great Britain, if not influenced by Government policy, seem likely to be governed by several considerations. In the first place, it appears not unlikely that in course of time the fall in the rate of increase of the population will tend to reduce the rate of expenditure upon capital development. In the second place, it is not impossible that the fall in the exports of the products of the well-known pre-war exporting industries will not be permanently arrested for some time to come. In the third place, a rising standard of living made possible by invention

and organisation, while likely to counteract to some extent the results of a reduction in the rate of expenditure upon capital development, may be expected to express itself in increasing degree in an expansion of miscellaneous light industries as well as of services. It would not, therefore, seem unreasonable to anticipate that the importance of the pre-war "basic" industries in the national economy may decline, and that that of other industries may increase, and in that event the industrial areas containing the former will only be able to keep up with the national rate of general industrial progress, if they are able to stimulate within themselves a growth of the miscellaneous light industries in excess of the rate of growth of such industries in the country as a whole. To what extent that growth can be stimulated, whether by Government action or otherwise, it is impossible to prophesy. But the attraction of London and the Home Counties, which within recent years has been so strong, may already be losing, or in course of time may be expected to lose, some of its force by reason of the relatively greater vulnerability of the area to attack from the air in the event of war as compared with other parts of the country. Apart from this factor, and in the absence of some restrictive regulation by the Government, we find no reason for supposing that the trend to the South-East will be permanently checked after the Government's rearmament policy, which of late has greatly increased employment in the North and West, has accomplished its purpose.

105. Such a trend is not, however, in our view, inevitable, and the question then arises whether it is desirable. If it is not desirable the further question arises as to how far it can be checked. For reasons set out in subsequent parts of this Report we regard the trend as undesirable, and in Part IV recommend measures designed to place a check upon it.

PART II.

SOCIAL, ECONOMIC, AND STRATEGICAL
DISADVANTAGES.*Section II of Terms of Reference:—*

To consider what social, economic or strategical disadvantages arise from the concentration of industries or of the industrial population in large towns or in particular areas of the country.

CHAPTER V.

SOCIAL.

HEALTH.

106. An issue of primary importance in the consideration of the social disadvantages which arise from concentration of industries or of the industrial population in large towns or particular areas is the effect of such concentration upon the health of the community. A large body of expert evidence has been placed before the Commission upon this subject. The Registrars-General for England and Wales and for Scotland have supplied comprehensive memoranda reviewing and analysing the question in the light of the mortality statistics of the last 60 to 70 years. It may here appropriately be pointed out that the official statistics as to mortality constitute the only comprehensive data which are available over a long period of time as an indication of the health of the nation. They are comprehensive in the widest sense, since they include the whole of the health experience, as reflected by deaths, and are available for every district of the country on a uniform basis.⁴⁸ They are free from the influence of the personal factor which is inseparable from any detailed non-statistical appraisal of the state of the public health, and they afford a sound basis for assessing progress over a given period.⁴⁹ It is, however, important to recognize that they are subject to real limitations. As the Registrar-General for England and Wales pointed out, social statistics of mortality are capable of varying interpretations,⁵¹ and it would, therefore, be unwise to use them as the sole basis for conclusions as to the present state of health in large towns. Years may pass before they reflect the effects of public health measures like slum clearance and abolition of overcrowding.⁵² Moreover, migration from country to town, or even from town to town is obviously a factor by which the

⁴⁸ Registrar-General (E. and W.) p. 928, Q. 7922-4.

⁴⁹ Joint Medical Committee.*

⁵¹ Registrar-General (E. and W.), p. 928, par. 55.

⁵² Dept. of Health, Scotland, p. 24, Q. 241-7.

urban statistics of mortality may be influenced according as the migrants bear the imprint of a native environment more or less healthy than that to which they remove. In a similar connection it is pertinent to remark that evidence has been placed before the Commission that destitute persons tend to gravitate to the town.⁵³ In the light of these considerations it is clear that a mortality rate is not necessarily an accurate measure of the present health of the community to which it relates.⁵⁴

107. In view of the limitations to which mortality statistics are subject in their use as indices of the existing standard of health, the Commission sought the assistance of the Royal Colleges of Physicians of London and Edinburgh, to whom four points were put on which the Commission were especially desirous of receiving information. These points were:—

(a) Disadvantages, from the health point of view, of life in the large industrial towns in the past.

(b) Improvement in health conditions, in these towns, over the last half or three-quarters of a century.

(c) Health conditions to-day in those towns as compared with conditions in rural areas; does or does not the balance of advantage still turn in favour of the country, and, if so, to what extent?

(d) Probable developments in the future.

The two Colleges readily agreed to afford assistance upon these points. At the instance of the Royal College of Physicians of London a Joint Committee⁵⁵ comprising representatives of the Royal Colleges of Physicians and Surgeons, and of the British College of Obstetricians and Gynaecologists was formed to deal with the matter and in the course of its work this Committee obtained information on relevant matters from the Medical Officers of Health of 24 towns including Birmingham, Liverpool, Sheffield, Stoke-on-Trent and Cardiff as well as seaside resorts and garden cities, and from the Medical Officers of Health of 11 counties.

The Royal College of Physicians of Edinburgh also set up a Committee which consisted of the President and 11 other Fellows, a nominee of the Royal Faculty of Physicians and Surgeons of Glasgow, and a medical officer of the Department of Health for Scotland. On completion of their work both Committees supplied the Commission with reports. The Ministry of Health and the Department of Health for Scotland also supplemented by special evidence upon health issues the general evidence they submitted to the Commission.

⁵³ Scottish Cities, p. 221, Q. 2344; and London County Council, p. 391 par. 88.

⁵⁴ Joint Medical Committee and Royal College of Physicians, Edinburgh.*

⁵⁵ Hereafter referred to as the Joint Medical Committee.

Conditions in the Past.

108. Almost a hundred years ago a medical investigator reporting to the Royal Commission on the State of Large Towns and Populous Districts wrote: "It has long been known that where a number of individuals are gathered together within a narrow compass, as in towns, the mortality among them considerably exceeds that occurring among an equal amount of population scattered over an extended surface, as in country districts." That was at a time when the sanitation and health of industrial towns were notoriously bad. The Royal Commission reported in 1844 that investigation showed that in 50 towns (including the largest manufacturing towns and the principal ports after London) whose condition was examined, in scarcely one place could the drainage or sewerage be pronounced to be complete and good, while in seven it was indifferent and in 42 decidedly bad as regards the districts inhabited by the poorer classes. It was often found that the most crowded portions of the town, those most densely inhabited by the poorer classes, were utterly neglected and had no drainage, the refuse being allowed to accumulate and decompose in open channels and pools, or to run into open and stagnant ditches in the immediate vicinity of the houses. The situation as regards water supply was found to be no better: in many instances, it was reported, the poor had no proper supplies of water available to them and were in the habit of begging or stealing the water they needed.⁸⁶ In the same report of 1844 the following table⁸⁷ appeared showing the average age at which death occurred during one year in five of the principal towns of England:—

	<i>Average age at death. Years.</i>
Metropolis, i.e., Kensington, Strand, White-chapel and Bethnal Green Unions	26½
Leeds	21
Manchester	20
Bolton	19
Liverpool	17

109. At about the same time Professor Robert Cowan of Glasgow described the conditions in Glasgow in the following terms:—

"The next cause (after destitution) of the diffusion of epidemic disease, is the state of the districts which the poor inhabit In all districts of the burgh, and in

⁸⁶ Royal Commission on the State of Large Towns and Populous Districts, First Report (1844), pp. x-xi, and Appendix, pp. 6-12. Also Second Report, p. 1.

⁸⁷ *Ibid.*, Appendix, p. 14. It will be appreciated that these figures include infant mortality.

the suburbs, there is a want of sewerage and drainage The streets, or rather lanes and alleys, in which the poor live are filthy beyond measure The houses, in the disease-haunted areas, are ruinous, ill-constructed, and, to an incredible extent, destitute of furniture. In many there is not an article of bedding, and the body clothes of the inmates are of the most revolting description; in fact, in Glasgow there are hundreds who never enjoy the luxury of the meanest kind of bed, and who, if they attempted to put off their clothes, would find it difficult to resume them."⁵⁸

110. Professor W. M. Frazer, the Medical Officer of Health for the City of Liverpool, has written in connection with the present inquiry the following description of conditions prevailing in that city in the middle of the nineteenth century:—

“ There were then no Infectious Diseases Hospitals, and sewage disposal arrangements in the slum areas of the town were non-existent. There was no piped water supply in general use, no provision for the cleansing and paving of streets and passages, and an enormous population, drink-sodden and degraded, was living in the conditions of utmost misery in the slum areas near the docks. Every conceivable combination of circumstances was present to cause explosive epidemics and during 1847, in the midst of the Irish potato famine, 300,000 immigrants landed throughout the year at the Port. Of these about 80,000, it is said, remained in Liverpool. These immigrants, unchecked and unsupervised, crowded into the cellars of the poorer quarters of the town bringing typhus and other infectious diseases with them and supplying still more combustible material to feed the fire of the already sufficiently prevalent epidemics. . . . There followed what were probably the worst epidemics which occurred in any town in this country during the nineteenth century. The mortality rate from all causes during 1847, according to the Medical Officer of Health's reports, ranged from one out of every seven of the population in the crowded Vauxhall district to one in every 28 in the then outer areas of Rodney and Aberromby. In one street—Lace Street—not less than one-third of the ordinary population died in the course of the year.”⁵⁹

III. Though Professor Frazer's vivid description relates to a town in which special and difficult conditions prevailed and accordingly is not necessarily to be taken as representative—as indeed it does not purport to be—of the state of large industrial

⁵⁸ Dept. of Health, Scotland, p. 1003, par. 5.

⁵⁹ Joint Medical Committee, Appendix A.*

towns generally at the time in question, it serves as a forceful reminder of the conditions which prevailed less than a century ago in one at least of the great industrial centres of this country.

112. More than 20 years later deplorable conditions still persisted in some towns of considerable size. The Sanitary Inspector in Dundee, at the time the Public Health (Scotland) Act, 1867, came into operation, described the conditions then prevailing in that town as follows:—

“ At this time, i.e., about 1867, Dundee was wholly devoid of sanitation. Drainage of even the most meagre description was barely in evidence and what there was consisted of stone-built rubble, allowing the liquid to percolate through and soak into the ground, thus poisoning the soil. A few public sewers were put down but these were confined to the leading thoroughfares. There was no proper supply of water for domestic, culinary or flushing purposes. All there was was largely obtained from wells situated at various places throughout the Burgh, the supply being limited and derived entirely from springs. Many of the population had to carry their supplies at least half a mile to their homes in pails. In dry weather water was carted into the Burgh in barrels from outwith the boundaries and sold on the streets. Monikie provided the only permanent supply, but it was very scanty and altogether insufficient. Under such conditions water-closets were an impossibility.

Overcrowding was rampant and the staff was much too weak to cope with it energetically, inspections being carried out only between midnight and 4 a.m. Many of the buildings in the denser parts of the town were simply rotten, whilst there were between 200 and 300 underground cellars used as dwelling-houses.

There was no attempt made to enforce the Smoke Abatement Act for modifying the pollution of the atmosphere by smoke emitted in dense volumes from factory stalks and which was full of smut and coom. Dairies were of the most insanitary character, being without drainage, paving, light, ventilation, or dung stances, while the milk was drawn from the cows in the most undesirable surroundings. Piggeries were numerous and scattered all over the town in undesirable places, even bedrooms, cellars, and attics being utilised as stys, the pigs mixing freely with the family.

From the year 1860 onwards smallpox, typhus, and typhoid or gastric fevers were serious menaces to the health of the community. In 1865 over 1,000 cases of typhus came to light. For many years subsequent to this there were

never less than from 300 to 500 cases per annum, and the treatment of these without proper hospital accommodation other than the Royal Infirmary, which was invariably full, was a problem which the local authority long hesitated to deal with. Occasional cases of cholera cropped up in the warm weather from 1860 to 1867, since which date there has been no recurrence of this."¹⁰

113. At that time a high rate of mortality, as judged by present-day levels, was common both to large towns and other parts of the country, and even as late as the decade 1871-80 the average annual death rate in Great Britain was 20.3 per 1,000 population (standardized).¹¹ Each succeeding decade has seen a steady improvement, and at the end of the ten years 1921-30 the average rate had fallen by more than 47 per cent. to 10.6 per 1,000 population in England and Wales and by 40 per cent. to 12.2 per 1,000 in Scotland.¹²

114. All parts of the country have participated more or less equally in that improvement,¹³ and a multitude of factors, social and economic, have contributed to it. Advances in medicine and the sciences generally; a higher standard of living with all that this implies in the way of better nutrition, clothing and so on; improved sanitation, water supply and housing; the development of the public medical and social services, such as the hospitals, the maternity and child welfare service, the health and unemployment insurance schemes, the widows, orphans and old age pensions scheme—these have all, in common with many other developments and factors, helped to achieve that advance in the public health which is connoted by the decline in the standardized mortality rate. Factors which have operated to improve or protect the public health have naturally most greatly affected those areas, such as the large towns and manufacturing districts, where it was the least satisfactory or was exposed to the greatest danger. Thus, though the standardized death rates in the industrialised counties¹⁴ of Lancashire and Lanark were in 1921-30, as in 1871-80, the highest among the counties, they improved between those two periods to a greater extent than the death rates for any other counties: the average annual death rate for Lancashire in 1921-30 was as much as 50 per cent. below the rate in 1871-80.¹⁵

¹⁰ Dept. of Health, Scotland, p. 1003, par. 4.

¹¹ The standardized death rate represents the number of persons who would have died in a year out of each 1,000 of the population if the sex and age constitution of the population to which it relates had been the same as that of the census population of England and Wales in 1901 (this being the standard population used in the national statistics of Great Britain).

¹² Registrars-General, p. 941, Table A, and p. 997, Table A.

¹³ Registrars-General, pp. 941, Table A, and 997, Table A.

¹⁴ Statistics for towns are not available before 1911.

¹⁵ Registrars-General, pp. 941 and 997.

115. Turning to towns and rural districts in England and Wales, between 1911-14 and 1931-34 the standardized death rate fell by 31 per cent. and 28 per cent. in county boroughs and other urban districts respectively as compared with a reduction of 22 per cent. in rural districts. In Scotland also the improvement has been relatively greater in the urban areas than in rural areas, the percentage reduction in the death rate between 1911-14 and 1931-34 being 27 in large burghs, 25 in small burghs and 22 in landward areas.⁶⁶

116. Thus the gap between urban and rural mortality has been narrowing. In 1931-34 it still, however, remained substantial, as between county boroughs or large burghs on the one hand and rural areas on the other hand, as will be seen from the following table,⁶⁷ which, nevertheless, also shows that the difference between the rates in these two classes of areas was lessened in striking measure between 1911-14 and 1931-34.

Area.	Standardized death rates per 1,000 living at all ages.		Infant mortality rates per 1,000 live births.	
	Average rates.		Average rates.	
	1911-14.	1931-34.	1911-14.	1931-34.
England and Wales, all areas	13.5	9.7	110	64
London Administrative				
County	14.5	10.1	108	65
County Boroughs(a) ...	15.9	10.9	125	73
Other urban districts(a) ...	13.0	9.7	107	61
Rural districts(a) ...	10.9	8.7	90	56
Per cent. excess in county boroughs over rural districts in England and Wales	+46	+25	+39	+30
Scotland, all areas ...	14.9	11.2	110	82
Large burghs ...	16.8	12.2	123	90
Small burghs... ..	14.2	10.6	102	70
Landward areas ...	12.8	10.0	91	71
Per cent. excess in large burghs over landward areas in Scotland ...	+31	+22	+35	+27

(a) Excluding areas in London's outer ring from 1931 onwards. (This exclusion has no important effect on the county borough or rural district rates, but it raises the rates for other urban districts by about 5 per cent.)

⁶⁶ Registrars-General, p. 943, Table B, and p. 998, Table B.

⁶⁷ Ibid, p. 918, par. 9; p. 984, par. 10 and p. 998, Table B.

It will be seen from the table that while in 1911-14 the general mortality rates in the county boroughs of England and Wales and the large burghs of Scotland were 46 and 31 per cent. respectively in excess of the rates in rural and landward areas, the excesses had fallen in 1931-34 to 25 and 22 per cent. The excess of infant mortality in county boroughs and large burghs also dropped considerably in that twenty-year period though not to the same extent as in the case of general death rates.

117. There can be no doubt that this drawing together of the mortality rates in the large towns and in the rural districts is symptomatic of the remarkable advance which has been made in overcoming and eliminating the disadvantageous elements which formerly influenced the public health in large towns.

Present Conditions.

118. Later figures hold the promise of further improvement. The standardized mortality rates and the infant mortality rates for the towns were both in 1935 and 1936 below the average rates for the towns for the period 1931-34. The general and the infant mortality rates, however, still remain higher for the towns than for the rural districts.⁶⁸ Although the question whether or not life in the town is to-day as healthy as life in the country involves so many complex issues and intangible factors that conclusive proof one way or the other is unobtainable, the fact of that difference still obtaining between urban and rural mortality rates naturally raises a presumption that, though the difference between town and country is much less than it was last century, on a general view the country remains healthier than the town. That presumption is supported by the evidence of the Joint Medical Committee which embodied the conclusion that despite the enormous improvement in the health conditions of large industrial towns over the last half or three-quarters of a century, the health of rural districts remains to-day better than that of urban districts.

119. Nevertheless such great progress has been made in the towns that some authorities go so far as to say that some urban areas, even cities, have attained equality with the country. As an instance of the expression of this point of view, reference may be made to the evidence supplied to the Commission by the Royal College of Physicians of Edinburgh where it is said: "Already, it would seem, in certain cities and in some parts of most cities, the standards achieved are not inferior to those which obtain in the country" Other authoritative statements to a similar effect have been placed before the Commission.⁶⁹

⁶⁸ Registrar-General (E. and W.), p. 918, par. 9.

⁶⁹ E.g., Medical Officers of Health for Sheffield, Wigan and Kent quoted in Appendices to Report of Joint Medical Committee.*

120. Before leaving the subject of the present standard of health in towns reference should be made to the suggestion which is sometimes advanced that from the point of view of the public health there is an optimum size of town. With regard to this suggestion attention is drawn to the following table¹⁰ in which mortality figures are given for towns in England and Wales, grouped according to the size of their population at the census of 1931.

Areas and Population Groupings.	Standardised Mortality Ratios at all ages. ¹¹		Infant Mortality.			
			Ratios per 1,000 live births.		Rates per 1,000 live births.	
	1935.	1936.	1935.	1936.	1935.	1936.
England and Wales ...	100	100	100	100	57	59
County Boroughs outside Greater London :—						
Under 50,000	109	103	112	92	64	54
50,000–100,000	110	110	109	107	62	63
100,000–250,000	114	113	114	108	65	64
250,000 and over	116	112	121	117	69	69
Other Towns outside Greater London :—						
Under 50,000	100	100	96	95	55	56
50,000–100,000	108	99	93	80	53	47
Towns of London's outer ring :—						
50,000–100,000	81	84	81	83	46	49
100,000 and over	90	92	84	88	48	52
London Administrative County	99	104	102	112	58	66

While these figures show that the towns with the greatest population tend to have the highest and smaller towns to have the lowest standardised mortalities and that, except in "other towns outside Greater London", infant mortality rates also show this relation to population,¹² they also indicate that there is no uniform level of mortality in towns within the same limits of size. Thus, towns of London's outer ring with populations between 50,000 and 100,000 show a mortality ratio much below the ratio shown by other towns within the same limits of size. In a sentence, to quote the Registrar-General, the figures "provide no support for the hypothesis that from the standpoint of

¹⁰ Registrar-General (E. & W.), p. 921, par. 25.

¹¹ A "standardised mortality ratio at all ages" is the local standardised death rate expressed as a percentage of the national standardised death rate in the same year.

¹² Registrar-General (E. & W.), p. 922, par. 26.

resulting healthiness there is for towns an optimum population which is intermediate between the smallest and the largest".⁷³ This conclusion is supported by the evidence of the Ministry of Health.⁷⁴

The following table contains similar figures for Scotland:—

Areas and Population Group: gs.	Standardised Mortality Ratios at all ages.		Infant Mortality.			
			Ratios per 1,000 live births.		Rates per 1,000 live births.	
	1935.	1936.	1935.	1936.	1935.	1936.
Scotland	100	100	100	100	77	82
Burghs:—						
Under 20,000	95	93	85	81	65	66
20,000–50,000	103	103	99	101	76	83
50,000–100,000	109	108	109	119	84	98
100,000–250,000	102	100	103	92	79	76
250,000–1,000,000	100	99	91	83	70	68
Over 1,000,000	118	123	128	132	98	109

This table shows that though the towns in the larger population groups suffer from higher mortality rates than the towns in the smallest population group, mortality does not increase step by step with size. The figures afford no more support than do the figures for England and Wales for the theory that from the aspect of health there is an optimum size for towns.

121. The favourable position of London in company with the towns of London's outer ring as shown by the figures in the foregoing tables is especially noteworthy. Greater London had an average annual death rate below the national average in both the decades 1901 to 1910 and 1921 to 1930 and only slightly above the national average in 1911 to 1920. In a period of no more than 40 years between the end of the decades 1881-90 and 1921-30 Greater London's average mortality rate fell from 20.0 to 10.5 per 1,000 population or by as much as 47.5 per cent.⁷⁵

122. In the small town there is generally found a greater degree of personal interest, both voluntary and official, in connection with the public health services than is found in the large unit where the administrative machinery is necessarily more elaborate. On the other hand, the large unit has th

⁷³ *Ibid.*, par. 27.

⁷⁴ Ministry of Health, p. 949, pars. 1 and 2; and p. 957, par. 38.

⁷⁵ Registrar-General (E. & W.), p. 930, Q. 7944 and Table A, p. 941.

advantage, as a rule, of possessing more experienced officers in those services.⁷⁶ Further there can be no question as to the superiority of the general medical and hospital services in the big towns. It has been well said that "without the concentration of population in the towns which provides teaching material in the necessary variety and volume, affording the medical profession a wider experience and opportunity for specialisation and research, it is fairly certain that medical science could not have reached its present level".⁷⁷ This advance in medical science has benefited both town and country. The towns and areas of concentration of population also possess more complete environmental health services, such as publicly provided water supplies, sewerage and sewage disposal works, and refuse collection and disposal schemes, than the country,⁷⁸ though a marked advance has been made, particularly in the last ten years (i.e. since the passing of the Local Government Act, 1929, which authorised county councils to contribute to the cost) in the provision of these services in rural districts. In this matter also the advantages possessed by the town may benefit the country, for the health protection directly afforded by an efficient sewerage and sewage disposal scheme may not be limited to the town or area actually served by the scheme, but may extend, for example through the protection from pollution which the scheme may give to the local supplies of water, to the adjacent rural areas.

123. What are the causes of the higher mortality rates which in general still prevail in Great Britain in towns as compared with the country? The Registrar-General for England and Wales comes to the conclusion, after an examination of the mortality statistics, that the factors most important in enhancing the death rates of residents in towns appear to be:—

- (1) the crowding together of houses;
- (2) the crowding together of people into houses too small for them;
- (3) the apparent aggravation by urban conditions of other adverse effects of economic pressure upon the standard of living and environment; and
- (4) the production of smoke from factories and homes which reduces the effective sunshine.⁷⁹

This conclusion is supported by the information submitted to the Joint Medical Committee by Medical Officers of Health. Housing conditions, lack of planning, smoke and noise, and the economic state of the family are all given as important factors in the state of the health of towns.

⁷⁶ Ministry of Health, p. 950, par. 10.

⁷⁷ Dept. of Health, Scotland, p. 35, par. 46.

⁷⁸ Ibid, p. 33, par. 37.

⁷⁹ Registrar-General (E. and W.), p. 928, par. 55.

The Future.

124. Is it inevitable that large towns should suffer higher mortality rates than the country? The evidence before the Commission indicates that the answer is in the negative, and this seems to be confirmed by the following comparison of the Dutch and English mortality rates for 1935 and 1936:—

	Infant mortality per 1,000 live births.		Crude death rate per 1,000 living.	
	1935.	1936.	1935.	1936.
Holland	40	39	8.7	8.7
Amsterdam	28	29	8.3	8.6
Rotterdam	36	31	7.7	7.6
England and Wales ...	57	59	11.7	12.1
London	58	66	11.4	12.3
Birmingham	65	63	11.1	11.5
Liverpool	84	76	13.4	13.2
Plymouth	60	57	12.5	12.7
Southampton	46	53	11.5	12.1
All Rural Districts ...	49	53	11.8	12.2

It will be observed that both the infant mortality rate and the crude death rate are lower in Amsterdam and Rotterdam (cities with populations of 782,000 and 595,000 respectively in 1936) than in Holland as a whole, and are much below the rates prevailing in the same years in the rural districts of England and Wales. Even after making allowance for present differences in age constitutions between the total populations of Holland and this country, the Dutch national rates remain much below the English.⁸⁰ In regard to infant mortality a similar situation as between town and country prevails in Sweden, where, according to the evidence of the Royal College of Physicians of Edinburgh, the average mortality rate in the towns is less than the rate in the country districts, which itself is already very low.

125. On the Dutch figures a significant comment was made by the medical witness who appeared before the Commission on behalf of the Ministry of Health. "One must remember," he said, "that some 12 years ago or so, Holland was in much the same position as we are to-day, so it might reasonably be anticipated that our mortality figures will in time reach what Holland has reached."⁸¹ The fact that one at least of the large English towns figuring in the above table had in 1935 and 1936

⁸⁰ Registrar-General (E. & W.), p. 922, pars. 28-32.

⁸¹ Ministry of Health, p. 958, Q. 8055.

more favourable mortality rates than the rural districts would seem to confirm the possibility of that anticipation being realised. Further, the Royal College of Physicians of Edinburgh point out that both the general death rate and the infant mortality rate for Greater London in 1936 were below the rates for the rural districts of Scotland. In 1936 the general death rates in Wales were higher in rural than in urban areas.⁸²

126. As already pointed out, the Registrar-General concludes from his statistical examination that important factors enhancing death rates of town dwellers include the crowding together of houses, the crowding together of people in houses and smoke pollution of the atmosphere. With regard to the factors of crowding together of houses and smoke pollution of the atmosphere, the Registrar-General points out that they are largely the outcome of the concentration of the heavy, smoke-producing industries in certain areas and the uncontrolled growth of towns around them. In his view these two factors "are not necessary accompaniments of urban life if, in the location of new factories and the planning of towns, the future health of the population is the paramount consideration." Similarly he considers that the factor of crowding within houses is "by no means an inevitable feature of urbanisation, and the planning of towns on modern lines with adequate transport facilities should minimise this factor provided that the improvement in living accommodation is not offset by any reduction in the standards of nutrition through economic pressure. Such a reduction would be particularly unfavourable to the health of married women and children."⁸³ Indeed, taking all four factors which he distinguishes as being most important in enhancing the death rates of residents in towns, he regards none of them as being inherent in the existence of an urban community.⁸⁴

127. The validity of that view seems to be confirmed in the case of the crowding together of houses and of people within houses by the considerable disparities which already exist between large towns in regard to the number of persons per acre and the number of persons per room. Grouping London and the county boroughs and the large burghs according to their populations, it is found that in 1931 the number of persons per acre, a figure which may be taken as giving a rough measure of the density of houses in a town, varied from 15.0 to 58.7 among towns with populations exceeding 500,000; from 12.2 to 62.8 among towns with populations between 200,000 and 500,000; and from 7.6 to 39.1 among towns with populations

⁸² Joint Medical Committee, App. I.*

⁸³ Registrar-General (E. & W.), p. 928, par. 56.

⁸⁴ Ibid, p. 929, Q. 7931.

between 100,000 and 200,000.⁵⁵ As regards the number of persons per room the figures varied from 0·83 to 1·56 in the first group; from 0·69 to 1·14 in the intermediate group; and from 0·64 to 1·58 in the third group.⁵⁶ The existence of such wide differences between towns in the same population groupings clearly indicates that an unduly high density of persons per acre or per room is not an inevitable concomitant of a large town. In point of fact both the density of houses per acre and the number of persons per house are, in their nature, factors in the character and growth of a town which are amenable to public control; and in this country they are now subject to such control. The Town and Country Planning Act, 1932, contains provisions enabling a local authority to restrict the number of new houses which may be erected upon any particular site,⁵⁷ and for many years 12 to the acre has been the general upward limit applied to the density of subsidised cottages.⁵⁸ Under the Housing Act, 1936, a house may not be occupied by more persons than the Act permits having regard to its size.⁵⁹

Similarly, in regard to smoke, few people would to-day contend that an atmosphere heavily laden with smoke is inseparable from industrial concentration.

128. The view expressed by the Registrar-General that the adverse effects upon health of these defects of present urban life could be minimised by planning is supported by the medical evidence.

The Joint Medical Committee expressed, in their report, the conclusion that the health of industrial towns could be further improved by such measures of planning as would introduce into the town as many as possible of the essential features of the country. The following measures are suggested by the Committee:—

(a) The town should be planned so that its several parts are allotted to industry, shops, dwellings, open spaces, etc.

(b) Contamination of the air by smoke should be reduced to the minimum.

(c) Overcrowding of houses on sites should be avoided: not more than 12 houses should be erected per acre of building sites; each family should have a house with a garden.

⁵⁵ The figures as to density of persons per acre signify the overall density in the areas in question, taking account of roads, railways, factories, etc. as well as houses.

⁵⁶ Registrars-General, p. 945, Table C, and p. 999, Table C.

⁵⁷ Town and Country Planning Act, 1932, Section 12.

⁵⁸ Garden Cities Association, p. 739, par. 29; and Joint Medical Committee App. A.*

⁵⁹ Housing Act, 1936, Sections 58 and 59.

(d) Overcrowding per room should, as far as possible, be avoided.

(e) Workers' dwellings should be near their place of work: a sufficiency of dwellings for workers should therefore be provided from the outset for any factories to be built in any area.

(f) Residential areas should be within easy reach of the open country.

In order to attain these ends the Committee suggest that it may be necessary to impose a restriction on the size of developing industrial towns. Further, the Committee consider that an interchange of amenities is, in the future, desirable between town and country, and would be of advantage to both; the scheme of the Garden City is a model towards which the location of industry should work.**

129. The statement supplied by the Royal College of Physicians of Edinburgh embodies the conclusion that "in present circumstances there is no need, as far as health goes, to deprecate the growth of well-planned urban areas. What is much more important is to ensure that the conditions within these urban areas are as good as can possibly be attained by proper utilisation of the knowledge and material resources already at our disposal."

130. The position is well summed up in the following extract from the evidence of the Ministry of Health:—

"Hitherto health services have been preoccupied in mitigating the grosser evils of uncontrolled urban development, in curing ills rather than preventing them, and little time or thought or money could be spared to the promotion of positive health and to the consideration of what constitutes an ideal urban environment. The great need of a town population is access to the country or the equivalent of what the country means—fresh air, sunlight, facilities for exercise and recreation and means for the harmless and profitable employment of leisure. These things are essential for old and young, but particularly for the young."**

131. While progress is being made towards better urban conditions there is no need to anticipate that the conditions in rural areas will not also improve. There was a consensus of opinion among the county Medical Officers of Health who co-operated in the inquiry of the Joint Medical Committee that rural life can be made more healthy than it is to-day, if some of the amenities of town life are introduced into the country.

** Joint Medical Committee.*

* Ministry of Health, p. 957, par. 40.

By the provision of public water supplies and sewerage and by the modernisation of housing, much has already been done to give rural areas the sanitary advantages of the towns. It is to be anticipated that this process of improving the environmental conditions of rural life will continue. Thus, in looking to the future of town in relation to country it must not be supposed that country conditions will remain static. At the same time the fact remains that the medical evidence, including that of Medical Officers of Health of counties and towns, supports the view that such disadvantages to health as are still present in town life are capable of being minimised if not removed in a well-planned town.²² Indeed some medical authorities go even further and indicate that, given a well planned or replanned town, health conditions should be more favourable in town than in country.²³ The question as to what constitutes the well-planned town becomes, therefore, of primary importance. The medical evidence suggests that from the health point of view a town is well planned which while retaining all possible advantages to be derived from (i) slum clearance and the abolition of overcrowding, (ii) better housing, water supply, drainage, hospital and other facilities as against the rural areas, at the same time approximates most nearly to the country in respect of sunlight, open space, recreation facilities and other amenities.

HOUSING.

132. The concentration of industry in large towns which accompanied the Industrial Revolution fostered a similar concentration of the industrial population. The new factories required a great and ever increasing number of workers. The populations of the industrial towns rapidly increased by reason both of immigration and an excess of births over deaths. Vast numbers of additional houses were required to accommodate the soaring population. The construction of the houses was subject to little or no public control. The persons for whom the houses were required had to give regular and punctual attendance at their places of employment and had to work long hours, and the almost inevitable result was that the houses were packed densely in close proximity to the factories. The same reasons which combined to produce that overcrowding of houses on sites also induced overcrowding of people within the houses. Houses, factories and other industrial establishments were intermixed without plan. The fact that the smoke and noise from the factories might adversely affect the public health was ignored. Building proceeded also regardless of the need for preserving open spaces for amenity and recreation.

²² Registrar-General (E. & W.), p. 928, par. 56; Ministry of Health, p. 957, par. 38; Joint Medical Committee, Appendices A and B*; Royal College of Physicians, Edinburgh.*

²³ Joint Medical Committee, Appendix A.*

In short there was no town planning; it is in the unplanned areas of badly constructed and congested housing that the health records of the great cities and conurbations are worst.⁶⁴

133. Modern urban development has been largely free from the disadvantage of congestion of housing. Municipalities have, with financial assistance from the State, become large providers of houses and, as mentioned above, for many years 12 to the acre has been the general upward limit applied to the density of State subsidised cottages. The overcrowding of persons within houses is being attacked. The creation of fresh overcrowding is prohibited by law and local authorities have commenced to provide houses for the purpose of enabling existing overcrowding to be reduced and remedied. At the same time a more enlightened view is being taken, and greater foresight is being exercised, as to the needs of the community for public open spaces. Further, by the use of electricity and gas in industrial processes and the introduction of improved methods of coal utilisation, smoke pollution of the atmosphere is less prevalent than in the old congested centres. Such pollution as does occur is, moreover, less concentrated owing to the more open form of development, which is bound similarly to be beneficial in relieving the community from the greater noise which is inherent in the congestion of housing and industry. There can be no doubt that all these factors contribute in greater or less measure to the better health experience of the outer urban areas of industrial towns as compared with the old, congested, unplanned cores of those towns.

General Progress.

134. A large proportion of the housing of Great Britain is of recent construction. According to estimates given in the report of the Inter-Departmental Committee of 1937 on the Rent Restrictions Acts there were in 1937 some 8,116,000 pre-war houses in Great Britain.⁶⁵ Comparatively few houses were erected during the war. The number of houses provided from 1st January, 1919, to 31st March, 1939, is shown below:—

	<i>England and Wales.</i>	<i>Scotland.</i>
By local authorities	1,112,505	212,866
By private enterprise with State assistance...	430,327	43,067
By private enterprise without State assistance	2,449,216	61,444
Totals	3,992,048	317,377
	4,309,425	

From these figures it will be seen that rather more than one-third of the houses of Great Britain belong to the last 20 years.

⁶⁴ *Ibid.*

⁶⁵ *Cmd. 5621, pars. 33-35.*

135. The contribution made by the State and local authorities towards the solution of the housing problem has involved a large charge on public funds. At the end of the financial year 1935-6, the gross outstanding loan debt of local authorities on housing was £631,900,000. In that year the housing expenditure on revenue account of local authorities was £45,600,000, of which £35,900,000 was accounted for by loan charges. Local authorities received as housing income £25,450,000 from rents, fees, etc., and £16,050,000 by way of Government grants, a total of £41,500,000, so that on the year a sum of £4,100,000 remained to be met out of the rates.**

Suburban expansion.

136. The natural place for a town to provide additional houses to meet the needs of its population is on the outskirts of its built-up area, and most of the houses erected since the War have been so sited whether they were provided by private enterprise or by the municipalities. As already indicated, this suburban development has been carried out in a manner which has advantages, so far as the physical health of the inhabitants is concerned, over the congested development of the past. It may, nevertheless, suffer from serious defects. Often the housing has proceeded in a haphazard manner and as a mere extension of the old town, though perhaps outside the municipal boundary. Commonly, housing has far outstripped the provision of communal buildings and services, such as churches and chapels, schools, libraries and public meeting places, without which a healthy industrial community in the full sense of the term is hardly practicable. In relatively few instances has any deliberate attempt been made by local authorities to co-ordinate housing development with industrial development, or vice versa: where housing and industry have happened to develop in satisfactory relationship to one another this has generally been a matter of good luck rather than design. Among the few exceptions to this statement are the urban units which the Liverpool Corporation and the Manchester Corporation are establishing at Speke and Wythenshawe respectively, descriptions of which are given in Appendix III.

137. Apart from the common absence of correlation of housing and industry and the lag in the provision of community services, this suburban expansion is fed by the movement of men, women and children from the district and surroundings in which more often than not they have been born and bred, in which their friends live, and in which their interests are mainly centred.

** The figures given are the aggregates of the figures for the financial year ended 31st March, 1936, in England and Wales, and the financial year ended 15th May, 1936, in Scotland.

They may move miles away from their old home to a large housing estate with little or no community life, lacking facilities conducive to the growth of a community life and, if the estate is composed of houses for one class only of the population, so constituted that the development of a full and healthy community life is next to impossible.

The housewife often finds that she has to pay higher prices for food and other family necessities than in her old district. The better housing accommodation which the family possesses may cost more in rent or similar payments.⁹⁷

138. At the same time as this spread of the towns by the development of housing on the outskirts has been proceeding industrial activities (especially of the non-manufacturing and commercial kind) have been expanding, and providing employment for more persons, in the central areas. The common result is that while the persons who have gone to live in the suburban areas have secured the advantage of better housing they have often become committed to the expense of long daily journeys—which may have to be made in overcrowded, fatiguing, and indeed unhealthy conditions—to and from their workplaces in the central area of the town. It is estimated that the average distance travelled per passenger journey on railways in Greater London now controlled by the London Passenger Transport Board increased from 3.90 miles in 1924 to 4.44 miles in 1932. For the wider London Passenger Transport Area the average distance travelled per passenger journey in 1935-6 was 4.50 miles.⁹⁸ The expenditure on transport by public conveyances within the London Passenger Transport Area, has been estimated at approximately £15 per family per annum, or about 8 per cent. of the average income of working-class families in London.⁹⁹ In Birmingham in 1936 the cost of transport is said to have represented, on average, an expenditure of £8 17s. per family per annum.¹⁰⁰ Even in the cases of Wythenshawe and Speke most of the resident industrial population are employed in the central areas of Manchester and Liverpool.

139. Moreover the disadvantageous results of haphazard suburban expansion are not limited to the suburban dwellers. The larger the town grows, the greater—in the absence of special provision—becomes the traffic converging upon the central area, and the higher the land values in the central area tend to become. Traffic congestion grows more acute, and the remedying

⁹⁷ In the case of municipal houses, however, statutory provision exists whereby a rebate of rent may be allowed to a tenant whose means are insufficient to enable him to pay the normal rent of his house. Much use is made of this provision.

⁹⁸ London Passenger Transport Board, p. 371.

⁹⁹ Ibid, p. 357. par. 7, Exhibit "E." For scale of charges see Exhibit "I."

¹⁰⁰ Garden Cities Assn., p. 742, par. 42.

of defects—such as inadequate roads and lack of open spaces—arising from the unplanned character of the centre becomes increasingly difficult by reason of the rising land values. At the same time the countryside recedes further and further from the inhabitants of the centre, and access to it which is most desirable—indeed some would say indispensable—in the interests of health and general well-being becomes more and more difficult. It is true that with the improved transport facilities of the present day access to the open country by residents in the central areas has been facilitated, but only by an expenditure of time and money which the majority of the people concerned can ill afford.

Central Redevelopment.

140. During the current decade the housing activities of local authorities have been chiefly directed to remedying the specific problems of slums and overcrowding. Much progress has been made in removing these blots upon urban life and thus in improving the living conditions in the old, congested, central areas of the towns. Under the slum clearance programmes framed by local authorities in England and Wales approximately 472,000 houses were to be demolished. By the end of December, 1938, 225,000 unfit houses had been demolished, 262,000 replacement houses had been completed and another 53,000 were under construction. In Scotland 70,000 unfit houses were demolished in the period 1930-8 and it is estimated that approximately another 66,000 houses still in occupation are unfit for habitation.

141. At the time of the survey of overcrowding made in England and Wales in 1936 in pursuance of Section I of the Housing Act, 1935, 342,000 dwellings were overcrowded. In Scotland the position was relatively much worse, the number of overcrowded dwellings being 259,000. Many local authorities have commenced to build houses for the abatement of overcrowding.

142. According to estimates supplied to the Commission by the Ministry of Health and the Department of Health for Scotland the number of additional houses still required to remedy slums and overcrowding is as follows:—

					<i>Estimated number of houses required.</i>
England and Wales	...	...	...	...	300,000
Scotland	...	...	...	...	230,000
					<hr/>
Total	...	...	...	...	530,000
					<hr/>

These figures do not include the additional houses that will be required by reason of the growth of the population and the demand for a higher standard of living. For some years to come the provision of additional houses to meet these requirements can hardly fail to be an important factor in the housing situation. If, however, the population declines or even reaches a stationary condition, as on the present outlook may be expected to happen, the extent of that need will likewise dwindle. But increasing numbers of the houses in the older parts of the towns may, meantime, be expected to have reached an age and condition at which replacement is demanded.

143. In many cases the persons removed from the bad, congested houses are being retained in the central areas by being rehoused on the sites of the old houses. Many cogent arguments can be advanced in favour of this course, the practical alternative to which, if the bad housing conditions are to be rectified, is the transfer of the inhabitants to houses on the outskirts of the town. The central areas are equipped with public services and facilities which would be rendered more or less redundant if large numbers of the population were removed elsewhere. Moreover, the persons concerned are often employed in the central areas and, by being rehoused on or near the site of their old houses, are being retained within easy reach of their workplaces. Further, they are usually of a class which cannot well afford the expense of a daily journey from a suburban area, in addition possibly to a higher rent and a higher cost of living which they might have to face on the outskirts of the town.

144. On the other hand this process of rehousing in central areas tends to maintain the high density of persons per acre which characterises the cores of old towns. If as many persons are to be rehoused on a site which has become available by slum clearance as were displaced from the site, and if, at the same time, a more open form of development than the old is to be secured, the only course is to provide the rehousing in a vertical instead of a horizontal form, i.e., in blocks of flats. In any case, in the very large towns the cost of the central sites is so high as to prohibit their use for the erection of working-class houses otherwise than in that form. Even when the land is used intensively in that way, the cost of the buildings must be heavily subsidised from public funds if the rents are to be brought within the means of the persons for whom the new accommodation is required. Parliament has recognised this fact by authorising the payment of higher subsidies on dwellings which, in order to meet the housing needs of persons displaced from slum or overcrowded houses, have to be provided on expensive sites.

145. In England and Wales the current rates of Exchequer subsidy are:—

(a) Dwellings not on expensive sites, £5 10s. od. (£6 10s. od. in exceptional cases) per dwelling per annum for 40 years.

(b) Blocks of flats of three or more storeys on expensive sites (i.e., where the cost of the site as developed exceeds £1,500 per acre) a contribution on a scale graduated according to the cost of the site from £11 to £26 per flat per annum for 40 years.

In Scotland the subsidy scales differ somewhat from those applicable in England and Wales. The normal scale is as follows:—

£10 10s. od. per annum for 40 years for houses of 3 apartments or less.

£11 15s. od. per annum for 40 years for houses of 4 apartments.

£13 0s. od. per annum for 40 years for houses of 5 apartments or more.

For (a) houses in clearance areas (b) houses in redevelopment areas, and (c) tenements on expensive central sites in large burghs, additional sums are payable, in certain circumstances, of such amounts as the Department of Health for Scotland consider reasonable, subject to a maximum additional payment of £15 per house over 40 years.

In addition the Exchequer subsidies are supplemented, both in England and Wales and in Scotland, by contributions from the local rates.

146. Housing on central sites thus involves a greater burden on public funds than housing on the outskirts of the town. Under the present housing law the financial assistance given from the Exchequer and rates towards the expense of flats on sites the cost of which, including clearance and other items of development, amounts to £14,000 per acre—which may, it is thought, be taken as a rough approximation of the average cost of suitable central London sites—is £27 a flat (Exchequer £18, rates £9). The assistance for cottages, as distinct from flats, is £8 5s. od. (Exchequer £5 10s. od., rates £2 15s. od.). Reckoning interest at 3½ per cent. the capitalised value of this assistance is as follows:—

£27 per annum for 40 years	£576
£8 5s. od. per annum for 40 years	<u>£176</u>
Difference	<u>£400</u>

On the basis of interest at $3\frac{1}{2}$ per cent., the current rate payable on loans obtained from the Public Works Loan Board, the difference between the capitalised values of the two rates of subsidy is £378.

147. The Joint Medical Committee in their report to the Commission advocate the provision of a house with a garden for every family. There is a strong body of opinion opposed to the building of flats. It is said that, apart from the enormous expense involved in land and construction, the confinement and noise of life in a large block of flats are bound adversely to affect the health of the occupants, especially infants, and that the working man prefers the privacy of a cottage with the advantage of a garden. Undoubtedly this preference is widely held but it is by no means universal. Indeed, a preference for life in flats is just as strongly held by some persons. On this subject Mr. G. A. Isaacs, who appeared as a witness on behalf of the Trades Union Congress said that in his experience of public life as a member of Parliament and of a Metropolitan Borough Council and as a Trades Union Official, he had found a remarkable difference in peoples' preferences: while some had a preference for cottages with gardens there were many who strongly preferred flats, and he knew of many instances where people had given up their cottages in order to return to flats in their old neighbourhoods.

148. The evidence before the Commission indicates in our view that in existing circumstances a certain amount of flat construction for the working classes is unavoidable in large cities. Night or broken-time workers such as dock labourers must, generally speaking, live near their work. There are many others who, rather than live a long way from their place of employment, would face life in a slum or overcrowded house. It is true, generally speaking, that a family which is accommodated in a municipal flat after being displaced from a slum or overcrowded house has the advantage of a better and healthier environment than that in which it previously lived and that it benefits accordingly, but there can, it is thought, be little doubt that for young children residence in the higher floors is undesirable. Many municipal flat buildings are marked by high standards of design, construction and equipment, despite the over-riding necessity by which the municipalities have been confronted of keeping costs from rising to so high a level as to place rents outside the means of the persons for whom the dwellings are erected. The large open spaces by which the more modern blocks of buildings are surrounded, besides providing places where the children may play in safety, impart a spaciousness in striking contrast to the congestion of the old type of

dwellings which they replace. Noise, however, as a concomitant of life in flats remains a problem, and we observe with pleasure that research is being made into that problem.¹⁰¹

PLANNING.

149. Some aspects of town and country planning are considered in relation to the Commission's inquiry later in this Report. A reference to the subject is, however, called for at this point in the light of several features of the problem of urbanisation which emerge from the foregoing discussion of housing.

The original provisions of town planning enacted in the Housing, Town Planning, etc., Act, 1909, enabled local planning authorities to prepare planning schemes "as respects any land which is in course of development or appears likely to be used for building purposes, with the general object of securing proper sanitary conditions, amenity, and convenience in connection with the laying out and use of the land and of any neighbouring lands." In short, the planning provisions of the Act of 1909 were designed to enable suburban development to be controlled: the Act did not provide for the control of building development in the countryside or of the redevelopment of built-up areas. Various changes in the law were made in the years following the war but the statutory restriction of planning to suburban development continued until the passing of the Town and Country Planning Act, 1932. Under this Act, planning schemes may be made in respect of any land, whether developed or undeveloped.

150. Owing to the war, the periodical changes in the law, the comparative novelty of the subject, and other causes, little progress was made in planning, as judged by the coming into operation of approved schemes, until the last few years. As is shown in Chapter VIII of this Report more rapid progress in planning is now being made, and planning may in the future be expected to exert an increasingly stronger influence on the expansion and redevelopment of towns. Hitherto its direct influence has not been great. Except to a comparatively insignificant extent, industrial development and the building of the 12 million houses which to-day exist in this country, have been carried out without the guidance of approved town plans. This is undoubtedly one of the main reasons for the maldistribution of new housing development in relation to new industrial development which is unfortunately often to be found in large towns. As more and more areas become covered by approved planning schemes, the risk of maldistribution of housing and

¹⁰¹ See e.g. Final Report of the Departmental Committee on the Construction of Flats for the Working Classes and the Report of the National Physical Laboratory for 1938.

industry taking place in new urban development will tend to be reduced. But special difficulty in formulating a plan for the coherent development of an urban area is apt to occur where the area extends into the districts of a number of planning authorities which are severally planning their districts independently of one another. This difficulty arises from the structure of local government; for planning under the Town and Country Planning Act, 1932, is a function of local government. It is a function which may be, and is, exercised independently by county boroughs, boroughs, urban districts and rural districts in England and Wales and by counties and large burghs in Scotland.

LOCAL GOVERNMENT AREAS.

151. While the large industrial concentrations have been growing the network of local government areas has, despite substantial modifications of boundaries in many cases during recent years, retained the main outlines of the structure established in the last century in conditions vastly different from those of to-day. With but rare exceptions the important industrial towns have long outgrown their boundaries as local government units. From them urbanisation has spread over an ever wider area and over more and more of the surrounding local government districts. Greater London stretches beyond the county of London into the counties of Middlesex, Essex, Kent, Surrey and Hertfordshire, and, in all, extends over or into the areas of no less than 118 local authorities,¹⁰² most of which are local planning authorities. The Manchester conurbation as defined by Professor C. B. Fawcett includes parts of the counties of Lancashire and Cheshire and of the West Riding of Yorkshire and altogether 53 local authorities (including county councils) are concerned in its local government administration. Similarly 49 local authorities are concerned in administration in the West Yorkshire conurbation. Those are extreme examples of the spread of urbanisation over local government boundaries, but to a lesser extent the same condition is to be found in the Birmingham, Glasgow, Merseyside and Tyneside conurbations as well as in some of the smaller conurbations.¹⁰³

152. Multiplicity of authorities is combined with variety of authorities. Besides impinging on the areas of county councils the great conurbations comprise within their limits the districts or parts of the districts of various classes of local authorities, Greater London having an even greater variety than the others, owing to the special structure of local government in the county of London. Joined with this variety of authorities is variety of jurisdictions. In England and Wales,

¹⁰² Registrar-General (Eng. & Wales), p. 938, and Preliminary Report of the Census of 1931, pp. 63-5.

¹⁰³ Geographical Journal, Feb. 1932, pp. 111-2; also G. C. Allen "Industrial Development of Birmingham and the Black Country" (1929), pp. 3-5.

county borough councils are, within their restricted areas, autonomous in local government, while in the other areas, some functions are exercised by the county councils, others by the borough and urban district councils and others again by the rural district councils. In Scotland there are three classes of local authorities—county councils, town councils and district councils, and the county councils exercise jurisdiction not only over the landward areas but also for particular purposes in certain of the burghs. Some authorities have local Act powers; others have no powers beyond those given by the general law. Sometimes even the jurisdictions of two classes of authorities overlap. Generally speaking, each and every authority is independent of its neighbour and is responsible solely to the local government electorate of its district for the manner in which it discharges its duties. In these circumstances there is inevitably a danger that an authority, in embarking upon a particular policy or course of action, may have insufficient regard to the interests of its neighbours. For example, housing sites are selected by individual authorities with regard only to their own needs; whereas, if a regional viewpoint were observed, central sites and larger and more efficient schemes could be evolved, and the risks of overlapping and overbuilding avoided. Evidence has been given to the Commission that whereas a site for a housing estate was chosen on the boundary of a large city in the North in the expectation that agricultural land on the other side of the boundary would not be used for building, the adjoining responsible authority did in fact zone it for housing.¹⁰⁴ Further, by reason of the independence of local authorities, a river may, as regards rivers pollution prevention, be subject to a number of jurisdictions if its course passes through the areas of several authorities.

The question of larger local authorities is dealt with in Chapter XV.

RECREATION: PUBLIC OPEN SPACES AND PLAYING FIELDS.

153. The construction of the nuclei of the larger industrial towns in Great Britain generally proceeded without regard to the preservation of public open spaces for amenity or recreation, in which they are usually sadly deficient as judged by modern standards. This again is one of the penalties under which the present generation labours by reason of the lack of foresight and planning in the past. With the continued expansion of the urbanised area, site values have soared to such heights as unfortunately to prohibit appreciable progress being made to rectify the deficiency in the central areas. The National Playing Fields Association consider that, if team and other games are to be reasonably catered for, 6 acres of playing fields are required per 1,000 population, apart from open space

¹⁰⁴ Leeds, p. 733, Q. 6219-23.

needed for amenity and for the use of persons who do not desire to play games. Evidence has been given to the Commission that in the administrative County of London there are only about 1·88 acres of public open space per 1,000 population, in Birmingham 3·77 acres, in Glasgow 2·83 acres, in Liverpool 2·5 acres, in Manchester 2·88 acres, in Cardiff 1·95 acres and in Newcastle-on-Tyne 4·3 acres;¹⁰⁸ and that of the area of public open space in London County only about one-quarter can be used for playing fields. In addition, however, there are, certainly in London, and probably in some of the other districts named, considerable areas of private recreation grounds. It must, of course, be remembered that such figures framed by reference to administrative areas may be subject to limitations for the purpose of making comparison between one town and another. For example, a town whose boundaries have, particularly in recent years, been extended well beyond its built up area may, by reason of this fact, show a higher proportion of open space including playing fields than a town which is built up to its boundary. These figures are not, however, quoted here for the purpose of drawing comparisons between towns, but simply to illustrate the fact, which is common knowledge, that, generally speaking, large towns at present lack reasonably adequate open space and playing fields. The present-day demand for physical fitness calls for the rectification of this deficiency, which is generally most acute in the central areas of the towns, and points to the desirability of local authorities giving consideration, when undertaking redevelopment, to the retention of part of the area as open space available for games. Wythenshawe has been planned so that large open spaces are attached to the schools. This course is to be commended and consideration should be given to the possibility of such open spaces being made available for use after school hours not only by the school children but also by the adult members of the local population. In the laying out of new towns proper foresight should be exercised to secure adequate open space for the recreational needs of the population. Consideration should also be given to the question of the best possible distribution of the recreational areas: for instance, five parks or areas of 10 acres each, well distributed, may be of much greater utility from the point of view of recreation than a single park or area of 50 acres.

SMOKE AND NOISE.

154. The adverse effects of smoke upon health were emphasised in evidence by the Registrar-General for England and Wales.¹⁰⁹ The Urban Medical Officers of Health also stressed, in the information which they supplied to the Joint

¹⁰⁸ Garden Cities Assn., p. 744, par. 51.

¹⁰⁹ Registrar-General (E. & W.) p. 926, par. 47 et seq.

Medical Committee, the relation between a smoky atmosphere and respiratory diseases, and some of them referred to the effect of smoke in diminishing the quantity of actinic rays which reach the town dweller, thereby contributing to the development of rickets.

155. One of the Medical Officers of Health went so far as to state that the lack of success in controlling smoke was "the great failure of modern public health." It may be that this statement does rather less than justice to what has been achieved in the sphere of smoke abatement; for, taking the country as a whole, smoke pollution of the atmosphere is undoubtedly decreasing notwithstanding the fact that there are every year more and more houses and factories requiring heat and power. Nevertheless it is true that smoke pollution still persists to a harmful extent in many large towns. And the adverse effects of smoke are not confined to health. Besides contributing through fog to traffic disorganisation, accidents and delays, it is unquestionable that smoke costs the country many millions of pounds a year, quite apart from its detrimental effects on vegetation and the fabric of historic and other buildings.

156. In regard to noise the Joint Medical Committee reported that there was a "fair unanimity" of opinion among the Urban Medical Officers of Health who co-operated in the Committee's inquiry that the effects of noise are harmful though difficult to estimate. Adaptable as the human body may be to its surroundings, it is difficult to believe that the continual din present in the central parts of great cities does not lower the vitality of those persons who are subjected to it day after day.

157. A Commission, which was appointed by the Commissioner of Health in New York City, in 1931 issued a report on noise in which the following conclusions were stated:—

(i) Hearing is apt to be impaired in those exposed to constant loud noises.

(ii) Noise interferes seriously with the efficiency of the worker; it lessens attention and makes concentration upon any set task difficult.

(iii) In the attempt to overcome the effects of noise, great strain is put upon the nervous system, leading to neurasthenic and psychasthenic states.

(iv) Noise interferes seriously with sleep, even if a few become tolerant.

(v) The normal development of infants and young children is seriously interfered with by constant loud noises.

158. Unfortunately there is no evidence that noise associated with industrial life is diminishing. There can, however, be no doubt that the population can be protected in large measure from its effects by enlightened town planning and decentralisation. The same is true in regard to smoke. But neither smoke nor noise has regard to local government boundaries, and if the utmost benefit is to be derived from planning, the planning must proceed by reference to the whole of an area of industrial concentration and a surrounding rural ring, not by reference to the arbitrary divisions into which the area is often split for local government purposes under the existing structure of local government.

EFFECT OF THE INDUSTRIAL CHARACTER OF THE TOWN OR AREA.

159. Overcrowding of houses on sites and overcrowding of people within houses are evils common to all parts of Great Britain. They taint the health of the large towns of the South as well as of the large towns of the North. Some of the densest overcrowding of houses and of people is to be found in the southern towns. Yet the mortality rates of these towns are generally better than those of the northern towns. Of the 37 county boroughs situated within the South East, East, South West and Midland regions of England and Wales, 35¹⁰⁷ had mortality rates in the period 1931-34 less than the average mortality rate for county boroughs generally, i.e., 10.9 per 1,000 population (standardized). Of the 46 county boroughs in the rest of England and Wales (i.e., in the Northern and Welsh regions) only nine¹⁰⁸ had mortality rates below the county borough average. The only large burghs in Scotland with mortality rates above the average for large burghs generally, i.e., 12.2 per 1,000 population (standardized), in the years 1931-34 were in the West Central region.¹⁰⁹

160. The fact that the South has a better record may suggest the possibility that the latitude of a town has an influence on the health of its inhabitants—that the advantage apparently possessed by the towns of the South may be due to the slightly better climate with which they are favoured. The medical evidence submitted to the Commission affords, however, little support for such a hypothesis.¹¹⁰

¹⁰⁷ The 2 towns which had mortality rates above the average for county boroughs were Dudley (11.3) and Stoke (12.2). The regions are those defined by the Registrar-General.

¹⁰⁸ Viz. Blackpool (10.5), Carlisle (10.8), Darlington (9.8), Doncaster (9.3), Rotherham (10.5), Sheffield (10.5), Southport (9.6), Wallasey (9.7), York (9.7).

¹⁰⁹ The burghs were Airdrie (12.4), Coatbridge (13.1), Glasgow (13.2) and Greenock (12.7).

¹¹⁰ Ministry of Health, p. 957, par. 39.

161. The industrial character of the towns of northern England and central Scotland seems to exert a much more significant influence than climate. It is in those towns that most of the smoke-producing heavy or textile industries are located. Statistics submitted to the Commission appear not only to establish a correlation between smoke pollution of the atmosphere and the excess mortality of the northern towns but to show that though the harmful effects of the smoke-producing heavy or textile industries upon health have diminished during the last 20 years, those effects are still very potent.¹¹¹

162. Similarly it is the Northern and Welsh towns that have suffered most severely from unemployment since the War. Through unemployment insurance, unemployment assistance and the improvement and extension of the public social services generally, much has been done to mitigate the ill-effects of unemployment upon the worker and his dependants. But nothing can replace regular employment; and there can be no question that widespread and prolonged unemployment or irregular employment must ultimately lower the standard of living, and have psychological reactions which cannot fail to lead to a lowering of the standard of health of the persons and locality concerned. It is perhaps significant in this connection that when the county boroughs of England and Wales are grouped upon an industrial basis¹¹² the highest mortality rates in the period 1931-4 are found to have been in—

	<i>Average Annual Death Rate per 1,000 (standardised).</i>	<i>Infant Mortality per 1,000 births.</i>
(i) The Tyneside and Durham Coastal Boroughs	11·9	86
(ii) The county boroughs with a high proportion of males at work in the textile industry	11·8	74
(iii) The South Wales boroughs	11·3	78
England and Wales—All areas ...	9·7	64

163. Most of these towns are in industrially depressed areas and the figures relate to a period during part of which depression was at its worst, and it may be suggested that the relatively bad record of the towns was due to those facts. The results of official inquiry do not support such a conclusion. An investigator, by whom an inquiry into the trend of urban mortality rates with special reference to the depressed areas was recently made under the aegis of the Ministry of Health, has reported that "it is not reasonable to attribute to the industrial depression of 1929-33 any deterioration of mortality rates in the depressed areas." "Excessive mortality these areas certainly have, both

¹¹¹ Registrar-General (E. & W.), p. 926, par. 47 et seq.

¹¹² *Ibid.*, p. 948, Table C.

when compared with England and Wales as a whole or with other sections of the country, but this excess is not peculiar to the years of depression. It has been a consistent feature of the depressed areas for at least the past 20 years."¹¹³

The results of that inquiry, and the figures given in paragraph 162, seem to indicate that the more a town is dependent upon heavy industry the less satisfactory its mortality rates tend to be.

SOME GENERAL CONSIDERATIONS.

164. The foregoing paragraphs of this Part of the Report deal with certain disadvantages of a social character that are associated with the concentration of industry and the industrial population in large towns or particular areas of the country. As stated, however, in paragraph 13 of the Report, disadvantages cannot be properly evaluated unless any accompanying advantages are also taken into account, and evidence submitted to the Commission leaves little doubt that in large towns social advantages arise by which the disadvantages are to some extent compensated. The large towns have been the leaders in the great and rapidly developing improvement in the social services. Besides possessing better medical services and institutional facilities, their environmental health services such as sewerage and sewage disposal, water supply, and refuse collection and disposal, though often inadequate in the past, are now, generally speaking, of a standard of efficiency unsurpassed by the small towns. Indeed, a concentrated population enables those services, in common with others such as gas and electricity supply, baths and wash-houses, to be provided not only more efficiently but also more economically than is possible with a scattered community.¹¹⁴ It is true that a relatively high standard of efficiency in the health services is an essential condition of the maintenance of a reasonably satisfactory state of health in the large urban units, but this fact does not detract from the advantage which the large units generally possess in the efficiency of their services.

165. The bigger aggregations represent far larger rateable values and are in a position, financially, to provide more elaborate services than the smaller town.¹¹⁵ The suggestion is sometimes made that a small town is capable of more economical

¹¹³ A study of the trend of Mortality Rates in Urban Communities of England and Wales, with Special Reference to "Depressed Areas" by E. Lewis-Fanning, Ph.D. See also Report of an inquiry into the Effects of Existing Economic Circumstances on the Health of the Community in the County Borough of Sunderland and certain districts of County Durham (Cmd. 4886).

¹¹⁴ Ministry of Health, p. 37, par. 30; Dept. Health for Scotland, p. 25, pars. 24-6; Electricity Commission, p. 127, par. 55; London County Council, p. 391, par. 79, p. 393, Q. 3266-7.

¹¹⁵ London County Council, p. 391, par. 79.

administration than a large town. Any attempt to probe this claim is faced at the outset with the difficulty that a scientific basis of comparison is not available since substantial variations in costs may occur between towns of the same size owing to differences in the standard of the municipal services, and for many other reasons, such as the character of the town (e.g. whether it is a pleasure resort or a manufacturing centre) and its situation. Even when examination is made of the cost of certain services selected as being least likely to be affected by influences of that kind it proves difficult to substantiate the claim or to show that from the point of view of cost of municipal services there is an optimum size for towns.¹¹⁶ In any case the test is not cost but efficiency. Sewage disposal in a large town with a complete system of sewers and sewage disposal works may obviously cost more than in a rural area with no sewerage system at all: but that is no proof that the complete system is not worth paying for.

166. Advantages arising from the concentration of population are strongly evident in other directions. In elementary, higher, and technical education alike, a large concentration is able to provide more varied, more efficient, and more readily accessible facilities than the small town unless that small town forms part of a larger unit. It is not too much to say that educational and recreational opportunities generally, as represented by schools and colleges, museums and art galleries, theatres and cinemas, clubs, lectures and social intercourse of many kinds, are more highly developed in the larger centres of population, a factor of which the advantage extends in varying degrees to all classes of the community. The extent to which these opportunities are present will naturally vary with the size of the town and the diversity of its activities. A larger population is needed to maintain a theatre than a cinema. Museums and art galleries of wide range and appeal can be provided, with full advantage, only in association with large units of population. The same is true of a university. A recent American authority expresses the view that at the present level of culture in America, a million people are needed to support a university.¹¹⁷

167. It is sometimes said that residents in large crowded cities, miss opportunities of a full and balanced life—in particular that owing to the difficulty of obtaining access to the countryside, they are often deprived of the stimulus of free contact with rural surroundings, and that they suffer by the absence from city life of the vigorous community and civic sense and pride to be

¹¹⁶ Ministry of Health, p. 153, Q. 1648-9.

¹¹⁷ Lewis Mumford, "Culture of Cities" (1938), p. 487.

found in smaller towns.¹¹⁸ As against this it may be argued that the bigger unit frequently affords wider and more diversified avenues of employment of all kinds, alike in industry and commerce. To state these facts is not, of course, to advocate the grouping of the whole of the population in large towns. As is emphasised in Chapter XIII there is a place in the national life for both the large town and the small town.

LONDON.

168. The immense size of Greater London and the continued rapid growth both of Greater London and of surrounding urban areas over a wide radius constitute a special problem from the social point of view. The general difficulties and also the compensating advantages of concentration tend to appear emphasised to a high degree in the case of the Metropolis. It still contains a large number of unfit houses despite the extensive schemes of clearance and rehousing which have already been carried out since the war. It is burdened with some of the worst overcrowding in the country, its nearest competitor in this respect being parts of the county of Durham.¹¹⁹ The pressure of traffic upon its streets has long been a major problem. Land values in the centre attain heights unapproached in the great provincial cities, and consequently render public improvements all the more expensive. No less than 118 local authorities besides many public utility undertakers are concerned in its local government and the provision of public services; no official body exists—apart from a Standing Conference on Regional Planning—for applying a unitary view to the problems and development of the whole area.¹²⁰

169. On the other hand, while London traffic congestion is more intense than elsewhere, its transport facilities, rail, road, sea and air, are equally unrivalled by any provincial centre. The general and infant mortality rates of the London conurbation are in striking measure better than those of any of the other great conurbations in Great Britain. Its medical services are unsurpassed by any other area. The same is true of its educational facilities. It possesses a galaxy of places of entertainment and recreation. Its parks—which have come to it largely by reason of its association with the Crown—are famous. Many of its scientific and educational institutions are of world-wide repute.

¹¹⁸ Ministry of Health, p. 38, par. 31; London County Council, p. 391, pars. 79 and 84; and p. 419, par. 122; Town Planning Institute, p. 589, par. 25; Garden Cities Association, p. 744, par. 52.

¹¹⁹ 18th Annual Report of the Ministry of Health, p. 112.

¹²⁰ London County Council, p. 423, Q. 3560-5; and 19th Annual Report of the Ministry of Health, p. 119. The Standing Conference covers the London Traffic Area.

170. It will be appreciated that in large measure those advantages accrue to London by reason of its position as the capital of the country and at the expense of the rest of the country since not a few of its institutions and amenities are of a national character and are financed on a national basis. The maintenance and upkeep of some of its parks, museums and galleries, for example, is not a purely London liability, the charges being largely met from the Exchequer. Apart from these considerations there are certain other special features which separate the problem of London from that of the other great centres.

171. The concentration in one area of such a large proportion of the national population as is contained in Greater London, and the attraction to the Metropolis of the best industrial, financial, commercial and general ability represent a serious drain on the rest of the country. In evidence placed before the Commission it was suggested that leadership is becoming increasingly centred in London to the disadvantage of the social, cultural and civic life of the provinces.¹²¹ The possibilities of open-air recreation and of contact with the countryside are far more restricted in the county of London, and particularly in the inner Metropolitan boroughs than in such centres as Leeds or Manchester. A resident in central London has to travel ten miles or more to secure any rural amenity.¹²² The spread of continuous urbanisation outwards from the county of London is a major factor contributory to the very grave transport difficulties which are at present involved.

In its evidence before the Commission the London County Council indicated that in the Council's view Greater London is already larger than is desirable either on proper planning principles or in the interests of the population of the county of London.

GENERAL CONCLUSION ON SOCIAL DISADVANTAGES.

172. The concentration of industry or of the industrial population in a large town or particular area should not, of itself, give rise to higher mortality rates than are experienced elsewhere or to other social disadvantages, provided always that the town or area is well planned. But unfortunately the existing large towns and areas of industrial concentration in Great Britain are not well planned, and it is for that reason that their inhabitants suffer certain disadvantages due to bad housing, lack of space for recreation, difficulties of transport, congestion, smoke and noise. These disadvantages, which are often accentuated

¹²¹ Sir E. Simon.* See also Robson, p. 790, Q. 6562-4.

¹²² London County Council, p. 419, par. 122.

in the case of large towns by unsatisfactory economic conditions, are the result of the haphazard manner in which urban development has proceeded in the past, and which has been marked by:—

(a) densely built inner areas of badly constructed and unplanned housing;

(b) an increasing density of industrial and commercial development and consequential transfer of land from housing to industry and commerce in the cores of the towns.

The disadvantages of concentration could be remedied or greatly reduced by good planning.

173. The increasing concentration of commerce and industry in the inner areas often involves the utilisation for those purposes of land formerly used for residential purposes, and many of the workpeople employed in the inner areas are thus forced to live further and further away from their place of work. In this way the working day of the industrial population has been artificially lengthened by the increased time occupied in travelling to and from work, real wages have been reduced by the cost of long daily journeys and acute traffic difficulties have been created. On the other hand, those persons have the advantage of better housing conditions, though perhaps at a higher price, than they formerly enjoyed and the state of the public health in the suburban areas is better, generally, than that in the central areas.

174. The housing conditions of the working classes still resident in the inner areas are being improved by slum clearance, abatement of overcrowding, and housing redevelopment: one-third of all the existing houses have been built during the last twenty years. In the very large towns the provision of rehousing accommodation on central sites means in practice that the accommodation—or the great bulk of it—must be provided in blocks of flats. According to some medical opinion flats are less satisfactory for family life than cottages. Moreover, rehousing in flats on central sites imposes a much higher charge on public funds than rehousing in cottages on suburban sites. It is, however, the only practicable means in existing conditions of providing the new accommodation required for those persons the nature of whose employment in the central area makes it essential for them to live near their place of work.

If the concentration of commerce and industry in the centres of the great towns continues to grow, more workers will be required for employment in those centres. These additional workers will have to be housed in the peripheral areas, and further accentuation of the existing traffic and other difficulties already indicated will thereby arise.

175. From the point of view of social amenities, educational opportunities, and the satisfaction of man's innate desire for a communal life, the large towns have undoubted advantages and attractions. London presents these amenities in an intensified degree as compared with other large towns, but the social disadvantages inevitably associated with life in London are also more accentuated. London acts as a continual drain on the rest of the country both for industry and population, and much evidence points to the fact that it is already too large.

The lines of policy indicated seem to be:—

- (1) Continued and further redevelopment of congested urban areas, where necessary, due regard being paid to the retention of such advantages as a well-planned town can provide, and the addition, as far as possible, of the cultural and physical attributes of the country;
- (2) Decentralisation and dispersal of both industries and industrial population from such congested areas;¹²³
- (3) Provision of checks, as far as possible, to the further growth of London.

CHAPTER VI.

ECONOMIC.

LOCALISATION AND SPECIALISATION OF PARTICULAR INDUSTRIES.

176. The grouping together, or concentration, within a particular area, of enterprises engaged in a particular industry, which has been a marked feature of industrial history, is claimed by leading industrialists to carry with it definite industrial and commercial advantages. Industries of an allied character, those engaged in ancillary and sometimes in finishing processes, those that can utilise the by-products of the industry, and those that can supply it with equipment or components are naturally attracted to the neighbourhood. The "localisation" of industry thus secured brings in its train economies in production: transport costs are kept lower than they would be if the industry were more widely dispersed, and the co-ordination of marketing, selling and warehousing arrangements and the provision of specialised services are facilitated.¹²⁴ Thus the Liverpool market for raw cotton and the Manchester market

¹²³ Decentralisation, as used here and elsewhere in this Report, implies a spread of industry or population over a comparatively limited area: dispersal implies a spread over a far wider area.

¹²⁴ Ministry of Labour, p. 247, par. 25.

for cotton goods are highly specialised institutions providing services for the local industries which could only be available to a smaller extent to enterprises operating in the same industries at a distance from the particular industrial area concerned.¹²⁵

177. Over a period of years, too, there grows up in the area of concentration a supply of workpeople having the specialised skill which the industry requires, and a body of experts, consultants and higher-grade employees skilled in its technical and administrative requirements.¹²⁶ Local technical colleges may also be established for the provision of training facilities, and for the pooling and advancement of technical knowledge, and there emerges a general stimulus to industrial efficiency and inventive capacity. This stimulus and inventive capacity are further encouraged by rivalry between a number of enterprises engaged in similar processes and catering for the same market, and by the close personal contact that can be maintained between the executives of the enterprises concerned.¹²⁷ A general atmosphere of industrial activity and prosperity is created and this, in its turn, tends to attract to the neighbourhood fresh industries and so to develop an increasing market.

178. On the other hand, high specialisation has its drawbacks. The more highly specialised an industrial area and the skill of its workers, the more difficult it becomes to adapt it to occupations of entirely different types,¹²⁸ and when an area that has concentrated over a long period mainly on one form of specialised industrial activity and that activity, for international or other reasons, encounters a severe and prolonged depression, the consequences to the workpeople and indeed to the population of the area as a whole are likely to be disastrous. At no time has this been more vividly illustrated than during the last two decades when certain industrial areas of the country, now classed as Special or Depressed Areas, have suffered intensely because of the steep decline in the industries on which for many years previously they had concentrated. Many large enterprises in these areas such as shipbuilding yards, steel works, engineering works, textile mills and coal mines were abandoned, unemployment reached an unprecedentedly high level, local minor activities such as shops and small businesses were forced to close down because of the reduction in purchasing power of the inhabitants, voluntary hospitals, churches, social clubs and welfare institutions all suffered

¹²⁵ Sargant Florence.*

¹²⁶ Federation of British Industries, p. 506, par. 52.

¹²⁷ Sargant Florence.*

¹²⁸ Federation of British Industries, p. 506, par. 52.

heavily, and local government services were adversely affected in many directions.¹²⁹ Over and above all this, many thousands of the best of the working people—the young and virile and the more enterprising—left the specialised industrial areas in question to seek their fortunes in other more prosperous parts of the country. To a very large extent they migrated to areas where the modern light industries were developing, and where the industrial activities were not centred on one or two highly specialised industries as had been the case in the migrants' old areas.

VARIETY OF OCCUPATIONS IN LARGE TOWNS.

179. This development in the modern light industries was at the period in question taking place, in the main, in or on the fringe of certain large towns or industrial areas, especially in South East England, with Greater London as the focus, and in the Midlands, with Birmingham as the focus. Generally speaking, the very large town—unless it is a town whose activities are concentrated mainly on one or two specialised industries—holds for the worker considerable advantages by way of employment over those offered by the medium sized and smaller units, because of the multiplicity and wide variety of its industries and occupations. Most industries to-day, and particularly the modern light industries, tend to utilise a smaller proportion of highly skilled labour requiring lengthy periods of training or apprenticeship, and a larger proportion of semi-skilled, including female and juvenile, labour in the shape of machine minders. The dexterity and type of skill required is quickly acquired and can be adapted fairly readily to a number of different industries so that those semi-skilled in one form of modern industry have not much difficulty in transferring to other forms. Thus, workpeople in the large city find themselves with a wider choice of alternative occupations and a greater competition for their services than in localities where activities are less diversified. There is also a smaller risk of unemployment for the worker and members of his family because of the probability of depression in one calling being accompanied by prosperity in others in the neighbourhood. Large towns also tend to provide a reasonable balance between those undertakings which employ a greater proportion of adult male labour and those which employ a greater proportion of female and juvenile labour.¹³⁰

180. Nor are the advantages confined to the workpeople. The employers, on their part, benefit from the presence of a pool of labour from which they can draw workers either ahead!

¹²⁹ Commissioner for Special Areas (E. & W.).*

¹³⁰ Sargant Florence.*

possessing, or capable of rapidly acquiring the degree of dexterity and skill which their processes require. They may also be able to provide for expansion of their scale of output and for seasonal fluctuations in their business without the expense, delay and inconvenience of bringing additional workers from a distance.¹⁸¹

181. Against this, however, is to be set a statement made by the Federation of British Industries that "what may prove to be an outstanding disadvantage of concentration is the competition that might arise for labour, especially skilled labour". The Federation said it was a frequent complaint that the recent establishment of new industries in an area had put an undue strain on available labour supplies and forced up wages, and with an influx of seasonal industries, there was a tendency to offer higher rates of pay than those normally ruling and, in consequence, a periodical disorganisation of the labour market.¹⁸²

PROXIMITY TO LARGE MARKET.

182. The concentration of a number of varied industries and the resultant concentration of population provide for manufacturers whose factories are situated within the area of concentration a large potential market for their products close at hand and thus gives them an advantage over their more distant competitors. As has already been remarked, the modern light industries have developed mainly in, or on the fringe of, certain large towns or industrial areas and probably one of the reasons that influenced such development was the fact that it is the large centres of population that constitute the chief market for their products. Where the manufacturing units depend largely for the sale of their products on the local market their relatively close proximity to the retailers who are their customers may be expected to have the effect of keeping down the costs of transport and distribution of the finished products. In addition, close contact can be maintained between producers and retailers, punctual and frequent deliveries can be relied upon by means of door-to-door services, and both wholesale and retail traders are saved the expense and inconvenience of holding such large stocks of goods as might be necessary if the factories were more remotely situated. A further advantage, though perhaps not of major importance, is the advertising value of factories, floodlit and brilliantly illuminated, in thickly populated areas, especially those near busy arterial roads leading out of the great cities, as compared with sites in smaller towns or the open country.¹⁸³

¹⁸¹ *Ibid.* *

¹⁸² Federation of British Industries, p. 507, par. 61.

¹⁸³ *Ibid.*, p. 506.

183. On the other hand, it seems clear that the increasing congestion of the more densely populated and more rapidly growing cities and industrial areas must have the effect of raising manufacturing costs; for example, the advantage of relative proximity of the factory to the chief market for its products might be largely reduced or even nullified by the time lost in delivery through street traffic congestion.¹⁸⁴

STREET TRAFFIC CONGESTION IN LARGE TOWNS.

184. Traffic congestion, one of the outstanding features of the large city of to-day, is probably due in the main to three causes—the immense development of road traffic within recent years, especially the private motor car and motor omnibus, the marked and increasing tendency of workers to live at a distance from the centre, in so far as their circumstances permit, and the increased desire of the population generally for movement. The habit of travel has of late years been greatly stimulated, more particularly perhaps in the Metropolitan area, by railway electrification and the institution of such inducements as cheap day return tickets and cheap midday fares.¹⁸⁵

185. As the large urban aggregation expands on its periphery and the workers in great numbers move further and further outwards from the centre for residential purposes, so there develops an increasing use of the centre for business, commercial and administrative purposes. The thoroughfares at the centre, which date from an earlier age, are, generally speaking, comparatively narrow, and, with the increase in commercial and passenger traffic, the rate of movement in them is inevitably slowed down. Thus there develops a definite waste of time on the part of those engaged on transport itself, their employers, and the travelling public generally. The cost of this waste in terms of money is probably not calculable, but it must in the aggregate be very great.

186. From the point of view of traffic safety on the streets the Ministry of Transport stated that no clear conclusions can be drawn from accident statistics as to the relative advantages of large and small towns, and in support of that statement they furnished a table showing for a number of Police Districts the number of accidents involving death and personal injury during the year 1936. The Ministry added that great concentration of traffic may be accompanied by a relatively low accident rate, instancing the City of London where in spite of the well-known density of its traffic, the number of fatal and non-fatal accidents together amounted in 1936 to no more than 475.¹⁸⁶

¹⁸⁴ Sargant Florence.*

¹⁸⁵ Highway Development Survey, 1937 (Greater London).

¹⁸⁶ Ministry of Transport, p. 197, par. 44, and page 205, Appendix IV.

SEPARATION OF HOMES OF WORKPEOPLE FROM PLACES OF WORK
AND EFFECTS OF LONG DAILY JOURNEYS.

187. As is mentioned earlier in this Report (par. 138), the comparatively wide separation from workplaces of the homes of a large proportion of people whose occupations are in the very large cities involves the workpeople in lengthy journeys daily, and, in spite of the adoption of a system of reduced fares in the form of workmen's tickets and season tickets, is liable to impose upon them a burden in the form of actual travelling costs, or, in other words, a reduction in their real wages, which they might ill be able to afford. Moreover, as most business houses start and finish the day's work at approximately the same hours, the greatest strain is imposed on all forms of public transport in the attempt to provide for the transport of workpeople from their homes in the early morning and from the business centre in the evening, and the result is that many thousands of them have to make their morning and evening journeys under conditions of severe discomfort. Many, with journeys of perhaps 30 minutes or more each way, have to stand for the whole or a great part of their journey. Travelling thus in overcrowded conveyances can hardly fail to have adverse effects on health and to result in fatigue, loss of energy and sacrifice of leisure time.¹⁸⁷ There can be little doubt, too, that these adverse effects on the workers are reflected in no small measure on their efficiency and output, and, in turn, on the employers' costs of production.¹⁸⁸ Unfortunately it is not alone the adult workers of both sexes and the employers who suffer. Juvenile workers are affected in the same way, and in their case the reduction in real wages is more substantial than in the case of the adult because the cost of travel forms a larger proportion of their earnings. The Ministry of Labour stated that owing to the expense and difficulty of travel from the suburbs to central London a number of juveniles who would otherwise be willing to accept employment in the central area are unable to do so, with the result that while in the suburbs there is a comparatively large supply of juvenile labour, there is in central London a demand for it which cannot be satisfied.¹⁸⁹

188. Although it is undoubtedly true that both new residential areas and new industrial areas develop more or less simultaneously on the periphery of the large cities, this fact, so far as present experience goes, does not seem to decrease traffic congestion.¹⁹⁰ As the workshop industries in the centre become replaced by factories on the outskirts, commercial and business

¹⁸⁷ London County Council, p. 391, par. 82.

¹⁸⁸ Sargant Florence.*

¹⁸⁹ Ministry of Labour, p. 247, par. 27.

¹⁹⁰ Ministry of Transport, p. 197, par. 43.

houses and administrative offices increase and multiply at the centre and use even more intensively the space formerly used industrially. Moreover, when an industrial enterprise moves out it by no means follows that the workers employed by it live in the vicinity of its new site: indeed, the move might, and doubtless very frequently does, mean that the workers find themselves much further removed from their workplace in its new site than they were before the move. In this connection Sir Malcolm Stewart, when Commissioner for the Special Areas (England and Wales), said in Appendix I to his Third Report¹⁴¹: "The recent concentration of new industries in the north-west and west of London while the mass of industrial workers reside in the east and south-east leads to a great increase in traffic across the city and tends to increase the congestion and the ratio of travelling expenses to wages." This is one result of the unregulated growth of the past.

189. Enormous efforts, combined with great skill and ingenuity, are continuously exerted by the transport and other authorities concerned to mitigate traffic congestion and the delays inevitably associated with it. They require the provision of additional transport, elaborate systems of traffic route-ing and signalling, the demolition and reconstruction of existing thoroughfares, and the provision of additional thoroughfares—all of them of a very costly character, but in spite of the great expenditure involved, these measures result in little more than palliatives, and it seems impossible for effective action to keep pace with actual traffic requirements.

190. Difficulties arising from traffic congestion appear in greater or less degree in all the big cities. Evidence was placed before the Commission that difficulties are experienced, for example, in the great provincial cities of Birmingham, Liverpool and Manchester, in the case of each of which a large proportion of the workpeople are housed in the suburbs at a considerable distance from the central business parts of the city. For example, Alderman Harold Roberts who appeared before the Commission on behalf of the Corporation of Birmingham said:—

"I can see no immediate relief from our traffic problem. We can plan, organise, and widen our streets but the best we can hope for is to keep level It is a standard joke that you cannot find your way about on account of one-way streets For the last 20 years we have been engaged in street widening but the motorisation of the population has been going on much more rapidly than one can work in that direction and we do

¹⁴¹ Cmd. 5303.

not know how far that motorisation will continue. We cannot hope to get ahead of it because the capital cost of pulling down and of doubling the width of roads is enormous."¹⁴³

The difficulties are, however, by far the most acute in London, and that in spite of the fact that London has an elaborate system of underground and suburban railways for passenger transport.

191. That system is for obvious reasons not subject to the delays which are apparently inseparable from its surface transport, but overcrowding on those railways is no less prevalent, especially during the morning and evening peak hours, than it is in the case of public vehicles on the streets. Mr. Frank Pick, who gave evidence on behalf of the London Passenger Transport Board, said "there will be standing passengers at the peak hours always. It is no use pretending otherwise. . . . There will always be what we call roughly 100 per cent. overload at the peak hours on the railways. It is a sort of inevitable thing . . . we have to accept it as a fact."¹⁴⁴

192. That statement was made in the light of the fact that the Board and the main line railways have already embarked on a programme of railway work—extensions, reconstructions, rolling stock, electrification, etc.—at a cost of approximately £45 millions, and that on completion of that programme within the next few years they will probably be faced with another of almost equal magnitude. The Board estimated that to supply the traffic needed to support the first of these two programmes an additional 650,000 to Greater London's existing millions of inhabitants will be required, and for the second programme a still further addition of a half to three-quarters of a million: to use Mr. Pick's words, "with the commitments already incurred the Board must certainly look forward to a population of ten millions, and in view of possible commitments for the completion of the transport system of the area (covering roughly a radius of 12-15 miles from the centre) it would seem as though a population of roundly 12 millions would ultimately be required for the support of the Board's undertaking."¹⁴⁴ Against these figures are to be set population estimates that were furnished by the Registrar-General, England and Wales, to Sir Charles Bressley for the purpose of his Greater London Highway Development Survey (1937). The Registrar-General, while pointing out that any present forecast of the future population of Greater London must be largely hypothetical because of the uncertainties of the political and economic future, estimated that in the area covered by a 30-mile radius of Central

¹⁴³ Birmingham, p. 716, Q. 6028 et seq.

¹⁴⁴ London Passenger Transport Board, p. 411, Q. 3388 et seq.

¹⁴⁴ *Ibid.* pp. 366-7, par. 10.

London, the population (estimated as being 9,808,000 in 1934) might be expected to increase by about 5½ per cent. between 1934 and 1941 and by 4 per cent. between 1941 and 1951, representing a total population in 1941 of 10,350,000 and in 1951 of 10,760,000. From 1951 no significant further increase was contemplated. It will be noted that this estimate referred to a 30 miles radius of Central London as compared with the 12-15 miles radius taken by Mr. Pick.

INCREASED LAND VALUES.

193. Large scale concentration has the effect also of forcing up land values within and around an urbanised area, and particularly in its central nucleus. This places a greater financial burden than would otherwise be necessary on industry and on local authorities, and through them on the community as a whole. Higher land values are a common feature of urban growth, but the values actually reached vary between towns of different sizes, the general tendency being that the larger the town the higher are the land values. In order to off-set the handicap of high land values in the large towns more intensive use tends to be made of the land by the erection of higher and, therefore, more expensive buildings. The result is that considerable sums have to be found from public funds for the payment of compensation in respect both of site values and buildings when public improvements or attempts to remedy the mistakes of the past are made, and it is precisely in the large towns, where the values of land and buildings are highest, that measures of improvement or re-development are most needed. In his Greater London Highway Development Survey (1937) Sir Charles Bressey said that in densely congested areas like the heart of the city of London the cost of comparatively insignificant street widenings sometimes works out at a rate exceeding £2,000,000 a mile, and even this leads to no conclusive result, as is shown by the recurrence of widenings in the same streets by successive generations.

LOCAL GOVERNMENT REGULATIONS.

194. Large centres of population, too, are liable to lead to the imposition of local government regulations which, while doubtless desirable in the interests of the community, may be inconvenient to certain industries. The Federation of British Industries stated that owing to the congested character of modern London, and for other reasons, local building regulations have been imposed which are alleged to increase materially the cost of building.¹⁴⁶ This factor, as well as the factor of high land values, might tend to restrict the settlement of

¹⁴⁶ Federation of British Industries, p. 507, par. 60.

new factories and other undertakings in the area of concentration and force them, as well as undertakings already established and wishing to expand, to settle, instead, on the periphery, and thus to extend the urbanised area.

PUBLIC BURDENS ARISING FROM THE ESTABLISHMENT OF INDUSTRIES IN UNDEVELOPED AREAS.

195. Apart from the effects of concentration of industry and the industrial population dealt with in the preceding paragraphs, there remains to be considered the effect from the national point of view of the establishment of industries in new and undeveloped areas, that is to say, in areas not already equipped for the settlement of industry. As has been shown, there has been a marked movement in recent years towards the establishment of the modern light industries on the outskirts of large towns and of industrial areas. Their establishment and growth naturally attract the labour required for the industries themselves, and then other trades and services grow up around them attracting still further population.¹⁴⁶ This centrifugal movement, though in itself *prima facie* ground for satisfaction, has unfortunately been largely haphazard and ill-regulated in character. The movement has proceeded with little or no regard to the fact that it necessarily involves heavy expenditure by the community for the provision of such necessary facilities as new roads, housing accommodation, water supply, sewers, gas and electric mains, schools, churches, increased transport, and all the multifarious services required to meet the needs of industry itself and of the rapidly growing population. This expenditure, moreover, has to be undertaken at a time when facilities of a similar character are already available in the older industrial areas and where they must be maintained in spite of the fact that much of the labour in the new areas is drawn from the older ones, whose authorities, because of the loss of working population, become progressively less able to support the services for their remaining population.

196. In some cases the incoming industry has borne a share of the financial burden involved in the provision of housing accommodation for its workers. In others, however, the local authorities have found themselves unable to keep pace with the enormous demand for working-class houses created by the rapid influx of workers. Houses have then been put up by speculative builders which might be dearer to buy or to rent than the workers can well afford, thus tending to force up the cost, or lower the standard, of living in the neighbourhood. Difficulties have been experienced, too, in providing school accommodation

¹⁴⁶ Ministry of Labour, p. 247, par. 28.

adequate to the demand, and it appears from information collected by the County Councils' Association and submitted to the Commission that some authorities are apprehensive lest the provision they are planning might not, with a later decline in the industrial activities of the area, prove to be in excess of requirements. The experience of authorities in areas where, owing to prolonged industrial depression, the provision made not only in respect of education but also of other services has proved to be in excess of present requirements, goes far to justify such apprehension.

EFFECTS ON AGRICULTURE.

197. The movement of industry into new and undeveloped areas has proceeded also without due regard to the agricultural value of the land that it, and its accompaniments, absorb for building purposes. The evidence presented to the Commission by the Land Utilisation Survey of Great Britain indicated that at the present time, more than ever, industry and housing are in some parts of the country invading what is, from the agricultural point of view the best land of the country. The Essex County Council, for example, informed the Commission that in Southern Essex alone, building development has involved the loss of thousands of acres of the most fertile land in the county where market gardening in its highest form has been carried on for generations.

198. Concurrently with the absorption of agricultural land there has been a flow of labour from agriculture to urban industry. According to statistics supplied by the Registrar-General the number of persons engaged in agriculture declined from 1,949,000 in 1861 to 1,194,000 in 1931, or at an average rate of more than 10,000 persons per year. The whole of that reduction is not, of course, to be attributed to the movement of agricultural labour to urban industry. Other factors by which the figures have undoubtedly been influenced, include emigration overseas, and the movement of labour from agriculture to other kinds of rural employment. It is unquestionable, however, that there has been a movement of considerable magnitude from agriculture to urban industry.

199. Whether this movement, viewed as a whole, is good or bad from the standpoint of the national interest is a question of some difficulty. On the one hand, workers who leave agricultural employment for urban employment probably secure, at least for a time, higher money wages, but, on the other hand, they lose the greater security of employment which agriculture often offers over unskilled industrial work. At the same time

the labour supply of agriculture is diminished; and wastage of skill is involved when skilled agricultural workers leave the land for unskilled work elsewhere.¹⁴⁷

200. Probably, however, the most important consideration is that the recent movement from the land has tended to consist of a disproportionate number of the younger workers. This feature is illustrated by the following figures¹⁴⁸ of the number of regular male workers engaged in agriculture in Great Britain:—

Age Group.	Number of regular male workers.		
	1925.	1930.	1937.
Over 21	501,694	505,745	454,100
Under 21	160,455	139,482	113,700

On this subject, the evidence of the Ministry of Agriculture emphasised that a point must sooner or later be reached at which the drift of the younger generation will raise serious problems for the future of agricultural production, and be dangerous from a social as well as an economic point of view.¹⁴⁹

CONCLUSION.

201. Concentration of industry and the industrial population undoubtedly possesses definite economic advantages from the point of view of industry and commerce. If it were otherwise the remarkable tendency towards concentration in and near large towns, instead of being intensified as it has in fact been within recent years, would long ago have been checked. The economic advantages to industry may briefly be summed up as consisting of (a) proximity to market, (b) reduction of transport costs, (c) availability of a supply of suitable labour.

202. Great, however, as the advantages may be, they are accompanied by disadvantages chief amongst which are (a) heavy charges on account mainly of high site values, (b) loss of time through street traffic congestion in the very large towns, which can hardly fail to off-set to some extent the advantage of lower transport costs, (c) the risk of adverse effects on efficiency and output on account of the fatigue incurred by workpeople through having to make long daily journeys between home and workplace, often under conditions of considerable discomfort.

¹⁴⁷ Ministry of Agriculture, p. 175, par. 23.

¹⁴⁸ Sir Daniel Hall.*

¹⁴⁹ Ministry of Agriculture, p. 175, par. 23.

CHAPTER VII. STRATEGICAL.

THE NATURE AND EXTENT OF THE AIR RISK.

203. The danger of attack from the air has effected a revolution in the problem of the defence of Great Britain. Formerly, so long as the command of the sea was retained the risk of attack or invasion was practically negligible, but the protection which this country enjoyed by virtue of its position as an island is not proof against modern methods of warfare.

Great Britain lies open to attack from the air by a hostile power just as other countries do, and the geographical position of its Capital and the concentration of so large a proportion of its population and activities there and in other large urban areas might well render it a more attractive object of enemy attack than most other European states.

204. It is not possible to publish from official sources any very precise information about the scale of the attack to which this country might be exposed in the event of war with a major European power within striking distance of its shores. It may, however, be useful to quote an extract from a document which, although it does not claim to be official in character, is obviously compiled from a close study of such information as is available. In a pamphlet published by the Air Raid Defence League entitled "The Nature of the Air Threat"¹⁵⁰ the position is summarised as follows:—

"In an attempt at a knock-out blow, an intensive period of mass raiding might follow the outbreak of war. Sound detection of approaching aircraft has now been perfected, and it can be taken as certain that both anti-aircraft guns and R.A.F. fighters would engage the enemy. But, particularly near the East Coast, where the fighters have a very short time in hand, many of the bombers would reach their target provided that they were willing to face a heavy barrage of anti-aircraft fire. Two hundred bombers per day, each carrying 1½ tons of bombs, would drop 3,000 tons of bombs in 10 days. In congested districts such raiding might cause at least 200,000 casualties"

"It is clear that certain areas—the East End of London, some East Coast ports, Midland and Yorkshire industrial towns, and the industrial belt along the Clyde—are in outstanding danger."

¹⁵⁰ Pamphlet No. 4 published in June, 1939, by the Air Raid Defence League.

205. Bombs cannot be aimed with mathematical precision, especially from aeroplanes which are compelled by an effective defence to fly at high speeds or at considerable heights, or which are attacking in adverse weather conditions or in darkness. Bombs, even if aimed at military objectives only, could hardly fail, however, to hit non-military establishments and buildings in their neighbourhood with the result that the civilian population in many places would doubtless be exposed to great danger. As the Report of the Committee on Evacuation (1938) pointed out:—

“ In any future war in which Great Britain is at conflict with a great European power, air invasion would take place on a very much greater scale than the air raids on London and other cities during the war of 1914-18. Large numbers of planes would be directed against docks, public utility undertakings, important factories and recognised military objectives.

“ Whether or not the civilian population were deliberately attacked, people living in industrial areas would be exposed to great dangers, especially those living in the immediate neighbourhood of important targets. Inner London contains many such objectives of attack and is, therefore, particularly vulnerable; and in different degrees the same is true of various other industrial areas. Other places, for example the naval ports, might be exposed to special risks because of the existence of military objectives in the neighbourhood.”

LONG-TERM ASPECTS.

206. Measures to mitigate the destructive effects of air attack are being pushed forward with all possible speed. On the one hand there are arrangements for active operations, consisting of fighter aeroplanes, anti-aircraft guns and balloon barrages, and on the other hand measures of civil defence including the provision of shelters which would afford some degree of protection against air attack. It might indeed be argued that on a long-term view the defence may to a large extent overtake the offensive and thus mitigate the earlier fears engendered by modern forms of warfare. However that may be, we see no reason to believe that improvements in means of protection, while they will no doubt lessen the danger, will reduce it to a level at which it does not demand the most serious consideration in the future planning of the economy of this country. We think, therefore, that even on a long-term view the risk of air attack should be taken into account as an important factor in determining how the population and industries of this country should be distributed.

THE GEOGRAPHICAL EXTENT OF THE DANGER.

207. No part of this country is safe from air attack. The range, speed, carrying capacity and above all the numbers of large bombing aircraft have not only been greatly increased since 1918 but are continually in process of further development. At the same time the degree of risk is obviously different for different parts of the country. As the Committee on Evacuation pointed out:—

“ Practical considerations, such as the number of aeroplanes available and the distance of possible objectives, are likely to restrict the number of places chosen for attack. Vast tracts of the country cannot be attacked simultaneously, and important places in the central and eastern parts of Great Britain are likely to bear the brunt of the first attacks.”

208. In spite of the extended range and power of hostile striking forces, the defensive capacity of anti-aircraft artillery and of fighting planes gives to the Western and Northern regions of Great Britain very real advantages, since the defences have longer time to come into operation and so to render the outward and homeward flight of the attacking bombers more dangerous. The greater distance to be covered, by increasing the flying time involved before the attack can be delivered, also reduces the attractiveness of more distant targets from the enemy point of view.

209. There are also great advantages in the dispersal of population and industry, as compared with close concentration, particularly within those areas which are highly vulnerable to attack. The disadvantages of the density of the population in the East End of London from a defence point of view would diminish if the population were dispersed into properly planned smaller centres separated from one another by belts of open country within a radius of say 30 to 40 miles of Charing Cross.

GENERAL POSITION.

210. The general position may be summed up by saying that from the defence point of view large concentrations of population and of industrial activities are undesirable, especially in the East and South of the country: and that the aim should be to secure both dispersal and the transfer of activities, so far as is practicable, from those areas to the West and North. London, by reason of its size and accessibility from the Continent, is an immense liability from the defence point of view.

LINES OF POLICY.

211. In countries which are at an early stage of industrial development it may be possible to plan the location of industries with considerations of defence as a prime factor in determining such location. In Soviet Russia something on these lines seems to have been attempted: the planting of great new electrical and industrial undertakings in the distant Ural Mountains is usually stated to have been, in part at any rate, a war measure, directed to achieving the maximum of security. But this country is faced with a different problem. Its great towns are in existence and vast industrial development has already taken place. What adjustments are possible and in what ways can future development be controlled, to secure, alike to industry and to the industrial population, the maximum practicable degree of protection?

GOVERNMENT ESTABLISHMENTS.

212. Before considering the wider question of the location of industrial units, it may be well to consider the policy which the Government has adopted in the past in regard to its own establishments and the policy which it should adopt for the future. The ordinary citizen or indeed the ordinary industrialist is liable to persuade himself that it will be time enough for him to consider advice which the Government gives, when he sees that advice being implemented in the Government Departments themselves.

There are many Government Departments, part at least of whose work could in our view be carried on effectively at a distance from the Metropolis, such, for instance, as the Unemployment Insurance activities of the Ministry of Labour, now centralised at Kew, the work of the General Register Office carried on at Somerset House or of the Post Office Stores Department at Islington. We understand that the Government have decided upon a certain measure of dispersal or decentralisation of the work and staffs of their headquarters Departments. We welcome a policy of this kind and think it should be pushed on as speedily as possible. We are glad to learn too that new Government munition factories have been erected recently in Lancashire, Scotland, and elsewhere in the North and West.

INDUSTRY.

213. The risks of air attack, and the best means of countering them, ought for the future to be a vital consideration, not only in connection with broad issues of the location of industry generally, but for each individual entrepreneur or manufacturer. We would recall that in the international crisis of

September, 1938, many commercial institutions, banks, insurance companies and others, made hasty arrangements for transferring their staffs and despatching their books and records out of London to branch establishments further afield.

214. As regards industry at large, the Civil Defence Act, 1939, imposes on the occupiers of factory premises, mines and commercial buildings in areas defined in an Order made by the Minister an obligation to provide protection for their work-people. An indirect and beneficial result of these provisions will, it is hoped, be to encourage the movement of industry from areas of large concentration to other areas of less concentration, notwithstanding the fact that Section 33 may operate to require the provision of shelter in all new buildings. Even as between vulnerable areas, there will be a bias in favour of the less vulnerable, since the provision of shelter may often prove a more costly and difficult matter in closely built up areas like parts of London than in areas where development is taking place on more open lines.

215. In a time of great pressure for the acceleration of Defence preparations, such as has been experienced recently in this country, it may be difficult to enforce conditions, otherwise desirable, in the fulfilment of Government contracts, lest the necessary productive capacity should not be forthcoming. In the Third Report of the Commissioner for the Special Areas (England and Wales), it was stated that of the 25 aircraft manufacturing firms in Great Britain, no less than 12 had erected their factories in or near the London area, and a further five in the South-Eastern counties. But in the last two or three years the Departments have taken definite action in the direction of encouraging the dispersal or decentralisation of factories engaged in production of war material. In the placing of armament contracts also, firms operating in less vulnerable areas have received a preference. This policy should be followed energetically, whenever conditions permit.

216. It must be remembered in this connection that on the outbreak of war many industrial undertakings not directly engaged in peace time on the manufacture of munitions become of vital importance to the national existence. The heavy industries—iron, steel, textiles, etc.—would doubtless, as in the last war, come directly under Government control, while many of the light industries, such as those engaged in electrical equipment or watch making, would have to swing over to the manufacture of war material of some kind. Moreover, many forms of industry, such as the production and processing of foodstuffs of all kinds, become in war-time as essential to the preservation of national existence as armaments or munitions

themselves, while for milling or the storage of wheat, for instance, or for collecting supplies of petrol, ports in the North or West obviously have an advantage in the scale of war risks over those in the East and South. It is clearly necessary that the location of all industries constituting this second line of defence should receive full attention from the point of view of vulnerability and dispersal or decentralisation.

CONCLUSION.

217. If our recommendations in Part IV of this Report are adopted, the National Industrial Board there proposed will be in a position to inform and advise industrialists as to the advantages, from the point of view of security, of one area as compared with another and to invite them to seek such information or advice. A policy of decentralisation or dispersal of industry from overcrowded areas is definitely to be recommended on strategical grounds: of this there can be no question, and such a policy coincides with and reinforces the general proposals on similar lines already shown to be desirable in connection with the social and economic disadvantages of concentration.

PART III.

SUBJECTS RELATED TO THE GENERAL INQUIRY.

CHAPTER VIII.

DIFFICULTIES AND DEFECTS OF PRESENT PLANNING LEGISLATION AND PRACTICE.

GENERAL CHARACTER OF EXISTING PLANNING.

218. A good deal of evidence has been placed before the Commission with regard to town and country planning and a number of witnesses have represented that difficulties and defects exist in present planning legislation and practice.¹⁵¹ These representations demand attention in this Report in so far as they bear upon the problems before the Commission; for, as the medical evidence indicated, it is only by proper planning that the disadvantages of the existing grouping of the population can be avoided, and life with full enjoyment of amenity, health and convenience be led. (See Chapter V.) Similarly, there is no doubt that the traffic problems which are commonly associated with the growth of urbanisation may largely be solved by proper planning.¹⁵²

219. It is no part of statutory planning, as at present existing, to check or to encourage a local or regional growth of population. Planning is essentially on a local basis; it does not, and was not intended to, influence the geographical distribution of the population as between one locality and another. Generally, it assumes a trend of local population growth based on past experience. If there is any expectation that further land will be required for any purpose—for example, for industry or for residence—within the area, the local or regional scheme would be framed to provide for that demand, though considerations of transport, health and social conditions may make such provision undesirable or inappropriate when the general distribution of residences and workplaces is viewed over a wide area. Evidence was given, for instance, that the growth of the Metropolis as a single agglomeration has already exceeded the size that is desirable on town planning grounds,¹⁵³ and that in the case of London and other great towns the increase of industry and business towards their centres,

¹⁵¹ Council for Preservation of Rural England, p. 567, par. 15 et seq.; Town Planning Institute, p. 583, pars. 12-16, p. 593, pars. 32-36, and pp. 760-777; Garden Cities Association, p. 746, pars. 61-63; and Robson, p. 778, par. 8 et seq.

¹⁵² London Passenger Transport Board, p. 366, par. 9 and p. 414, par. 11.

¹⁵³ London County Council, p. 419, par. 122, and p. 420, par. 127.

and the normal growth of residential suburbs on their outskirts, are increasing the expenditure of time and money on daily travel, are accentuating transport overloading and street congestion, and have lately produced a development of flat-building and an increase in the standard of residential density in the centres.¹⁸⁴ Under present planning legislation and practice this local tendency, which is common to most great towns, is by no means counteracted by planning schemes; on the contrary, the schemes for central areas of cities often provide for an increasing height, coverage and bulk of business and industrial buildings for such areas, while the permitted density of dwellings in such areas in practice follows, rather than obstructs, the centralising tendency. The schemes for suburban areas, which largely deal with unbuilt-upon land, set a better standard of density, but essentially follow the same principle of accepting the established tendency. They are effective, by zoning methods, in preventing an ill-considered jumble of houses and businesses, and in securing convenient road lines, and often a reasonable provision of local open space. In some cases they are achieving a better architectural appearance of new buildings. But if there is a local demand for factory sites, schemes would in practice zone for that demand. And for financial reasons it is often difficult for them wholly to preserve from building agricultural or rural areas on the outskirts of agglomerations, which from many points of view it may be desirable so to preserve. It may, therefore, be said that while present statutory town-planning tends towards producing a more pleasant, healthier and more convenient local environment, it is not adapted to check the spread of great towns or agglomerations, nor, so long as their growth continues, to arrest the tendency to increasing central density and traffic congestion. To say this is not in any way to diminish the importance of present town-planning, which is of essential value in the protection and creation of amenities. It is really to say that present town-planning does not concern itself with the larger question of the general and national grouping of the population which is the subject of this Commission's inquiry. Whatever policy of grouping is adopted, detailed planning on a local basis will remain necessary.

220. Nor do the foregoing observations cast any reflection on the Ministries charged with administering the Acts relating to planning, nor the local authorities who put the powers into execution, though the extent to which these powers are executed, and the skill with which they are administered, vary widely in different areas. Planning legislation is of comparatively recent origin, and has had to feel its way. The necessity of frequent

¹⁸⁴ Garden Cities Assn., p. 739, par. 27 et seq.

revisions of the planning law has, in itself, caused confusion and delay for which the Ministries and local authorities are not responsible. But while in some areas the powers have been operated as fully as is possible, it is apparent that they are not adequate at present, nor were they intended, to deal with the essential problem with which the Commission is faced.

THE QUESTION OF NATIONAL PLANNING.

221. Much evidence has been placed before the Commission that the national point of view as well as the local or regional point of view ought to be introduced into planning. As the law stands no authority is charged with the duty of considering the local or regional planning schemes in the light of the national resources, requirements and interests as a whole. It has been suggested that a central authority is required which would be charged with effective responsibilities for national planning and with the duty of watching, stimulating and guiding local and regional planning.¹⁵⁵

222. The local and regional planning schemes may be expected in due course to cover all the land of Great Britain which can be regarded as suitable for development or likely to be developed, even if only very sparsely. Accordingly, if fitted together, the plans would form a plan covering virtually the whole country. Such a plan would not, however, constitute a national plan in the true sense: it would be nothing more than a collection of local and regional plans, a patchwork of schemes of varying size, and varying merits, which had not been co-ordinated and moulded to form a coherent whole. A national plan conceived as a whole would be likely to differ substantially from a national plan constructed by merely piecing together the local and regional plans. The local and national interests may easily clash.¹⁵⁶

223. Further, it has been represented that the present law is incomplete in that it does not constitute a full code for regulating the use of land. Agriculture is not one of the purposes of planning as set out in Section I of the Act of 1932, but land can in effect be preserved for agricultural use by the imposition of restrictions on building, and, under the new "Rural Zoning"¹⁵⁷ the primary object of which is the preservation of amenities, the protection of agriculture is indirectly achieved. The conservation of fertile land is obviously a matter of national

¹⁵⁵ Town Planning Institute, p. 762, et seq.

¹⁵⁶ Ministry of Health, p. 42, par. 34, p. 142, Q. 1518-35.

¹⁵⁷ Report of Town and Country Planning Advisory Committee, July, 1938, pars. 31-33.

significance, but the national aspect of the subject is one with which local planning authorities are clearly not competent to deal.

224. Again, the Commission's attention has been drawn to the fact that a planning scheme is not enforceable against the Crown. The amount of land occupied by Government Departments is extensive and is increasing. Large areas have been acquired in recent years for aerodromes, for artillery, bombing, machine gun and tank ranges, for armament factories and dumps, and for large-scale afforestation. The necessity for the acquisition of land for such purposes on the scale undertaken has not been questioned. It has, however, been suggested that there is inevitably a risk that when an individual Government Department chooses a particular site for its own purposes it may tend to overlook interests other than those for which it is directly responsible and that in fact the Department may not alone be fitted to balance the various conflicting national interests which may be involved.

Time and again, especially in recent years, public controversy has risen in regard to proposals of Government Departments for the acquisition of particular sites, on the ground that while the land might be suitable for the purpose for which the Departments desired to acquire it, the taking of it for that purpose would be injurious to another public interest. This is not said by way of criticism of the individual Departments which happen to have been involved, and which often, especially in matters of defence, have had to act against time. The point which it is desired to make is that hitherto insufficient attention sometimes appears to have been given to public interests other than those of the individual Department directly concerned with a particular purchase. The result has frequently been to excite public controversy: not only have the interests of the nation in the widest sense not been sufficiently safeguarded, but also, so far as the Department itself is concerned, delay has occurred in the carrying out of projects of urgent importance.

225. The position of statutory undertakers in relation to planning schemes is in some respects similar to that of Government Departments. Any lands or buildings belonging to a statutory undertaker, and used or held for the purposes of the undertaking, are excluded from planning control, except with the consent of the undertaker or, failing his consent, by decision of the Minister. Here again the consideration arises that the area of land vested in statutory undertakers is continually increasing.

226. On the evidence submitted we have reached the conclusion that the National Industrial Board whose establishment is recommended in Part IV of this Report should be vested with

the right to inspect all existing and future plans whether regional or local, and to consider, where necessary, in co-operation with the Government Departments concerned the modification or correlation of existing or future plans in the national interest.

PROGRESS OF STATUTORY PLANNING.

227. At 1st April, 1939, an area of 1,093,785 acres of Great Britain's total area of 56,801,833 acres was covered by approved planning schemes. By this date resolutions had been passed by the responsible local authorities to prepare schemes for another 26,482,263 acres of the country. With the passing of these resolutions, a form of licensing to control development has become available in the areas in question since any buildings erected without the planning authorities' permission in areas in which planning schemes are in preparation are liable to be removed without compensation, if they are found to contravene the planning schemes when these schemes come into operation. In this power, planning authorities possess an instrument which, if properly used, affords some safeguard of planning interests pending the operation of the planning scheme; for although developers are not compelled to seek permission for proposed development, they almost invariably do so.¹⁵⁸

In general it may be said that as regards areas where any extensive development may be expected, resolutions have been passed, planning schemes are in preparation, and at least the stage of interim planning control has been reached. Powers to prepare schemes for built-up areas were first granted by the Act of 1932, and the preparation of schemes for such areas is not, therefore, yet so general nor so far advanced.

228. The figures given above show that great as the area is in respect of which resolutions have been passed, it is far short of the total area of Great Britain. Evidence has been submitted to the Commission showing that recently the Town and Country Planning Act, 1932, was inoperative in Lincolnshire (Holland), Rutland, Anglesey, Brecknock, Merioneth, Montgomery, and Radnor and in many counties of Scotland; and was operative in but little of the counties of Lincolnshire (Kesteven), West Suffolk, Isle of Ely, Cardigan, and Carmarthen.¹⁵⁹ It is highly desirable that planning should be operative in such areas, because industry could at any time be located or other development damaging to amenities begin there without even the mildest form of control. Though the preparation of a planning scheme is not compulsory on local authorities without action by the Minister of Health, the Minister has power to require the

¹⁵⁸ Ministry of Health, p. 17, par. 23.

¹⁵⁹ Council for the Preservation of Rural England, p. 568, par. 36; and supplementary evidence of Department of Health, Scotland.*

preparation of a scheme for any land or, in default of the responsible authority, to prepare a scheme himself or to authorise the county council to do so, but in practice he has not exercised that power. The Department of Health has powers of a similar nature in Scotland appropriate to the conditions there.

229. With present day methods of transport, remoteness from existing development is not in itself an assurance against development. Accordingly, delay in taking such measures of control as the Act permits may be dangerous. This point is well exemplified by the risk to which a coast headland was recently exposed. In 1938 plans were submitted to the responsible local authority for the erection of a number of bungalows on the headland. As a formal and effective decision to prepare a planning scheme covering the headland had not then been taken, no planning powers were available to the local authority in dealing with the proposed development; and as the plans of the bungalows complied with the by-laws the authority felt constrained to pass them. The danger has since been removed by the purchase of the land by another local authority, but this fact does not lessen the force of the moral pointed by the incident, viz., that if town and country planning is to fulfil its function it is imperative that local authorities should take advantage of the powers available to them in advance of development, and should not wait until development is actually proposed before proceeding with the making of a planning scheme.¹⁰⁰ The realisation of this necessity is growing among local authorities. Between 1st April, 1932, and 1st April, 1939, the total area covered by approved resolutions to prepare planning schemes grew from 7,491,358 acres to 26,482,263 acres.

230. The total area fully planned in the sense of being included in approved planning schemes, between the inception of town planning in 1909 and the 1st April, 1932, was 75,020 acres. In the following seven years the total area fully planned was multiplied more than 14 times: it amounted at 1st April, 1939, to 1,093,785 acres. Accordingly, since the passing of the Town and Country Planning Act of 1932, more rapid progress has been made: the annual increase in the area covered by approved planning schemes has grown progressively larger. In the single year 1st April, 1938, to 1st April, 1939, planning schemes were approved in respect of a total area of 767,357 acres, or almost 700,000 acres in excess of the aggregate acreage fully planned in the whole of the 20 years or so preceding the Act of 1932. At 1st April, 1939, the aggregate acreage covered by schemes which were awaiting approval was 4,027,683, or about one-sixth of the total area of Great Britain for which planning schemes were then in preparation. Thus, though the

¹⁰⁰ The new Coastal Zone should be of use in cases of this kind.

total acreage under approved planning schemes has increased strikingly since 1932, the stage has been reached when greater expansion of that acreage may be expected.

231. It is to be remembered, however, that there is a qualitative as well as a quantitative progress to be aimed at, and it has been stated in evidence before the Commission that many schemes which are being prepared are insufficiently strong. If town and country planning is to play its full part within the reasonably near future in securing that, in the growth of new industrial areas or the reconstruction or extension of old ones, the disadvantages hitherto associated with urbanisation owing to its unplanned character are avoided, a great acceleration in the preparation and approval of really adequate planning schemes is essential.

LOCAL ADMINISTRATION.

232. There is an important difference between England and Wales on the one hand and Scotland on the other hand in the local administration of the planning law. Taking Scotland first, the responsible local authorities are the county councils and the councils of the large burghs. In certain circumstances small burghs may, by order of the Department of Health, be entrusted with planning functions; but the law contemplates that normally the planning of the small burghs will be undertaken by the county councils as part of the planning of the counties.

233. South of the Tweed the county councils do not possess by law the same recognised and established position in planning as do their Scottish counterparts though, as will be explained later, the law permits them to take a prominent part in planning, as in fact many of them are doing.

In England and Wales planning schemes may be prepared by the councils of county boroughs, municipal boroughs, urban districts and rural districts. It has long been recognised, however, that the area of the individual borough, urban district or rural district, may be unsuitable for planning in isolation from the neighbouring areas. Results which seem to be the very negation of true planning may follow an attempt by the authorities of small districts to plan their areas separately. In the 1,986 square miles of the London Passenger Transport Area there are as many as 133 authorities exercising planning powers. The difficulty in such circumstances of obtaining coherent planning over the area as a whole needs no elaboration.¹⁰¹

234. In recent years there has been a trend towards greater co-operation in planning between separate local authorities and towards the formation of a larger unit of planning than is

¹⁰¹ The problem of London is further discussed in Chapter xiv.

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offered by the single borough, urban district or rural district. In England and Wales the larger unit may be secured in one of three ways. Firstly, a group of local authorities may establish a Joint Committee for planning their combined areas as a single unit: in other words, regional planning authorities may be formed to make regional schemes. Secondly, the non-county borough and district councils may relinquish their planning powers to the county councils. Thirdly, under certain circumstances, the Minister may after an inquiry compel the formation of Joint Committees. Similar provision as to the establishment of regional planning authorities is also in force in Scotland.

235. The idea of planning in large units has gained a strong hold, so much so that a large proportion of planning schemes in preparation are being formulated by executive joint committees or county councils. There is, however—possibly because of the fear of claims for compensation—little doubt that a danger exists of a weakening in proposals in the two stages from (i) the Advisory Regional Report to (ii) the preparation stage of the scheme. There is possibly also a danger that a similar weakening in proposals may occur between the preparation stage of the scheme and the administration of the approved scheme.¹⁶³

236. There is a tendency towards the evolution of wider areas apparent in various spheres of local government activity—usually described as a tendency towards Regionalism. There can be no doubt that, broadly speaking, such a tendency, if developed, would be to the advantage of planning.¹⁶⁴ There are signs of an increasing willingness on the part of local authorities, not only to combine for the preparation of schemes, but to join in setting up Joint Boards for administering the schemes when they become operative, and to delegate to the Boards power to precept upon the constituent authorities for money to pay running expenses and expenses incidental to the carrying out of the scheme, e.g., expenses involved in compensation and land purchase. By joint action of that sort greater financial resources can be made available and a more equitable distribution of the costs of planning can be secured. Where the need exists, as it often does, for the preservation of extensive open spaces outside a town, mainly for the benefit of the inhabitants of the town, it is manifestly unreasonable to expect the local government districts in which the land happens to be situated, to bear the whole cost involved by the prohibition of building. In such a case co-operation between all authorities concerned is essential: in its absence the taking of effective action to preserve the land may be impracticable.¹⁶⁴

¹⁶³ Ministry of Health, p. 152, v.

¹⁶⁴ See Chapter xv.

¹⁶⁴ Town Planning Institute, p. 567, pars. 18 and 20.

Again, the large unit of administration is better able than the small individual district to command the services of a highly qualified planning staff, and to provide sufficient work to keep such staff fully employed.

237. Evidence has been placed before the Commission that town and country planning calls for treatment on a regional basis.¹⁶⁵ Though a good deal of regional planning is in fact proceeding there appears to be scope for still more to be done; for some hundreds of local authorities are still planning their districts as separate units. There can be little doubt that the full acceptance in local planning administration of the regional principle would conduce to quicker and more effective action and to greater efficiency generally. The movement towards the adoption of wider areas for local planning and an equitable sharing of financial responsibility are, therefore, to be recommended and encouraged to the full.

FINANCE.

238. The Act of 1932 enables a person whose property is injuriously affected by the coming into operation of any provision of a scheme to claim compensation within a specified period, but provision may be inserted in the scheme excluding compensation in certain classes of cases, including restrictions on the manner in which buildings may be used. Compensation may, however, only be excluded if the Minister is satisfied "that having regard to the objects of the scheme the provision in respect of which compensation is to be excluded is proper and reasonable and expedient having regard to the local circumstances."

A further provision in Section 19 (5) of the Act is to the effect that the Minister in deciding whether or not to exclude compensation must have regard to the nature, situation and existing development of the land affected and of neighbouring land and to the interests of persons who would be affected by the provision in respect of which compensation is excluded.¹⁶⁶

239. The outstanding difficulty from the financial standpoint arises from the liability to pay compensation which a planning authority may have to face where property is injuriously affected by the coming into operation of a planning scheme, such e.g. as when a scheme, in order to preserve open space, prohibits the development of land which is suitable and ready for development. Wide stretches of coastline are in danger of being developed. On grounds of amenity complete prohibition of development is often demanded but cannot be enforced

¹⁶⁵ Scottish Counties, p. 208, Q. 2184; London Passenger Transport Board, p. 366, par. 9 and Q. 3179, p. 413, Q. 3435-43; p. 414, Q. 3468-70, and p. 415, Q. 3483.

¹⁶⁶ Ministry of Health, p. 18, par. 25.

because the compensation involved would be far too great for the planning authority to bear, even on a county basis, though a method of zoning undeveloped sea-coast areas on somewhat similar lines to the rural zoning referred to in paragraph 223 has, we are informed, recently been suggested to planning authorities and this should be of value in easing the difficulty.

240. It is, apparently, within the powers of the Act for a planning authority to insert a provision of the kind in respect of which compensation may be excluded (e.g., a provision dealing with the use to which buildings may be put), and for the Minister to retain this provision in the scheme as finally approved, but not to feel justified in declaring that compensation should be excluded. The effect would thus be that the planning authority would find itself exposed to the risk of claims for compensation. In practice, this course is rarely followed. Planning authorities have not usually been prepared to incur the risk of paying compensation for restrictions, except where it is intended to preserve the land in question from development of every kind, and in that case the simplest course is usually for the authority to acquire it.¹⁶⁷ Planning authorities are accordingly often unwilling to risk the preparation of really strong schemes in spite of their power to withdraw or modify the provisions of a scheme which give rise to claims for compensation.¹⁶⁸ In practice all zoning is devised to come within the Minister's view of what is "proper and reasonable and expedient having regard to local circumstances," rather than to produce a bold scheme which may lead to the Minister's refusal to exclude compensation.

241. One of the chief forms of weakness consists in allowing too much "free entry" building land. This practice hampers any constructive (satellite or otherwise) grouping of population. In 1937 it was estimated that the amount of land zoned in draft schemes for residential development was sufficient to provide for a population of 291 millions,¹⁶⁹ but it should be emphasised that this estimate related to draft schemes which had not been approved by the Minister. Power is vested in the Minister to modify schemes when they are submitted for his approval, and it is understood that this power is being used to reduce the amount of building land to which free entry would be allowed under schemes as proposed by the local planning authorities. Clearly a margin must be allowed for future development, but when due allowance is made for this

¹⁶⁷ *Ibid.*

¹⁶⁸ Ministry of Health, p. 46, Q. 565; p. 152, par. V. and Q. 1637-41.

¹⁶⁹ R. A. Hudson quoted by Garden Cities Assn., p. 746, par. 61; and Sir Raymond Unwin, p. 880, Q. 7599.

fact, there can be no doubt that the aggregate area to which "free entry" is allowed is much greater than will ever be used for building.

242. The Act provides also for the recovery of betterment. In brief, where the value of property is increased by the operation of a provision in a scheme or by a work carried out under a scheme the local authority can, within a certain period after the scheme comes into operation, claim from the owner of the property 75 per cent. of the increase in the value. It is provided, however, that, except where a claim for compensation equivalent to the amount claimed for betterment has been made, the person from whom betterment is claimed can require the claim to be deferred, and in that case the local authority can make a further claim on a disposition or change in use of the property or, in the case of property used for industry, within 12 months from the expiration of five years from the date of the original claim, unless a claim upon disposition or change in use has already been made. No claim for betterment can be made after 14 years from the date of the original claim. The amount of betterment payable, if not agreed, is to be settled by arbitration.

243. Very little experience has yet been gained of the working of these provisions. The general difficulties in the way of securing betterment, however, are well known. In the first place it is a difficult matter to determine the extent of the area within which values have been influenced by a particular provision or work. An arterial road, for example, may increase values in a town over a very limited area, but where it crosses undeveloped land the effect on values may extend to a great distance. Again, in order to determine the amount of betterment to be claimed, there must be a basic value from which an increase may be calculated. Under the Act the material date is the date on which the provision or the work which gives rise to the claim comes into operation or is completed, as the case may be; but it is to be anticipated that as the planning proposals will have been known long before the coming into operation of the scheme, the increment value will often have been realised before the time comes for claiming the betterment. And even if this has not occurred, to prove the extent to which any increase in value can properly be attributed to the operation of the scheme, as distinct from general appreciation owing to urban growth, will generally be a matter of great difficulty—a difficulty which will become greater the longer the claim has to be deferred. The realisation of substantial sums by way of betterment cannot therefore safely be anticipated; but the existence of a power to claim betterment has been found in the

past, and will no doubt continue, to be valuable in negotiation, particularly in cases where betterment may be used as a set-off against a claim for compensation.¹⁷⁰

244. Certain proposals which have been brought to the Commission's notice for dealing with the issues of compensation and betterment are outlined in Chapter IX of this Report. As the difficulties are enhanced when the planning authority is a small one with relatively meagre financial resources, it is in place here again to stress the value from the financial point of view of having a unit of administration larger than that of the ordinary borough, urban or rural district. Proposals involving a cost which would be prohibitive if it had to be borne by a single urban or rural district may be brought within the realm of practical action where the expense is spread over the wider area of a county or region.

Moreover the difficulties largely arise from the fact that land has often acquired a high development value before a decision is taken to sterilise it against development. In so far as this is the case, they may generally be greatly eased by planning well in advance of development. If the development of land needed for open space is prohibited before the land has acquired a high development value the burden of compensation may be substantially lightened.

It is, however, in areas surrounding existing towns and conurbations, where the need is most urgent and where a building value already exists, that the greatest difficulty is encountered. Moreover, under the present system by which claims for compensation are assessed separately, there is a danger of a building value, which would in fact be realisable only on a small proportion of the total land, being held to attach to each piece of land as it comes under review by the arbitrator.

245. In this connection reference may be made to a clause, now commonly inserted in local Acts, which gives power to a council by agreement, and in spite of the fact that the land may not be immediately required, to purchase or lease any land, which in their opinion, it is desirable the council should acquire in connection with any of their undertakings or "for the benefit, improvement or development of the district." It seems that this common clause is intended to cover purchase of land outside, as well as inside, the council's area. It is understood that the Minister of Health does not report against this clause when inserted by a local authority in a private Bill before Parliament. We are of opinion that extension of powers to local authorities,

¹⁷⁰ Ministry of Health, p. 18, par. 26.

as part of the general law, on the lines of that clause would make it easier for local authorities to buy land in the early stages of development at cheap rates and avoid the high prices which they may have to face at a later stage of development. It may be mentioned that the Manchester Corporation secured the greater part of the land for Wythenshawe at agricultural value under a local Act provision of that kind, and the Liverpool Corporation also acted under a similar provision in purchasing the land for Speke.¹⁷¹

246. At our request Mr. G. L. Pepler supplied us with an interesting and informative memorandum on Planning in some other Countries for which we desire to express our thanks. The memorandum is reproduced in Appendix IV.

CHAPTER IX.

COMPENSATION AND BETTERMENT UNDER CURRENT TOWN AND COUNTRY PLANNING LEGISLATION.

247. Reference is made in Chapter VIII to the provisions of the Town and Country Planning Act, 1932, under which, in certain conditions, (1) a person whose property is injuriously affected by the operation of a planning scheme may claim compensation from the planning authority, and (2) the planning authority may claim betterment from a person whose property is increased in value by the operation of a planning scheme.

248. Evidence has been placed before the Commission that the difficulties that are encountered by planning authorities under these provisions are so great as seriously to hamper the progress of planning throughout the country.

One of the difficulties, if not the major difficulty, attendant upon any proposal to control the use of land, lies in the fact that such control, whether it is operated by means of the existing planning legislation or by other means, necessarily has the effect of shifting land values: in other words, it increases the value of some land and decreases the value of other land, but it should not destroy land values. In theory, therefore, it should be possible fully to compensate all owners whose land is decreased in value from a fund levied from owners, the value of whose land is increased. No scheme has, however, been introduced in this country under which in actual practice compensation and betterment can be balanced in that way.

¹⁷¹ Manchester, p. 808, par. 53, p. 813, Q. 6867. Liverpool, p. 832, par. 106.

249. The difficulties of equating compensation with betterment are briefly:—

(a) If the potential development value of each piece of land is assessed separately the total sum arrived at is likely to be greatly in excess of the sum which could fairly be claimed if the prospective development of the country as a whole is considered;

(b) The difficulty of proving betterment, and especially of proving that betterment in any individual case results from a particular planning scheme, makes any betterment provisions largely ineffective;

(c) It is not practicable to levy betterment unless and until the landowner has the betterment actually in hand, i.e. on the disposal of his land.

250. In connection with these difficulties a comprehensive proposal was placed before the Commission by one of its members for the acquisition by the State of the development rights of the undeveloped land of Great Britain. The proposal is summarised in paragraphs 251-256 below. The Commission gave full consideration to the proposal and they recommend that, in view of the important issues of finance and policy involved, the Government should appoint a body of experts to examine the questions of compensation, betterment, and development generally and that this proposal, together with other schemes directed to the same problem which have been brought to the Commission's notice and which are also summarised below should be referred to that body.

ACQUISITION BY THE STATE OF THE DEVELOPMENT RIGHTS OF THE UNDEVELOPED LAND OF GREAT BRITAIN.

251. The proposals envisage the creation of a "National Development Board" which would acquire by compulsory purchase, as from a specified date, the development rights of all the undeveloped land of the country.

The term "undeveloped land" might be defined substantially as it was in the Finance (1909-10) Act, 1910, viz.: as land which has not been developed by the erection of dwelling-houses or of buildings for the purposes of any business, trade, or industry, other than agriculture, or is not otherwise used for any business, trade, or industry, other than agriculture. Agriculture would be interpreted in its widest sense as including horticulture, forestry, etc., and the erection of dwellings for agricultural workers might be treated as not coming within the term "development".

Broadly speaking, "development" might be defined as any erection of buildings, or user of land, which took the land out of the category of "undeveloped land".

252. The value of the development rights to be purchased by the Board would be the difference between the value of the undeveloped land for its existing use, or other use not involving development, and its value for development purposes. The freehold of the land would be retained by the owner but he would hold it subject to the condition that no development of it might take place without the consent of the Board.

The value of the development rights over the whole country would be assessed as a single operation, as was provided for in the case of property in coal by the Coal Mines Act, 1938, and a global amount of compensation determined. The object of the global method is to prevent the over-valuation which frequently results when each piece of land having an alleged development value is considered separately.

253. The money required for the purchase of the development rights by the Board would be found by a loan raised by the Board and guaranteed by the Treasury.

The Board would sell the rights to approved developers for the kinds of development approved by the Board and would carry to a Fund the proceeds of the sales. The service of the loan and the administrative expenses of the Board would be a first charge on the Fund, and, assuming tolerable accuracy of the estimate of the global amount of compensation, the Board's income from the sale of the development rights would, it is suggested, prove ample to meet these expenses.

Apportionment of the global sum between individual claimants for compensation would proceed on lines akin to those provided for under the Coal Mines Act, the machinery for apportionment possibly being left largely in the hands of the landowners themselves. Under such a system extravagant claims for speculative building values should be capable of assessment at their true value.

254. An intending developer would negotiate with the Board for permission to develop and for the purchase of the development rights. If the intending developer were not the landowner he would negotiate separately with the landowner for purchase of the land proposed to be developed. In the event of a landowner being unwilling to sell land at agricultural value the Board should have power either to purchase it compulsorily or to make an order conferring compulsory purchase powers on the intending developer in cases where the Board considered development to be desirable in the public interest.

The Board's consent to development would be limited to the kind of development actually before it, and the Board should probably impose a time limit for the life of its consent, on the lines of the grant of an ordinary building lease.

255. The amount of undeveloped land is roughly 40 million acres: it constitutes the great bulk of the land of the country but its value is a relatively small part of the whole. Further, only a small part of the undeveloped land has any potential development value, and, as regards the remaining part, the proposals would, in effect, leave the present position untouched, because the mere acquisition of the development rights by the Board would make no practical difference unless or until development occurred.

All land which at the specified date was not "undeveloped" would not be affected under the proposals. This land would constitute the great bulk of land in cities and urban areas, the control and redevelopment of which would remain with the municipal authorities exercising their powers under the Town and Country Planning Act, 1932, and the redevelopment provisions of the Housing Act, 1936.

256. It is claimed by the author of the proposals that their adoption would greatly simplify planning procedure, and, by reason of the disappearance of liability for compensation, would change the attitude of planning authorities who under present regulations are continuously hampered in their planning proposals by the fear of incurring claims for compensation. As a matter of administration the Board would replace the Ministry of Health as the central authority for planning.

In brief, the author of the proposals claims that:—

(a) their adoption would effectively solve the compensation-betterment problem to which every scheme of public control and public acquisition of land gives rise;

(b) the plan would not affect the mass of small householders, shopkeepers, etc., who make up the bulk of the property-owning class;

(c) the plan would not interfere with rural landowners so long as their land remained in agricultural use, nor the interests of farmers whether as owners or tenants;

(d) the financial commitments, though substantial, would be on a scale quite different from those that would be involved in land nationalisation.†

(e) all future increment in the value of undeveloped land would enure to the national purse.

†*Note.*—On the question of the financial commitments involved the Commission sought the views semi-officially of the Chief Valuer, Board of Inland Revenue. The Chief Valuer informed the Commission that preliminary calculations led him to the conclusion that the cost of the development rights might be "somewhere in the region of £400,000,000. This figure should be regarded as an intelligent guess."

REDISTRIBUTION OF LAND IN GERMANY.—THE "LEX
ADICKES"¹⁷²

257. The principle of the procedure under the Lex Adickes is the pooling of all the variously owned plots in an area to be planned and their re-arrangement and subsequent redistribution in such a way as to assist the development of the area as building land.

This procedure is based on the assumption that the re-arrangement of ownerships within a certain area is a matter of public interest; it is to be applied to land which is mainly undeveloped and for which a town planning scheme (Bebauungsplan) has been finally approved. The area chosen must be no larger than is actually required for the purposes of the redistribution, and individual plots which are already built upon or which are subject to some special user (e.g. market gardens, forestry schools, parks) may be wholly or partially excluded.

258. The plots of land which it is proposed to redistribute, together with the existing public streets and squares, having been pooled together, the next step is to deduct from the pool all the land required for public streets and squares, whether existing or prospective, which is then vested in the local authority or other highway authority. The remainder of the land pooled is then divided among the previous owners in the same proportion (by area) as that in which it was held prior to the pooling and in such way that the plots are usually at right-angles to the streets or squares and the plot of each owner is as nearly as possible in the same position as that which he previously held. Plots which are already built upon or which have a special value are, as far as possible, re-allocated to their previous owners before the redistribution takes place.

Owners are entitled to money compensation in respect of land reserved for streets or squares, so far as this exceeds 35 per cent. of the pooled plots where the procedure has been initiated by the authority, or 40 per cent. where it has been initiated by the owners.

So far as the value of a re-allocated plot is less than that of the plot of the same owner before the pooling, the owner is entitled to money compensation in addition, and such compensation is also payable in the case of the appropriation of buildings, for the loss of value which appertained to the pooled plot on account of special natural qualities or on account of expenditure thereon, or for the loss of business due to the use of a building or the special characteristics of a plot. Increment of value due to the redistribution itself must not be taken into consideration in assessing compensation.

¹⁷² Summary based on information supplied to the Commission by the Ministry of Health. See also Appendix 2 to the First Report of Great London Regional Planning Committee, 1929.

The compensation is paid out of a fund formed by a "redistribution levy" from the owners in proportion to the value of their new plots, which are assessed immediately upon the redistribution,

259. When the redistribution scheme has been settled, an inquiry must be held by the Redistribution Committee, at which any person concerned may make representations and the local police authority must be given an opportunity of taking part.

The final decision on the scheme is made by the District Committee. This must be publicly notified, maps and plans must be given to the owners and there may be an appeal to the Courts, within two months, in the matter of compensation.

Before the erection of any building in Germany, a permit must be obtained from the local building police authority. Where a redistribution scheme has been made, this authority may not grant building permits for plots included in the scheme without having first given the Magistrat an opportunity to express their views, and permission may be refused or conditions laid down if the redistribution would be made more difficult as a result of the erection of the building. No compensation is payable on account of this restriction on building.

260. The procedure described above has probably been modified in some details under the Third Reich, but it is understood that the general principle remains in operation.

261. The Bavarian Act appears to go, in some respects, further than other German legislation, since it permits redistribution procedure to meet any needs of public traffic and also for any other cases in which it is to the interest of the community to keep land free from building. The town of Nuremberg, in particular, has taken great advantage of this Act and a large number of redistribution schemes have been completed. A number of open spaces have been acquired without expense to the municipality.

In some variations of the *Lex Adickes*, e.g., those adopted in Baden and Saxony, redistribution is carried out on the basis of value instead of that of area.

BETTERMENT PROVISIONS IN JOHANNESBURG.¹⁷⁸

262. It appears that town planning in Johannesburg is mainly governed by the Townships and Town Planning Ordinance (No. 11 of 1931) of the Provincial Council of the Transvaal. Section 50 of this Ordinance, which deals with compensation for land taken for the purpose of a town planning scheme,

¹⁷⁸ Summary based on information supplied to the Ministry of Health by the City Engineer of the Town of Johannesburg.

contains the following provision: "If only a portion of a claimant's land is taken for the purpose of a scheme and the remaining portion is in the opinion of the Court increased in value by the operation of such scheme, the Court shall determine such increased value and set off the same against the value of the land taken as determined under Subsection (2)". It is stated, however, that no Compensation Court has as yet been appointed for this purpose and that, broadly speaking, betterment in this sense has never operated in Johannesburg. When the draft Ordinance was under consideration, the question of betterment was reviewed by a Commission appointed by the Administrator of the Town of Johannesburg to report on the Ordinance, and their views may be gathered from the following extract from the Report. "In cities and towns densely populated, but of small extent, the difficulties in connection with the assessment of betterment may not be great, but the Commission feels that, having regard to the extensive areas of our municipalities, and to the fact that the approval of a scheme is not likely to have any effect in the immediate future on the value of large areas of land included within a scheme, the practical difficulties likely to be experienced on the application and determination of betterment are so serious as to make the success of its operation very doubtful."

263. The Ordinance of 1931 contains in addition a number of provisions relating to the establishment of "townships". (A township is substantially the same as a building estate.) The lay-out of the township must be approved by the Administration. The owner can be required to surrender to the local authorities as much land as has been reserved for townlands or for public or municipal purposes, or for endowment purposes. He may further be required to lay out and construct streets and pay to a local authority "as an endowment" such percentage of the purchase price of lots sold as may be fixed by the Administrator. Any money so paid is to be applied to services of a capital nature in or for the township.

In connection with these provisions the City Engineer stated:—

"On approval of the township by the Administrator the management and control of the streets automatically vest in the local authority. After inspection of the site and amendments to the lay-out, the Townships Board submits its recommendation to the Administrator that the proposed township be approved subject to certain conditions more or less on the following lines:—

(1) The granting of a school site or sites free of cost to the Educational Authorities.

(2) Transformer sites as required by the Electricity Department are granted free of cost to the local authority.

(3) Streets are only formed and graded by the township owner.

(4) Actual construction of the roads and stormwater control has eventually to be carried out by the local authority.

(5) Sewerage reticulation is carried out by the local authority but no time limit is imposed.

(6) Water and light are paid for by the township owner.

(7) An endowment of 15 per cent. of the purchase price of all the stands (i.e., plots) in the township is paid to the local authority by the township owner. This amount must be expended on the township under consideration and usually covers only a small proportion of the total cost incurred under items (4) and (5). On the establishment of the township the building lots are valued and assessment rates then become due.

(8) Density and use zoning restrictions are imposed.

Small parks are usually included in the lay-out but open space as a gift is not easy to secure."

SPECIAL ASSESSMENT IN KANSAS CITY, U.S.A.

264. The scheme is described in the following terms by Sir Raymond Unwin in Appendix 3 to the First Report of the Greater London Regional Planning Committee (1929):

"The method of applying 'special assessments' to pay for the acquisition of lands and compensation for damage in connection with improvements is shortly as follows.

The City Council having decided on an improvement or the acquisition of a new park, apply to the Circuit Court for authority to take the properties or to do something which may injuriously affect them. Having received a favourable verdict, there is appointed a jury of six disinterested freeholders, generally reputable and experienced 'real-estate' men. Their first duty is to determine the value of the lands and properties to be acquired, and the compensation due for injury to be inflicted. Then, to quote the words of the City Charter of 1908, they 'shall proceed to estimate the amount of benefit to the City at large, inclusive of any benefit to the property of the City, and shall estimate the value of the benefit of the proposed improvement to each

and every lot, piece and parcel of private property, exclusive of the buildings and improvements thereon, within the benefit district, if any benefit is found to accrue thereto; and in case the total of such benefits, including the benefit to the City at large, equals or exceeds the compensation assessed, or to be paid for the property purchased, taken or damaged, then the said Jury shall assess against the City the amount of benefits to the City as aforesaid, and shall assess the balance of the cost of such improvement against the several lots and parcels of private property found benefited, each lot or parcel of land to be assessed with an amount bearing the same ratio to such balance as the benefit to each lot or parcel bears to the whole benefit to all the private property assessed.'

The result of setting representatives of the owners both to fix the total compensation to be raised and to apportion it fairly according to benefit on the remaining owners, including the City as one of them, has been progressively satisfactory. On the first 5,000,000 dollars spent on open space and other improvements 17 per cent. was assessed for the City to pay, 83 per cent. was assessed for the remaining owners. On the second 5,000,000 the City's share fell to 15 per cent., the remaining owners' rose to 85 per cent. Not only so, but the owners as represented by the Real Estate Board are satisfied. Valuations have shown that after paying their assessments they have still benefited by the improvements. A special Committee of the Board recently stated in their report 'that the increase in values resulting from these improvements has vastly exceeded the assessments, and the public has become convinced that in paying their park assessments they are simply making a worth-while investment. In addition, the City has remained with a smaller bonded indebtedness than any other City of the country comparable to it in size.' Yet few American Cities can show greater improvements or more adequate open space."

265. The Commission were informed, however, by the Ministry of Health that information furnished to the Ministry by Judge H. F. McElroy, the City Manager of Kansas City, suggests that the system of special assessment, i.e. apportioning amongst the owners of land benefited thereby the cost or a part of the cost of the value of improvement, is not, in fact, being operated in Kansas City as widely as Sir R. Unwin's note indicates.

266. Judge McElroy also informed the Ministry of Health that "As regards the acquisition of lands for public parks a benefit district or whole city, as the case may be, is taxed to pay

for same, and it has resulted in one of the finest park and boulevard systems in the United States." That statement, the Ministry informed the Commission, was recently confirmed by Mr. A. R. Waters of Kansas City, a gentleman much interested in local government affairs. He stated that the special assessment procedure would be used in the case of sewers but not in the case of parks, the expenditure on the latter being met, if large, by a special issue of City bonds, and, in other cases, out of general resources. In relation to the acquisition of land for parks and parkways, any benefit accruing to the owner's remaining land would be set off against compensation, but, apart from this, special assessment procedure would not be adopted.

PROPOSAL OF SIR RAYMOND UNWIN.

(Evidence 25th, and 26th Days.)

267. There is much to be said for some form of land nationalisation. It would afford the most complete solution. But probably the fairest, the most simple and least drastic method would be to raise a fund by taxing the owners of land values on all realised increment to an extent sufficient to meet the compensation payable to individuals for the loss of prospective value entailed by planning. It would be a fair method as between landowners and the community, and would do rough justice among the owners, as only those who realised increment would contribute, while those who suffered a loss would be compensated out of the fund so contributed. Such a method could be administered by the owners themselves: so long as all the compensation for transferred prospective values was raised and distributed amongst those who suffered loss, the details could be left largely to the owners to assess, and the management of the land would be left to the individual owners as at present.

A tax on increment values would not raise the question whether land is better managed, as a whole, by some trust or by individual owners and would not involve interference with property rights—temporarily or permanently.

Some difficulty in assessing increment might arise from the necessity for having a datum line, but in fixing a datum line a good deal of discretion might be left to the landowner. If he fixed it too low the valuation would be quoted against him on sale of his land for any public purpose, and, if too high, he would have less increment to pay but higher rates and death duties.

A heavy tax on increment would probably not be necessary, but the tax would have to be collected over a large area of the country.

PROPOSAL OF SIR GWILYM GIBBON.

(Evidence, 25th Day.)

268. The liability to heavy claims for compensation which now so gravely hinders good planning arises largely because land is held in so many separate ownerships. Under present conditions, individual owners might be seriously injured by proposals in a planning scheme and have the right to claim compensation even though owners as a whole might, far from being damaged, even be benefited.

The difficulty can apparently be met with equity only by the pooling of separate ownerships in large units. This could be secured by some form of public ownership, but there are strong reasons against this course. A better course would be to retain private ownership but to pool individual ownerships in suitable areas of large size. Each owner would be given a share in the pool to the value of the land owned by him. The several ownerships merged in a pool would be valued by the same person or group of persons on the same basis so as to ensure fair treatment all round. Each pool would be managed by a small body of competent persons responsible to the "shareholders". These persons would be chosen by the "shareholders" where agreement could be obtained or, failing agreement, by a group of persons specially appointed for the purpose by the State. Arrangements would be made for co-operation between pools, where necessary.

A reform on these lines would reconcile private and public interests, would retain private initiative (a matter of supreme importance) and would render possible the preparation of planning schemes without those wasteful compromises unavoidable under present conditions! In particular some form of pooling is essential for that replanning of existing towns which is so urgently needed for the better location of industries as well as for other purposes. The case for pooling in order to prevent the unfair drain of compensation, or wasteful compromises to avoid it, is reinforced by the necessity for some measure of pooling in order to ensure appropriate sites for good redevelopment.

PROPOSAL OF MR. A. NOEL MOBBS.

(Evidence, 11th Day.)

269. In order to provide finance for the reservation of open spaces and playing fields, a charge of 5 per cent. might be made on the cost of new buildings in areas zoned for industrial development and housing in connection therewith. All new buildings (factories, houses, shops, and places of amusement) would be subject to the charge, the collection of which might be left to the local authorities concerned. The author claims that the funds so obtained, coupled with the income derived from the use of open spaces, would provide a substantial sum towards interest and amortisation on open space finance.

CHAPTER X.

GARDEN CITIES, SATELLITE TOWNS, AND
TRADING ESTATES.

EXPERIMENTS IN DECENTRALISATION AND DISPERSAL.

270. The communities or undertakings above indicated are of various kinds; they have been launched under a variety of auspices and the objects sought to be achieved by their founders have shown great diversification of aim. They are described and examined here not as forming a problem by themselves, but rather as one amongst many elements in the wide national issues which the Commission have to consider, and particularly in relation to the question of decentralisation or dispersal from overcrowded and congested urban areas.

271. Garden cities and satellite towns formed the subject of investigation by a Departmental Committee, presided over by Lord Marley, which reported in 1935.

Garden cities as envisaged by Sir Ebenezer Howard were, in that Committee's Report, taken to mean new self-contained towns, separated from any existing urban unit by a protecting belt of open land, which were to offer properly planned facilities for industry, residence of inhabitants of various grades of society, and cultural and recreational opportunities. Howard considered it desirable, in addition, that the whole area selected for the site of the new town should be in the single ownership of the body undertaking the development, and that the profits derived from the land ownership, after providing for a certain maximum return on the capital invested, should be used for the benefit of the inhabitants. The term Satellite Town arose somewhat later, and was taken to indicate a development on garden city lines, but in the neighbourhood of, and to some extent dependent on, an existing large town. As the Marley Committee pointed out, there has been a tendency during the last two decades to confuse these two terms, and they added that it was "questionable whether at this date there is any great value in the maintenance of the expressions in any definitive sense". The Committee advocated the fullest adoption of the type of development usually associated with the idea of a garden city, and made other and more general recommendations as to better planning. They also recommended the establishment of a Planning Board under whose aegis should be brought land development and redevelopment throughout the country: the Board was not apparently to exercise executive powers, but should "encourage and assist local authorities to exercise the executive powers they possess". The Committee further recognised that it was not feasible under present conditions arbitrarily to locate industry, but expressed the belief that the attractions and facilities which could be offered to industry, together with the general influence which could

be exerted by the Planning Board and by local authorities concerned, would probably suffice to secure that industry would adopt the locations desired. No action was taken to set up the proposed Board.¹⁷⁴

272. Garden cities and satellite towns fall naturally into two categories, of which in each case there are two outstanding examples:—

(a) Letchworth (1903) and Welwyn (1920), promoted under private auspices as complete towns and also as experiments in social living. Their appeal was largely to those in sympathy with the ideas of the founders; this somewhat limited appeal, at any rate in the early days, may account to some extent for the comparatively slow growth of these two communities.

(b) Wythenshawe and Speke, developed respectively by the Corporations of Manchester and Liverpool. They owe their origin to local authorities and are framed, primarily at any rate, to meet rehousing requirements in connection with large and crowded municipalities; they are, in fact, housing developments carried out largely on garden city lines, including provision for industry.

273. Trading Estates also fall into two categories:

(a) Estates such as Trafford Park and Slough, financed by private enterprise on a profit-making basis.

(b) Estates such as Team Valley near Gateshead, Treforest near Cardiff, and Hillington near Glasgow, started with a view to grappling with the severe unemployment problem in those areas. These estates owe their origin to the Commissioners for the Special Areas in England and Scotland. They are undertakings not carried on for gain, and are financed by loans from the Special Areas Fund. The companies responsible for the Estates are not expected to pay interest on the loans during the early period of development, anticipated to be usually a period of five years, but thereafter it is assumed that interest at the rate of 4 per cent. will be payable.

274. It is important to bear in mind the different aims and circumstances attending these various communities.

Garden cities and satellite towns are attempts to provide both sites for industry and homes for the workers employed, together with centres for community life: Wythenshawe and Speke were undertaken in the first instance by the local authority as housing schemes, but they also set out to provide accommodation for

¹⁷⁴ A Departmental Committee on Unhealthy Areas, of which the present Prime Minister, Mr. Neville Chamberlain, was Chairman, had in 1921 reported in favour of garden cities.

industries within the community and to stimulate the community idea. The main difference between categories (a) and (b) in paragraph 272 is the direction which controls and the finance which supports the community: in (a), both are in the hands of private enterprise, while in (b) they are supplied by an active local authority.

Trading Estates set out to offer facilities and attractions to industries seeking location, but provision is not made by the estate companies, except to a small extent, for housing the workers employed by tenants on the estate. Here again, the difference mainly centres around control and finance; in the case of category (a) (paragraph 273), private enterprise supplies both; in the case of category (b), it is the State acting through the Special Commissioners which is responsible.¹⁷⁵

275. But while these differences of origin and aim in respect of the various communities mentioned are clear, from the point of view of this Commission and the problems with which it is entrusted, they have features in common. All have been founded in more or less definite relation to, but at varying distances from, large urban units—Letchworth is approximately 30 miles from central London, Trafford Park approximately 3 miles from the centre of Manchester; all are intended to give to industry or an industrial population, or both, opportunities that are not usually available in the big urban centres. These opportunities, so far as an industrial population is catered for, take the form of improved facilities for housing accommodation, for open spaces, and for recreation; and, in the case of industry, for better planned and generally cheaper factory accommodation. All represent, in greater or less measure and in various stages of development, experiments in decentralisation of industry or of industrial population, or of both.

Descriptions of the garden cities, satellite towns and trading estates referred to above appear in Appendix III.

276. It is pertinent to examine what advantages these experiments in decentralisation offer. In the case of the trading estates, the tenant firms enjoy certain advantages that, generally speaking, are not available elsewhere.

(a) The main attraction probably is the provision, especially in the more modern estates, of standard or specially designed factories erected by the estate company which can be leased to the tenant firms on a rental basis.¹⁷⁶

¹⁷⁵ While the main types are given above, there are also some smaller and less well defined experiments on trading estate lines. See Appendix III under Special Areas Trading Estates.

¹⁷⁶ In the case of some of the garden cities, also, the municipal Corporations concerned, or the garden city companies, have, with the view of attracting industry, adopted the policy of erecting factories to let on lease, and of assisting industrialists by advancing loans towards the erection of factories. See Appendix III.

This has many advantages from the tenant's point of view; it saves him heavy capital outlay to start with—an outlay which may be a serious handicap, especially in the case of many of the small light industries.

(b) Information required by an applicant for a factory can be readily obtained at one source on the spot on such matters as gas, electricity, water, rating, sewage disposal, transport, labour, and housing, and, after occupation, there is at the tenant's disposal the benefit of the experience and advice of the estate company's engineering, surveying and other technical departments.

(c) The layout of the estate factories is generally on liberal lines, with space for extensions.

(d) The availability of public utilities, electricity, gas, water, and steam is another great attraction.

(e) So soon as the estate company is well established, a prospective tenant will have confidence that provision has been made for the normal requirements of modern manufacture—labour, markets, power, and transport.

277. The workpeople employed in factories on modern trading estates have the advantage, as compared with those employed in factories of the older type, of working in buildings of greatly improved design under good conditions of space and light. In addition, provision is often made on the estates, either by the estate companies themselves or by the tenant firms, for cheap meals, recreation, and educational facilities. An admirable example is the social centre at Slough, where generous provision is made indoors for refreshments, games, library and theatre, and outdoors, of swimming pool, tennis courts, running track, and so on.

278. As to the trading estate companies themselves, if success is to be measured by profit-earning capacity, Slough may claim to have achieved from the start a considerable measure of success, and Trafford Park, while it made little or no profit in its early days, has shown a reasonable dividend in recent years. The garden cities of Letchworth and Welwyn similarly are now on a dividend-paying basis. Speke and Wythenshawe from the finance point of view present a double aspect. As already shown, they are, primarily, housing undertakings affording accommodation rendered necessary by growth of population, slum clearance, etc., in the parent cities themselves but, in addition, the Corporations had the foresight and initiative to plan these new estates on garden city lines with provision for residences of varying types, for schools, for industrial establishments, for shopping centres, and for recreational facilities, thus securing in great measure self-contained communities. The finance required was therefore twofold in character:—

(a) The ordinary provision under the Housing Acts;

(b) Further finance as required for the purchase and laying out of the estate as a garden city.

279. Those who represented both the Liverpool and the Manchester Corporations before the Commission expressed the view that in the future, when the sinking fund periods were completed and the construction loans had been amortised, the respective Corporations would be in possession of a valuable asset and would derive income as landlords from the properties leased.¹⁷⁷ A round figure of £6½ millions in the case of Wythenshawe was put before the Commission as the probable estimate of all costs and commitments up to 1941 under the two heads of (a) construction of houses by the Corporation, and (b) estate development, including all services such as roads, gas and water supply, etc. Hitherto the practice has been, at any rate so far as Wythenshawe is concerned, for the Corporation to consider its position as landowners of the estate, and as local authority under the Housing Acts, separately, and to treat the finance concerned accordingly.

280. Taking the estate development side by itself, the following figures were supplied to the Commission by the Manchester Corporation:—

WYTHENSHAW ESTATE.

Revenue Account.

Estimated position upon the complete development of the Estate after applying estimated debt charges on capitalised outlay of £2,477,000 on the purchase of land and provision of development services.

1. Estimated debt charges on capitalised outlay—

	Redemption.	Interest.	Total.	
	£	£	£	£
20 year loan period	43,142	46,370	89,512	
30 year loan period	10,204	19,418	29,622	
60 year loan period	5,107	33,309	38,416	
				157,550
2. Management and Administration			2,000	
Maintenance of spinneys, greens, parkways, etc....			1,800	
				3,800
3. Total Annual Charges				161,350
4. Less Income from ground rents				157,458
5. Deficit per annum				£3,892

Note.—In fact, part of the Council's outlay which has been capitalised in the calculation will have to be met annually out of the rate as it arises, whilst leases may not be taken up as readily as will be desirable, with the result that a greater charge on the rate than that shown by the above figures will, in fact, occur year by year in the earlier years.

It would appear, therefore, in the case of Wythenshawe that while the rates may have to be called on to cover a small deficit, that deficit is represented by value accruing to Manchester and

¹⁷⁷ Manchester, p. 815, Q. 6890; Liverpool, p. 835, Q. 6940.

its residents in other directions and in generally improved conditions. The Corporation are satisfied that the scheme will ultimately prove to be a profitable investment for the Corporation on a strictly financial basis.

281. Before leaving the subject of the constitution and aims of garden cities and satellite towns one point should not be forgotten. They seek to embody a system of social life in connection with, but distinguishable from, factory activity, and some liberal-minded and farsighted employers have also made interesting experiments on somewhat similar lines. For example, Bournville and Port Sunlight—to mention only two—have developed fully-equipped communities in relatively close proximity to the factories with a view generally to providing accommodation for the workers. It is doubtful whether, in the future, there will be so much necessity for such experiments, owing to the enlarged powers and duties imposed on local authorities by the Housing Acts.

282. It is necessary now to consider to what extent and under what conditions resort may in the future be had to the expedient of establishing garden cities and trading estates as a contribution towards the problem of decentralisation in the case of overgrown and congested urban areas, and whether, in fact, they are capable of further extensive development. In this connection the view was expressed before the Commission on behalf of the Corporations of Manchester and Liverpool that two essentials for the successful establishment of satellites such as Wythenshawe and Speke are:—¹⁷⁸

(a) The development should be undertaken by the local authority.

(b) The land should lie within the boundary of the local authority undertaking the development.

283. As indicated in other portions of this Report, it is not necessary, if indeed it is practicable with the information at present available, to define when a given town has reached such a stage, either in size or in the extent of its congestion,¹⁷⁹ as to call for special consideration with a view to possible action in the direction of decentralisation: that point will differ with different towns and varying circumstances. A purely industrial town, crowded with factories and at the same time densely populated and burdened with smoke and lack of sunshine, with noise and the other concomitants of modern industry, may well be forced to consider decentralisation at an earlier stage than pleasanter and less industrialised centres of similar or even larger size. But while the minimum limit at which the forces of

¹⁷⁸ Manchester, p. 813, Q. 6850; Liverpool, p. 836, Q. 6977.

¹⁷⁹ See Chapter XIII.

decentralisation should come into play will vary, considerations of space and distance in the case of the larger urban areas, involving problems of transport and traffic congestion, should, in our opinion, serve to mark the stage when decentralisation must be contemplated.

284. Assuming that in the case of a given large urban unit, decentralisation has been decided upon and is to take the form of a garden city or satellite town, then, in our view, certain broad conditions should be observed:—

(i) The communities¹⁸⁰ should be as far as possible complete units and placed well outside the existing town so as to enjoy advantages of air and space not possible at the centre or in the immediate suburbs, and they should be protected by a belt of open country so as to avoid eventual coalescence with the existing town.

(ii) They should be off the main arterial roads of traffic, but have good access to them,¹⁸¹ and should be near enough to the big centre to enjoy its advantageous marketing facilities.

(iii) They should provide industrial and other occupational opportunities, preferably with reasonable diversification, for a large, if not the greater, proportion of the inhabitants.

(iv) While sited far enough away from the centre to secure satisfactory conditions for space and recreation, they should be near enough to permit of the residents enjoying, when desired, the medical, educational and recreational facilities which the big centre can supply. As has been wisely said, however well a suburban or satellite city may be equipped, its inhabitants will want to visit the centre in order to shop or see a good play or film, or listen to a concert or a well-known speaker, or for many other purposes. But that is a very different thing from being forced to seek all their amusements and collective activities at a long distance from their place of residence. "The suburb ought to be a secondary centre of social and civic activity and to develop a community feeling of its own."¹⁸²

Moreover, in this connection, it is worth emphasising that in the case of trading estates, every effort should be made to guard against a shortage of housing accommodation for the workers employed on them.

¹⁸⁰ See recommendations 10, 11 and 12 in the Report of the Committee on Garden Cities and Satellite Towns, 1935.

¹⁸¹ As advocated by Sir Charles Bressey—Greater London Highway Development Survey, 1937, p. 62.

¹⁸² G. D. H. and M. I. Cole. "The Condition of Britain," pp. 181-2; and evidence by the Corporations of Liverpool and Manchester as to Speke and Wythenshawe, and by the Welwyn and Letchworth Garden Cities.

FINANCIAL CONSIDERATIONS.

285. Finally, if the risk of wasteful competition is to be avoided, it seems necessary, in the interests of the community as a whole, that some supervision should be exercised by the Government over the location and growth alike of (a) garden cities and satellite towns and (b) trading estates, even when in private hands. In the case of (a) the resources, of Government and municipal finance may have to be brought into play, particularly in the early years: the sums involved are likely to be too great, and the profits of too uncertain a character to be attractive, save in exceptional circumstances, to private enterprise. Finance, and the length of time required before anything like full development is attained, are most important factors: large capital expenditure is inevitable and interest on capital rapidly accumulates. If, therefore, development is slow, the capital account of the undertaking will have to carry a far heavier burden of accumulated interest than if it had been more rapid; and if they are launched with the assistance of Government or municipal finance, that may afford valuable help in the direction of more rapid development. It will be borne in mind that under Section 35 of the Town and Country Planning Act, 1932, the Minister may, with the consent of the Treasury, acquire land on behalf of a local authority, if necessary by compulsion, where he is satisfied that the authority will develop it as a garden city and have funds available for the purpose. Local authorities also may, themselves, acquire land, if necessary by compulsion, for the same purpose.¹⁰⁰

286. It is clear that financial as well as industrial and social considerations must enter largely into the issue of success or otherwise for all the communities described: the Government Department concerned in the case of the Special Areas trading estates, the local authorities responsible for Wythenshawe and Speke, and, in their turn, the companies responsible for Letchworth and Welwyn, must all bear the financial aspect in mind.

287. So far as private enterprise is concerned in the creation of garden cities, the capital involved is, as already indicated, apt to be large and the ultimate profit remote. Experience indicates that the financial success of an undertaking of this kind must depend ultimately on incremental value. The problem is, how by careful finance and judicious planning, so to increase the average value per acre of the land as to leave a surplus after covering not only the original cost per acre, together with development charges, but also an allowance for interest on the capital invested until such time as

¹⁰⁰ Ministry of Health, p. 19, par. 27; p. 141, par. 51.

rents and income from other sources become adequate. Clearly if there is a prolonged interval between the start of the undertaking and the time when a considerable population has settled in the community, a good number of industries have leased sites, and income becomes considerable, then the amount to be debited to capital on account, *inter alia*, of interest and charges will become heavy, and the incremental surplus reduced accordingly.

288. Private interests can in no way control population so as to overcome the awkward waiting period. Different considerations, however, apply to communities such as Wythenshawe and Speke, promoted by municipalities, and to trading estates such as those in the Special Areas, created under Government influences. In both these cases finance will in general be available at a somewhat lower rate of interest, and the very large initial sums of capital required are more readily available than in the case of communities financed by private enterprise.

Moreover, where municipalities, as at Wythenshawe and Speke, combine in one scheme a housing estate, an industrial centre and a garden city, there are opportunities for rapidly accelerating the growth of population, as well as for providing the necessary social services so as to bridge or largely eliminate the waiting period between the launching of the scheme and its full expansion. Also, assuming our recommendation for the establishment of a National Industrial Board with facilities to discourage industrial growth in certain areas and encourage it in others be put into force, and the activities of the Board are called into play, communities created under Government influence will enjoy similar advantageous opportunities of expansion within a reasonably short period.

289. On the other hand, there is a risk to be guarded against: it is doubtful whether the policy of creating either garden cities or trading estates is capable of very wide expansion and, indeed, it has been suggested to the Commission that something in the nature of competition is already arising in the case of the latter.¹⁶⁴

290. Decentralisation implies migration of industry and population from one congested area to another area less congested, and when decentralisation becomes necessary the question naturally arises as to the locality to which migration should be directed. As to this, there is no one panacea capable of universal application. Garden cities, satellite towns and trading estates will all doubtless play their part, but other expedients will also be available and all practicable methods of handling the problem will naturally receive the careful consideration of the National

¹⁶⁴ National Industrial Development Council of Wales and Mon., p. 469, Q. 4048-50; Ministry of Labour, p. 265, Q. 2689 et seq.

Industrial Board whose creation we recommend in Part IV of this Report. Methods that have been suggested include:—

- (a) the building of a large number of new towns, each to hold a population of, say, 50,000, and
- (b) the extension on properly planned lines of existing small towns and large villages.

In addition, if a Regional system, as described in Chapter XV, were adopted, the practicability should be considered of further developing the regional capitals. The fact that they may already be large urban units need not rule out their further development provided always that they and the new developments are adequately planned to meet social, economic and strategical requirements.

CONCLUSION.

291. We are of opinion that by the well considered development of garden cities, satellite towns and trading estates a useful contribution can be made towards the solution of the problem of relieving overcrowded and congested urban areas, but we believe that such development is not likely to proceed successfully if left entirely to private enterprise, on account, mainly, of the magnitude of the financial commitments involved. Success is much more likely to be obtained if the development is undertaken by municipal authorities especially in cases where they are faced with the necessity of decentralisation with a view to meeting their responsibilities in relation to housing needs, etc. Those authorities have two great advantages as compared with private enterprise:—

- (1) administratively they can, provided that the land is within their boundary and, preferably also, within their ownership, control the provision of housing, and social services generally, and thus stimulate rapid development, and
- (2) they, or at any rate, the larger authorities, have financial resources and facilities for raising loans at low rates of interest which are not generally available to private enterprise.

In addition, with a view to encouraging local authorities to undertake development of the types under consideration, financial assistance under proper safeguards should be afforded to them from central Government funds.

292. We recommend that the proposed National Industrial Board should examine forthwith and formulate the policy to be adopted in relation to decentralisation or dispersal from congested urban areas in connection with the following issues:—

- (i) In relation to what congested urban areas is such decentralisation or dispersal desirable.

(ii) In cases where decentralisation or dispersal is found desirable, how far should the following be encouraged or developed:—

(a) Garden cities or garden suburbs.

(b) Satellite towns.

(c) Trading estates.

(d) Further development of existing small towns or regional centres (provided adequate planning schemes are applicable thereto).

(e) Other appropriate methods.

In such cases adequate provision must be made:—

(a) For the requirements of industry (i.e., in respect of labour supply, markets, transport and power), and for the social and amenity needs of the communities.

(b) That the risk of unnecessary competition is avoided.

(c) That strategical considerations are given due weight.

(iii) The time factor is important in developments under (ii). Without excluding activities of private enterprise, such as authorised associations under the Town and Country Planning Act, 1932, municipalities (which have special facilities in respect of housing, roads and other social services) should be encouraged to undertake such development, and:—

(a) Where considered necessary they should be given opportunity for dealing with the problem so far as found desirable on a regional rather than on a municipal basis.

(b) In cases approved and to the extent approved by the National Industrial Board financial assistance should be available for the municipalities from Government funds, especially in the early years.

CHAPTER XI.

THE FUTURE OF THE POPULATION.

293. Any discussion of the problems arising from the geographical distribution of the industrial population and industry would be incomplete without reference to the future of the population. Though there were during the nineteenth century fluctuations from time to time, partly due to emigration, it is true, generally speaking, that throughout the century the population

of Great Britain increased by progressively larger numbers, as is shown by the following table.¹⁸⁸

Year.	Population.	Increase.
1801	10,500,956	—
1811	11,970,120	1,469,164
1821	14,091,757	2,121,637
1831	16,261,183	2,169,426
1841	18,534,332	2,273,149
1851	20,816,351	2,282,019
1861	23,128,518	2,312,167
1871	26,072,284	2,943,766
1881	29,710,012	3,637,728
1891	33,028,172	3,318,160
1901	36,999,946	3,971,774
1911	40,831,396	3,831,450
1921	42,767,739	1,936,343
1931	44,830,980	2,063,241
1937	46,007,610	1,176,630

Notes:—

1. The decades 1881-1891 and 1901-1911 were periods of high emigration.
2. The war deaths overseas during the war of 1914-18 among population normally resident in Great Britain are estimated to have numbered 651,000.
3. In the period 1930-1935 there was an inward balance of migration amounting to 340,000 persons according to the statistics of civilian passenger movements, but it is not known how many of these persons represent permanent immigrants.

It will be observed that as compared with an increase of about 1,470,000 in the decade 1801-11 there was an increase of 3,972,000 in the decade 1891-1901. But for high emigration the first decade of the present century would have shown a still greater addition to the population: even so there was an increase of 3,831,000.

294. A radical change has since occurred in that the rate of the decennial increases has undergone a drastic reduction. In the decade 1921-31 the increase fell to 2,063,000 and judging by the experience of the six years 1931-7 it appears likely that the increase in the present decade will be even smaller, despite the fact that during this latter period a large amount of population has been gained by immigration from overseas. In each intercensal period from 1871 to 1931 the balance of migration was outward: since 1930 it has been inward.

295. Though influenced by migration to and from Great Britain and by war deaths, the recent reduction in the rate of increase of the total population is ultimately to be traced to the decline in the birth rate which set in immediately after the quinquennium 1871-5 when it had attained so high a rate (crude) as 35.4 per 1,000 population. The decline, though small, that started in the quinquennium 1876-80 (with a birth rate of 35.3 per 1,000 population) continued in almost unbroken succession

¹⁸⁸ Sources of figures, etc., are General Report, Census of England and Wales, 1921, Table II, p. 14; General Tables, Census of England and Wales, 1931, Table I, p. 1; Report on Census of Scotland, 1931, Table B, p. viii; and evidence of Population Investigation Committee.*

until 1933 in which year the rate fell to 14.7 per 1,000 population.¹⁰⁶

296. In 1926, the Registrar-General of England and Wales in his Annual Review for that year (p. 159) observed that:—

“ it seems extremely probable that since about 1923 the birth rate in this country has entered upon a stage which, if no future improvement takes place, must eventually result in a declining population. On the other hand, if, as is quite possible, the present lowness of the birth rate is only a temporary phenomenon reflecting the prolonged economic depression of the post-war period, the tendency may be corrected before the consequential decline actually sets in, while even in the most extreme circumstances it could hardly commence for some decades to come.”

297. Since 1933 the fall in the birth rate appears to have been arrested, and a small, and so far uninterrupted, rise has taken place. Despite this slight improvement the rate is at present of the order of about 75 per cent. only of a full standard reproduction rate and, failing its recovery still further to the par value, the population of the country is bound sooner or later to decline in numbers,¹⁰⁷ unless there is an increase in the number of immigrants of such proportions as seems at present unlikely.

298. Within recent years the subject has attracted increasing public interest, partly no doubt as a result of some rather sensational prognostications as to what might be the fate of the population of the country a century hence if the birth rate followed in future a certain calculated though quite hypothetical downward course. Evidence was placed before the Commission by the Population Investigation Committee, including estimates framed by Dr. Enid Charles. These estimates are summarised below:—

*Dr. Enid Charles' estimates of the future populations of
England and Wales, and Scotland.
(Total population in thousands.)*

Year.	England and Wales.			Scotland.	
	(a)	(b)	(c)	(a)	(b)
1935	40,563	40,563	40,563	4,945	4,945
1945	40,876	40,392	42,338	5,151	5,114
1955	40,207	38,777	43,651	5,299	5,110
1965	38,504	35,799	43,744	5,360	4,935
1975	36,038	31,452	43,021	5,345	4,558
1985	33,106	26,087	41,612	5,270	3,989
1995	30,019	20,440	39,871	5,149	3,309
2005	27,090	15,058	38,177	5,014	2,600
2015	24,467	10,456	36,646	4,890	1,935
2025	22,121	6,940	35,104	4,770	1,369
2035	19,969	4,426	33,585	4,647	925

¹⁰⁶ Registrars-General, "Memorandum on the Current Trend of Population in Great Britain."⁰

Estimate (a) assumes a continuance of the fertility and mortality of 1933, estimate (c) that fertility rises to the 1931 level while mortality continues to fall, and estimate (b) that both fertility and mortality continue to fall at a rate deduced from recent trends. Estimate (b) postulates constant fertility for women under 20 years of age, a fall of 5 per cent. every five years for women aged 20-24, of 15 per cent. for those aged 25-39 and of 25 per cent. for those aged 40-49 years. With regard to estimate (b) the Population Investigation Committee explain:—

“With such a fall in fertility as that postulated it is necessary to emphasise the fact that this estimate, like those made by other statisticians, is a statistical exercise, and must not be regarded as a prediction.”

299. In their evidence the Registrars-General remark that “the danger of the hypothetical type of treatment is that the inherent complexity of the subject may lead to a neglect of the limitations of the hypotheses on which it depends, and, in achieving the immediate purpose of stimulating interest and concern in regard to future conditions, it may have given rise to misunderstandings, not only as to the likelihood of realisation of the more distant forecasts, but also as to what is actually happening to the population at the present time and what changes can be counted on to take place in the immediate future.”¹⁸⁸

300. The Registrars-General have supplied the Commission with estimates of the future population of Great Britain up to 1971 which have been framed on the assumptions that—

- (a) fertility will remain at its present level;¹⁸⁹
- (b) mortality rates will continue to fall;¹⁹⁰
- (c) net migration will be inwards until the decade 1941-51 and nil thereafter.

Forecasts of the population of Great Britain, calculated in accordance with the foregoing assumptions, are shown in the following table at decennial intervals between 1941 and 1971.

¹⁸⁸ Ibid.

¹⁸⁹ This does not betoken a fixed annual number of births since, owing to the lowness of the numbers at younger ages in the existing population, there will be a decline in the coming years in the numbers of women at the child-bearing ages and hence, assuming a constant level of fertility, a decline in the annual number of births.

¹⁹⁰ The Registrars-General remark that they are in continuous touch with medical opinion and Departmental medical administration, and they can find no justification for the assumption, implied in some population forecasts, that the most probable course of mortality is one which shows no significant improvement on the rates actually experienced in recent years.

	Actual Population 1937.	Forecast Population.			
		1941.	1951.	1961.	1971.
Total Population	46,008	46,565	47,501	47,192	45,980
Deviations (a) ...	—	±25	±280	±805	±1,579
<i>Age and Sex groups.</i>					
0-15, persons ...	10,179	9,573	9,054	8,433	7,600
15-30—					
Male ...	5,614	5,541	4,975	4,443	4,274
Female ...	5,691	5,539	4,907	4,319	4,147
30-45—					
Male ...	4,913	5,260	5,436	5,099	4,413
Female ...	5,438	5,637	5,557	5,069	4,351
45-65—					
Male ...	4,751	4,867	5,579	6,382	6,542
Female ...	5,552	5,822	6,482	6,957	6,790
Over 65, persons	3,870	4,326	5,511	6,490	7,863
<i>Age and Sex groups.</i>					
<i>Distribution per 1,000 total population.</i>					
0-15, persons ...	221	205	191	179	165
15-30—					
Male ...	122	119	105	94	93
Female ...	124	119	103	92	90
30-45—					
Male ...	107	113	114	108	96
Female ...	118	121	117	107	95
45-65—					
Male ...	103	105	117	135	142
Female ...	121	125	137	147	148
Over 65, persons	84	93	116	138	171

(a) These figures indicate the variations which would be produced under more favourable and less favourable assumptions, the modifications for this purpose being as follows:—

More favourable assumptions: the ultimate mortality and fertility reached in 1971 to be 10 per cent. lower and 10 per cent. higher than the standard respectively, with rateable differences for intervening years.

Less favourable assumptions: the same procedure but with factors 10 per cent. higher and 10 per cent. lower respectively in 1971.

The positive and negative deviations on the bases adopted are so nearly equal that they are shown as a single figure preceded by a plus and minus sign.

On this forecast a population maximum of between one and two millions in excess of the present figure of 46 millions would be reached during the decade 1951-61. The total population would not, however, have fallen below the present level by 1961 and possibly not by 1971, though the increasing margin of variation shows that the element of speculation is becoming significant at that distance of time.

301. It may be argued that in viewing the future trend of the population the possibility cannot be ignored of biological forces coming into play to counteract the present tendency or of a national policy being adopted with a view to stimulating the birth rate so as, at least to prevent a decline in population. In this connection it is calculated that if the births of Great Britain were maintained at the present level of 700,000 per annum, the total population would increase, on the assumptions as to mortality and migration adopted for the preceding forecast, until 1971 at least and would tend ultimately to stabilisation at a figure of about 47½ million.

302. Thus the problems arising from the present distribution of industry and the industrial population have to be looked at in the light of the considerations that while the population of the country is still increasing the rate of increase is well below that of the 19th century; that though increases may be expected to continue for the next thirty or forty years, they will tend to become progressively smaller, unless some unforeseeable and unanticipated change occurs; and that subsequently the population may begin to decline, or, alternatively, if the annual number of births remains at the present figure, will become stabilised at a figure about one and a half millions above the present figure. Moreover, if the assumptions underlying the estimates set out in paragraph 300 are fulfilled, there will be a marked movement of the age balance of the population from the younger to the older ages, so that in 1971, when a total population roughly equal to that of 1937 is forecast, the number of children under the age of 15 and the number of persons between the working ages of 15 and 65 will be more than 2½ millions and nearly 1½ millions respectively below the 1937 figures for those age groups, while on the other hand the number of persons over the age of 65 will be almost 4 millions above the 1937 figure.

303. The decline or stabilisation of the population and its ageing in the manner indicated would import a potent change in the environment in which the Commission's problem is set. The expansion of the national market for particular types of products might be expected to dwindle and ultimately be stayed, or reversed, though articles which supply the needs of the elderly would be in greater demand. An increase of the average age of the population would tend to reduce the mobility of labour, since migration is largely confined to the younger adults free from the ties of families and established homes which inevitably militate against free movement from district to district in the case of married men. Further, the older the industrial population grows the less adaptable will it become both to new methods and new occupations; and though by reason of a higher

standard of health the members of the industrial population might be able to work till a later age there might nevertheless be some loss of industrial efficiency, and of power to compete in overseas markets.¹⁹¹

304. There are many other possible repercussions, the nature and results of which at this stage cannot be other than debatable and speculative. The outlook is all the more uncertain in that it cannot be assumed that the incidence of a decline of population would fall upon all areas of the country at the same time, or that stabilisation of the size of the population would also imply stabilisation of its geographical distribution. It might on the one hand be argued that the lessened mobility which, judging by present social conditions and past experience, the industrial population might be expected to have by reason of a greater proportion of its members being contained within the higher age ranges, would tend to induce greater stability in its geographical distribution. On the other hand it might be suggested that any such tendency to greater immobility would be more than counter-balanced by the powerful forces which operate to attract labour to prosperous areas and that ultimately the population might be concentrated almost wholly in and around a few large towns¹⁹²; in particular that the London area would continue to expand while the population of the country as a whole was declining or at any rate not increasing.¹⁹³

305. On the whole it seems reasonable for the purpose of the Commission's inquiry to assume that for the next 30 years or so the population will remain fairly stable. Even so, however, a stationary condition of the population would constitute for the future a great change as compared with the large and continued growth of the last 100 years and these changed conditions must be borne in mind in connection with the problems of location of industry in the future and any measures proposed in connection with them.

CHAPTER XII.

PROBLEM OF THE SPECIAL AND DEPRESSED AREAS IN RELATION TO THE BALANCE OF INDUSTRY THROUGHOUT THE COUNTRY.

306. Changes on a large scale in the course of commerce and industry involving migration of population are as old as history. In commerce, the growth and, later, the diminished prosperity

¹⁹¹ Federation of British Industries, p. 495, pars. 25-26, p. 498, Q. 4283-4.

¹⁹² Ministry of Labour, p. 246, Q. 2544-50.

¹⁹³ Federation of British Industries, p. 496, Q. 4270; p. 499, Q. 4309 and 4315; London Passenger Transport Board, p. 351, Q. 2977-80. Population Investigation Committee.*

of the Hansa towns, of Venice, and of Genoa, furnish illustrations of such changes in mediaeval times. In industry, mining discoveries, and the gold rush to California in the middle of last century afford obvious examples of rapid change in the mining industry accompanied by equally rapid migration of population. In the history of Great Britain, iron smelting in Sussex and Kent died with the eighteenth century, and by 1830 the concentration of the iron industry in South Wales and the Black Country was remarkable.¹⁹⁴ Woollen manufacture, which flourished in East Anglia with Norfolk as its centre till the end of the eighteenth century or a little later, was towards the end of that century moving up to the West Riding; and the migration of the worsted industry from East Anglia to Yorkshire is a "classical case of industrial migration in English history."¹⁹⁵

A recent instance of change in industrial location is the rapid development of Messrs. Stewarts & Lloyds works at Corby.

307. In all these cases natural economic causes were at work: the growing shortage of timber for charcoal in Sussex coupled with the supply of coal and ore in other regions, the availability of fuel for power and domestic use in Yorkshire, and the need for cheap iron ore even if of low grade—such were the reasons for these large-scale movements of industry and the consequential migration of the industrial population.

308. Since the War, the world trend towards national self-sufficiency in manufacture has involved great changes in industry in Great Britain, especially with regard to the export trade.

This trend was considered by the Balfour Committee on Industry and Trade, and the conclusion¹⁹⁶ of the Committee was that:—

"Taking the world as a whole the widespread development of home manufactures to meet needs formerly supplied by imported goods . . . is perhaps the most important permanent factor tending to limit the volume or to modify the character of British export trade.

In part this tendency is a natural and universal one inseparable from healthy economic progress and dating from a period long before the War."

The tendency has become more marked in the 14 years since the Balfour Committee reached that conclusion and its effects on Great Britain are more pronounced: it is this tendency which has operated as one of the chief factors in producing the problem of the Special and depressed areas.

¹⁹⁴ Clapham, "Economic History," Vol. 1, p. 42.

¹⁹⁵ Clapham, "Economic Journal," Vol. XX, June, 1910; and Board of Trade, p. 70, par. 56.

¹⁹⁶ Vol. 1, Introduction, 1925, p. 9.

309. In their final Report¹⁰⁷ the Committee emphasised the need of mobility to meet the inevitable changes of industry.

“ The vitality of modern industry, like that of an organism, is measured by its power of response to external stimulus and of self-adaptation to modified environment. ‘ Mobility ’ (in this sense of the term) does not imply incessant or purposeless movement or change, and may be consistent with a high degree of stability and complexity of structure. But it does imply the power of spontaneous reaction to changes in economic conditions, and of internal modification and rearrangement to meet such changes. This is true both of the material and the human factors, of methods of business organisation and of relations among classes, as well as of the personal skill, enterprise and leadership which individuals bring into the common stock. It is, therefore, a matter of supreme necessity in this period of rapid and insistent flux and transformation to maintain unimpaired the qualities of initiative and flexibility of temperament, the power of readjustment and adaptation, and the capacity for free and willing co-operation among all the partners in production and distribution. Any waning of these powers could only mean an increasing rigidity and ossification of economic structure, and a progressive enfeeblement of its vitality, for which no measures of external support or defensive organisation could compensate.”

It is, therefore, necessary to look on movements in industry as a permanent phenomenon varying in degree from time to time, and to be met with mobility (in the sense indicated of ready adaptation to economic change) as an indispensable defensive weapon.

310. Such movements may produce grave economic friction: heavy financial loss may be incurred by industry and the financial interests concerned, and risk of unemployment is involved. It is easier to recommend mobility than to secure it, and under modern conditions appeal for assistance by the interests adversely affected is inevitably made to the Government of the day.

311. Government measures may take the form of an endeavour to “ cushion ” the blow of a great change by tariffs or commercial treaties. Further, existing or new machinery may be brought into play with a view to mitigating the severity of the change, and this has been in fact done by the Government in the case of Great Britain. The measures taken in the case of the Special or depressed areas were indicated in the evidence

¹⁰⁷ Final Report, 1929, p. 235.

of the Ministry of Labour, and may be summarised shortly as follows:—¹⁰⁰

- (a) "Placing" work of the Employment Exchanges;
- (b) Transference, with financial assistance in various forms, of unemployed, both adults and juveniles, from areas of severe unemployment to more prosperous areas with new openings;
- (c) Establishment of training centres and instructional centres;
- (d) Legislation for the four Special Areas:—
 - (i) West Monmouthshire and the greater part of Glamorgan.
 - (ii) Tyneside and the greater part of county Durham, etc.
 - (iii) West Cumberland.
 - (iv) Middle Industrial belt of Scotland, excluding Glasgow.
- (e) The creation of Trading Estates and smaller industrial centres, with financial assistance from the Commissioners for the Special Areas.
- (f) Land Settlement, also financed by the Commissioners.
- (g) Location of factories required for the Government's Defence programme.
- (h) Preference given to areas of heavy unemployment in the allocation of Government contracts.
- (i) Location of factories established by foreign firms or firms employing foreign labour.

The legislation for the four Special Areas, referred to at (d) above, includes:—

- (i) The Special Areas (Development and Improvement) Act, 1934, under which Commissioners were appointed to initiate, organise, prosecute and assist measures designed to facilitate the economic development and social improvement of the specified Areas. The Commissioners were vested with wide powers of financial assistance, and empowered to establish Trading Estate Companies in the Areas.
- (ii) The Special Areas Reconstruction (Agreement) Act, 1936, under which a limited company—the Special Areas Reconstruction Association—was set up. The Government gave certain guarantees in connection with the company's capital, and the company was empowered to make loans to persons either newly setting up a business in a Special Area, or already carrying on a business there and needing financial help for purposes of extension.

¹⁰⁰ Ministry of Labour, p. 254, et seq.

(iii) The Special Areas (Amendment) Act, 1937, under which the Treasury were authorised, in accordance with the recommendations of an Advisory Committee, to make loans to persons carrying on any industrial undertaking established in a Special Area subsequent to 6th May, 1937, provided that the undertaking was likely in normal circumstances to employ not less than ten persons. Under this Act, the Commissioners were authorised under certain conditions to let factories in any of the Special Areas for the purpose of inducing firms to set up there and to offer contributions towards rent, rates, and income tax.

The funds authorised under the Acts of 1936 and 1937 were supplemented by a sum of £2 millions which was placed at the disposal of trustees in December, 1936, by Lord Nuffield for the benefit of the Special Areas, and the Commissioners for the Special Areas have supplied the Commission with information as to the effects of the three funds, and of financial assistance in other directions, in inducing industrial undertakings to set up in the Special Areas. Up to the 30th September, 1938, financial assistance, in the form of capital, had been given for the establishment of new industries in the Special Areas, to 121 firms, the amount of assistance provided being £2,874,000. The number of workpeople to be employed by the firms in question was estimated at approximately 14,900. The total number of firms assisted by capital and by other financial inducements, such as the provision of factories or factory sites, was approximately 290.

The establishment of trading estates and smaller industrial centres, referred to at (e) above, is dealt with in Chapter X of this Report, and in Appendix III, where some details are given as to the history of the estates, the number of factories that have been set up and the numbers of workpeople employed.

As to the location of factories required for the Government's Defence programme referred to at (g) above, the Ministry of Labour informed the Commission¹⁰⁰ that consultation takes place, well before final commitments are entered into, between the Service Departments and other interested Departments, as to the suitability of any proposed site in relation to the available supply of labour, housing, and the general employment position. As far as practicable, consultation also takes place in regard to the location of factories to be established by individual firms, with Government assistance or otherwise, for carrying out Defence orders. It is the policy of the Government to locate

¹⁰⁰ Ministry of Labour, p. 266, par. 99 et seq.

new factories, in connection with the Defence programme, in the Special and depressed Areas so far as practicable considerations permit.

With regard to the preference given to areas of heavy unemployment in the allocation of Government contracts, referred to at (h) above, the Departments concerned normally give a preference to tenders from firms in areas of heavy and prolonged unemployment, subject to the condition that the quality, price and availability of the goods to be supplied are not less favourable than under tenders from firms in other areas.²⁰⁰

As regards the location of factories by foreign firms desiring to set up in this country, referred to at (i) above, it is now the normal practice for an applicant to be discouraged from setting up in or near London and encouraged to locate his undertaking in one or other of the Special or depressed Areas.²⁰¹ Between June, 1936, and the end of 1938, about 190 foreign firms located their factories in a Special Area or other depressed area.

312. The Commissioners for the Special Areas informed the Commission that in their approach to the Special Areas problem they had two broad objectives in mind: (1) the improvement of the health and social services of the areas, and (2) the introduction of new light industries into the areas in order to diversify and extend the opportunities of employment. The Commissioners have power to make grants to local authorities and other bodies in respect of schemes urgently necessary on grounds of public health, provided that grants are not already available from other Government Departments, and under this power substantial sums have in fact been granted to local authorities and voluntary organisations in respect of such services as hospitals, sewerage schemes and water supplies. In this connection the Commissioner for England and Wales said in his last report (September, 1938): "It is the opinion of the Ministry of Health that, taking a general view, the health services, whether provided by local authorities or by voluntary organisations, will be substantially up to the level of the services in other parts of the country."

313. As regards the second objective, the Commissioners state that the general lines of the policy of diversification of industry in the Special Areas were dictated by the conviction that the heavy industries would never again absorb the same amount of labour as formerly. Steps have been taken by the Commissioners to attract industrialists to the areas by creating in them conditions favourable for new enterprise so that the communities in those areas might be given a good chance of

²⁰⁰ Ibid, p. 268, par. 105.

²⁰¹ Ibid, p. 269, par. 112.

partaking in the general economic recovery of the country, and a recently published statement by the two Commissioners for England and Wales and for Scotland said that "industries established in any of the Special Areas may expect to find all the essential conditions and facilities necessary for efficient and profitable operation as well as full amenities for the health and general welfare of the workpeople."

314. The late Sir George Gillett, Commissioner for the Special Areas (England and Wales) from 1937 to 1939, in his Report for the year ended 30th September, 1938, said in regard to the provision of Trading Estates, that such Estates are capable of securing a very considerable amount of support, that the progress so far made is very satisfactory and, given time, there is every reason to expect that they will provide a large amount of work for those living in the neighbourhood. With regard to the administration of the provisions in the Special Areas (Amendment) Act, 1937, for the encouragement of new undertakings in the Special Areas, he said in the same Report that he had been able to exercise his powers under that Act only for the comparatively short period of 16 months, and it was too early yet to be able to draw any final conclusions as to the real value of the provisions of the Act. In view, however, of the continuance and intensification of the trade recession during that period, the progress that had been made in the establishment of new industries in the Special Areas was all the more satisfactory.

It is, of course, hardly to be expected that the results of the Commissioners' policy will be fully appreciated for a number of years. There can, however, be no doubt that the Commissioners' plans for the improvement of conditions in the Special Areas have been well and sympathetically conceived and carried out, and that already a substantial measure of success has been obtained. Neither can there be any doubt that the experience of the Commissioners in their various experiments and spheres of action would be of invaluable assistance to the National Industrial Board whose establishment is recommended later in this Report.

315. In the light of the experience gained in the Special Areas during the last few years some broad issues emerge and may be briefly examined.

(i) Should the State policy be directed in such cases to directing new industries to existing labour, or migrating labour to more favourable areas?

The Ministry of Labour have been operating both policies. Some areas are not likely to attract industrialists without special inducements, yet if the more vigorous and younger men are transferred from them, those areas have less chance of recovery, and rates become an increasingly heavy burden on the community.

Research in the United States of America has been directed to the problem of the action to be taken in areas where the old industry is dead and where new industries would have little or no prospect of success, and a policy of "homesteads"²⁰² has been adopted with some success, e.g., Arthurdale in N.W. Virginia and Westmoreland Homesteads in S.W. Pennsylvania: both were founded to rehabilitate former mining families who were stranded when mining operations in the neighbourhood were discontinued or seriously curtailed, and both provide for farming in combination with light industry. These experiments are, however, on a comparatively small scale at present.

In this country also a scheme of settling families on the land on small holdings and co-operative farms has been initiated. The scheme provides for 3,000 families and is as yet in the experimental stage. It is being financed by the Commissioner for the Special Areas and the Ministry of Agriculture. The full programme of 3,000 families will involve expenditure of over £3 millions, but the greater part of this is either repayable or yields some return by way of rent.²⁰³

316. The transference schemes of the Ministry of Labour, referred to in paragraph 311 (b) above, have assisted considerable numbers of unemployed workpeople in the Special and depressed areas to find work in other parts of the country. From August, 1928, to mid-1937, nearly 150,000 men and 40,000 women were transferred,²⁰⁴ but it is known that from 1930 to mid-1937, no less than about 50,000 men and 5,600 women returned to the depressed areas after being transferred out by the Ministry. In addition to those transferred under official arrangements many migrated to London, the Midlands, and other districts on their own initiative without Government assistance. Thus, in the 18 months ended mid-1937, some 61,500 unemployed men moved on their own initiative either to take up employment they had found on their own account or to look for employment, while the number transferred by the Ministry in the same period was only about 30,500.²⁰⁵ The Ministry's transference policy seems to proceed along the lines advocated by the Balfour Committee.

(ii) The Special Areas Acts were framed as temporary measures but their period of operation has been extended from time to time. Are they still to be regarded, in the light of experience gained, as temporary in character? Or, assuming that general conditions of industry improve in an area (as indeed they already have in some areas) and that the help given by the

²⁰² See Memorandum by Mr. G. L. Pepler, Appendix IV.

²⁰³ Ministry of Labour, p. 264, par. 97-8.

²⁰⁴ *Ibid.*, p. 256, par. 49.

²⁰⁵ *Ibid.*, p. 257, par. 56; p. 328, Table VIII.

Special Areas legislation is less needed in that area than in other parts of the country, are the powers of the Commissioners to be enlarged to include other areas?

Under Section 7 of the Special Areas Act, 1934, there is power by Order in Council:—

(a) To transfer to the Unemployment Assistance Board any of the functions of the Commissioners relating to the promotion of the welfare of persons to whom the Unemployment Assistance Act, 1934, applies;

(b) To enable measures undertaken by the Commissioners in relation to other matters to be carried on by the appropriate Government Department.

Doubts might arise as to what is covered by the words "measures undertaken", but it will not be possible under legislation as it stands to begin new measures after the expiry of the Acts, except in the limited field relating to welfare, and the expiry of the Acts would therefore lead to a diminishing scale, if not cessation, of Government activity on behalf of the Special Areas. It was urged in evidence submitted to the Commission, for example, by Sir Steven Bilsland on behalf of the Scottish Economic Committee, that the facilities of the Special Areas legislation should be extended to other areas with bad unemployment, and this suggestion will be partly met if the Loans Facilities Bill introduced on 1st August, 1939, becomes law. Under this Bill the Treasury would have power to give financial assistance to new industrial undertakings established in areas of heavy unemployment where certain prescribed conditions are satisfied.

317. Industry can never be regarded as likely to be static: indeed, changes considerable in extent are not unlikely to operate in the future with as much frequency as in the past, and, owing to the increasing tempo of modern industrial life, to fall upon industry with greater rapidity. Industry will itself naturally do all in its power to accommodate itself to these conditions: that is the prerequisite of its success and even of its survival. But what should be the national policy in the matter? How far can Government help, and along what lines?

318. Government action in future cases of localised depression analogous to the Special Areas would inevitably tend to be two-fold in character:—

(i) *Emergency measures mainly short term in character.*—These will probably proceed on lines broadly similar to those adopted in connection with the existing Special Areas, but the methods of handling the problem will be enlarged, and policies of remedial treatment developed and improved, as the experiments now being tried and the experience

gained by the Special Commissioners permit of fuller analysis and enable the results to be more definitely established.

(ii) *Long term plans.*—No one can with any certainty foretell what economic or industrial changes future years may have in store, but the circumstances in which, and indeed so far as possible the industries or industrial areas in connection with which, industrial depression may be likely to occur should be the subject of continuous examination; it should be the duty of the proposed National Industrial Board to undertake such continuous examination. The risk of industrial depression clearly is much emphasised in localities which are dependent, or mainly dependent, on one form of industrial activity: such areas are more open to industrial or economic oscillation than those with greater diversification of employment, as has been instanced in the past by the experience of those engaged in the metal trades in the Midlands, or to-day of those engaged in the textile industry in Lancashire or in shipbuilding in Glasgow.

319. In evidence given before the Commission in support of a memorandum submitted by the Royal Geographical Society, Professor E. G. R. Taylor presented a series of interesting and informative maps, some of which will be reproduced in a separate volume, illustrating the existence of a great industrial axial belt in the centre of England (covering approximately 14,500 square miles, or 39 per cent. of the area of England and Wales) running from London in the South East to South Lancashire and the West Riding in the North. If the industrial growth of Greater London were checked, there might be a tendency for industry to settle elsewhere within that belt.

320. The density of population in Great Britain, estimated in 1937 at 518 per square mile and for England alone at 766 per square mile, and the needs of agriculture and also of opportunities for recreation and enjoyment of amenities, must be constantly borne in mind: but on that basis, and taking a view both long and broad, a reasonable balance of industry and population throughout the country should be a main feature of national policy during the coming years. It is not in the national interest, economically, socially or strategically, that a quarter, or even a larger proportion of the population of Great Britain should be concentrated within 20 to 30 miles or so of Central London. On the other hand, a policy:—

(i) Of balanced distribution of industry and the industrial population so far as possible throughout the different areas or regions in Great Britain;

(ii) Of appropriate diversification of industries in those areas or regions;

would tend to make the best national use of the resources of the country, and at the same time would go far to secure for each region or area, through diversification of industry and variety of employment, some safeguard against severe and persistent depression, such as attacks on an area dependent mainly on one industry when that industry is struck by bad times.

CONCLUSION.

321. The general problem of unemployment lies outside the Commission's Terms of Reference; and the problem of the Special and depressed Areas is only covered by the Terms of Reference in so far as those areas represent disadvantages arising from the concentration of industries or the industrial population in large towns or particular areas.

The Special Areas legislation and the work of the Commissioners appointed thereunder will afford increasingly valuable experience. The National Industrial Board whose establishment is recommended in Part IV of this Report should, in the light of this experience, study the location of industry throughout the country with a view to:—

(i) Anticipating cases where depression may probably occur in the future (e.g., the armament industries when normal peace conditions are again definitely secured), and encouraging before a depression crisis arises the development in such cases, so far as possible, of other industries or public undertakings.

(ii) Encouraging a reasonable balance of industrial development, so far as possible, throughout the various divisions or regions of Great Britain, coupled with appropriate diversification of industry in each division or region throughout the country.

CHAPTER XIII.

DIFFERENT TYPES OF CITIES AND THE PROBLEM OF CONGESTION.

322. With the great growth of the large urban unit in the last century or so, the word "town" or "city" in modern use covers many varieties of urban development, from small centres of a few thousands up to the great communities whose population runs into millions. It is obvious that this great variation in respect of size and population involves also striking contrasts and differences in the problems arising, whether considered from the social, the economic or the strategical point of view.

323. Two tendencies are noticeable amongst those who can speak with authority on the problems of planning and the location of industry and population. Some attempt detailed analyses

of different types of town, differentiating them into such categories as traffic towns, i.e. those situated at nodal centres and enjoying good transport service over a considerable area; port towns, which owe their growth and importance mainly to their connection with the sea and to sea-borne traffic, whether of freight or passengers; manufacturing towns; military towns; mining camp towns; cathedral towns; dormitory towns; and so on.²⁰⁶ On the other hand, not a few who have devoted much thought to the problems usually taken to be involved in the word "planning" have, from the time of Ebenezer Howard to the present day, been somewhat too much disposed to ignore existing conditions and to concentrate on the conception of the ideal town—what constitutes it and how it should be planned: in the view of many, the ideal town should be limited to a population of 50,000 to 100,000.²⁰⁷ The analyses of the first school have their uses in clarifying thought, and of the second in suggesting possible types of future development, but they are often made without quite sufficient attention being given to the actual facts and causes of urban growth or to the diverse needs of modern civilisation.

324. Much research and careful study have been devoted to the problems of modern urbanisation in other countries, more particularly perhaps in America by the powerful National Resources Committee whose constitution and activities are described in Appendix IV to this Report. There a healthy tendency appears, while pressing forward towards the ideal, not to ignore the actual. Thus, the National Resources Committee in one of its recent publications,²⁰⁸ in dealing with the great cities of to-morrow makes this statement:—

"The concentration of so large a proportion of the urban population in extremely limited areas is wasteful of resources, time and energy. The same would be true of undue dispersion. The Committee believes that the most desirable environment for the urban dweller, and for the most effective use of human and material resources is more likely to be found somewhere between these two extremes. Wholesale decentralisation which is advocated by some does not seem to be compatible with the effective performance of the economic and cultural role of the urban community in the life of the nation."

"Provided the urban community possesses a fundamentally sound economic base and has a site the disadvantages of which are not too costly to overcome, the Committee is of opinion that the realistic answer to the question of a desirable urban environment lies not in wholesale dispersion

²⁰⁶ See Weber, "Growth of Cities," p. 172.

²⁰⁷ The Hundred New Towns Association; Garden Cities Association, p. 629, Q. 5169-71.

²⁰⁸ "Our Cities," June, 1937, p. 84.

but in the judicious reshaping of the urban community and region by systematic development and redevelopment in accordance with forward looking and intelligent plans. In this advantage would be taken of the natural trends in the shifting of industry between established industrial areas and its diffusion within such areas, of the drift of population from congested central districts to outlying sections, of the improved means of transit and the general fluidity of the population—to loosen up the central areas of congestion and to create a more decentralised metropolitan type.”

325. The evidence submitted to the Commission makes two conclusions clear. First, as elaborated in other portions of this Report, mere size need not in itself be a disadvantage, but it is size without system, chaotic growth without the adoption of proper principles of planning alike for social well-being and for industry, that are to be avoided.³⁰⁹ Secondly, in the conditions of modern civilisation there is room for many varieties of town, not only varieties of type but varieties of size and of arrangement. To quote a recent American authority:—

“ In one of Le Corbusier’s early schemes for an ideal city he chose three million as the number to be accommodated: the number was roughly the size of the urban aggregate of Paris, but that hardly explains why it should have been taken as a norm for a more rational type of city development. If the size of an urban unit however is a function of its productive organisation and its opportunities for active social intercourse in culture, certain definite facts emerge as to adequate ratio of population to the process to be served. Thus at the present level of culture in America, a million people are needed to support a university

What is important is not an absolute figure as to population or area: although in certain aspects of life, such as the size of city that is capable of producing itself through natural fertility, one can already lay down such limits.

What is more important is to *express size always as a function of the social relationships to be served.*³¹⁰

The words in italics may have the appearance of being something of an overstatement. It is not always possible to contemplate a city of a million as serving wider or better social relationships than a city of half or three-quarters that size, but experience shows that as a broad principle it is undoubtedly true that the larger units can and do supply better social services than

³⁰⁹ Ministry of Health, p. 39, Q. 479 et seq.

³¹⁰ Lewis Mumford, “ Culture of Cities,” 1938, p. 487. The writer goes on to express his preference for a “ polynucleated ” as opposed to a “ mononucleated ” town; it is not always very easy to appreciate his meaning, but his proposals appear to have elements in common with suggestions made elsewhere in the Report in relation to garden cities and satellite towns.

the smaller ones; and whether it be in the direction of medical and institutional treatment, of educational facilities such as specialised teaching or opportunities for research and study in laboratories and museums, of recreation such as music or the drama, the million mark town has advantages over smaller units.

326. It by no means follows that the very large unit is always desirable or the ideal to be aimed at in all circumstances, but equally it is clear that the unit of a million or even more is not necessarily anathema and to be avoided or abolished at all costs. In modern industrialised countries of the western type not only is there room for, but the social and economic needs of the community demand, towns of varying types and sizes, including a proportion of urban units of the largest size but with due emphasis on the proviso that all towns, including the largest units, shall be properly planned, or if not so planned shall be redeveloped so as to secure far better provision than usually exists at present against the evils of overcrowding, lack of sunlight and of facilities for recreation, fatigue and waste due to congested traffic, and so on.

327. Concentration must be distinguished from congestion or overcrowding. Mere size of city—leaving aside strategical considerations—need not, as already stated, be objectionable, if the city is well planned; and if planning is undertaken in the early stages of its growth there is no obvious reason why a big city should not be just as well planned as a small one. The great difficulty of replanning existing cities that have grown up without any regard to planning is, of course, that of finance. The drawback of industrial concentration as it exists in Great Britain to-day is that it has proceeded without plan and at some points has degenerated into congestion. It is this congestion which is the harmful feature of concentration and which must be attacked. Size of town is no guide to the presence of congestion: a medium sized town may suffer from the evil as well as a million mark town.

328. Where does the dividing line between concentration and congestion lie? As regards the individual house, a mathematical measure of congestion or overcrowding of occupants can be formulated and easily applied. Such a measure is in fact laid down in Section 58 of the Housing Act, 1936, where it is enacted that a dwelling-house shall be deemed to be overcrowded when the number of persons sleeping in the house either—

(a) is such that separate rooms for sleeping are not available for unmarried persons of opposite sexes; or

(b) is, in relation to the number and floor area of the rooms, in excess of the permitted number of persons as calculated in accordance with the detailed formula set out in the Fifth Schedule to the Act.

Again, a mathematical standard is imposed, under the town planning schemes, in regard to the number of houses which may be built per acre in certain defined residential zones, such, for example, as four houses to the acre in one zone, six houses to the acre in another zone and so on. A fairly common maximum allowed in planning schemes is 12 houses to the acre. In both of these instances a clearly defined unit is available to which to apply the respective standards: in the first case the unit is the individual house; in the second case it is an area which is delimited with precision on the town plan. In both cases the answer to the question whether or not the prescribed standard is contravened in a given set of circumstances can be ascertained by making a straight-forward arithmetical calculation. For determining where congestion of population and industry exists there is unfortunately no simple mathematical formula. Density of population per acre within a particular unit of local government is no sure test of congestion: the fact that at the Census of Population of 1931 the density of population in the City of Birmingham was less than that, e.g. in Bristol, Dover and Gloucester does not necessarily mean that congestion was present in the latter three towns but was not present in Birmingham. There are many complex factors in the situation of which density of population per acre is only one. Among other relevant factors appear to be the acreage occupied by (a) houses, (b) factories, (c) other buildings, (d) permanent open space; the extent to which overcrowding of persons within houses is present in the area; the relationship of the places of residence to the workplaces of the industrial population of the area; transport facilities and difficulties; cost of sites; extent of smoke pollution, etc. So far as industry is concerned the transport factor is the most important. Probably there is no better practical indication of the presence of congestion of industry than the existence of traffic congestion. In this connection attention may be drawn to the evidence given by Mr. Frank Pick on behalf of the London Passenger Transport Board that the congestion on the Board's railways at the peak hours when the workpeople are on their way to and from work can never be remedied.²¹¹ The existence of this permanent congestion of traffic in the carrying of workpeople is a clear indication of the existence of congestion of industry.

329. The diversity of the factors involved is such that congestion cannot be a matter of exact or mathematical determination or classification: what constitutes congestion will vary with different conditions and circumstances, and according to the human activity under consideration—e.g. there might be serious congestion of traffic as between two large well-planned and otherwise satisfactory urban units.

²¹¹ London Passenger Transport Board, p. 411, Q. 3388-94.

It follows that discretion must be left to an authority to decide in the light of broad considerations above outlined, where and when congestion, either of industry or of industrial population, exists and what steps should be recommended, especially along the lines of decentralisation or dispersal, to deal with such cases. We consider that this function should be entrusted to the National Industrial Board whose establishment is recommended later in this Report.

CHAPTER XIV.

SOME ASPECTS OF THE PROBLEM OF LONDON.

330. The unique character and position of the Metropolis has been the theme of countless discourses and much rhetoric: Dunbar's famous invocation, "London, thou art the flower of cities all," however true in the sixteenth century, found little response in the heart of the social reformer four centuries later.

It is not necessary here to do more than mention three amongst the many factors which constitute London's special claim to distinction: it is the capital city not only of Great Britain but of the Empire, and the seat of the Imperial Government; it is probably the largest port and distributing centre in the world, and, setting aside questions of municipal boundaries, it is generally accepted as the largest conurbation in existence. Inevitably London presents problems of special character and complexity, some of which have received consideration in earlier sections of this Report.

331. A definition of the area of London is difficult. No one can say exactly what its boundaries are or how many people it contains. Its name may be used with equal validity to connote either the ancient city of London with an area of little more than one square mile and a resident population in 1931 of only 10,580, or the administrative county of London with an area of 117 square miles and a population in 1931 of 4,405,500. This latter population alone would suffice to rank London among the largest of the world's conurbations. London has, however, far outgrown the area of the administrative county: indeed it was already overspreading the boundary when the county was formed in 1888. The county boundary has little significance except as marking the limits of the jurisdiction of the London County Council. It has ceased to embrace London. Many vastly larger London areas exist,¹¹² among them being:—

(i) Greater London—693 square miles comprising the City and Metropolitan Police Districts. In 1937 the estimated population of this area was 8,655,000.

(ii) London Traffic Area and Greater London Regional Planning Area—1,820 square miles.

¹¹² London County Council, p. 379, par. 4; Robson, p. 783, par. 43.

(iii) London Passenger Transport Area—1,986 square miles. In 1937 the population estimated to be contained within a circle of 25 miles of Charing Cross—an area which roughly corresponds with the London Passenger Transport Area—was 9,811,000.

(iv) Metropolitan Traffic Area—2,417 square miles.

332. The area of Greater London has long been commonly adopted as more closely representing London than the area of the London County Council. The boundary of the Metropolitan Police District, with which the boundary of Greater London coincides, was settled as long ago as the first half of last century. The Registrar-General in 1875 adopted the same area for purposes of vital statistics and christened it "Greater London."¹¹³ But it must not be assumed that the area of Greater London, despite the fact that it is approximately six times as extensive as the area of the county of London, is to be taken as coincident with the area comprising the modern conurbation of London. As London swept across the boundary of the administrative county, so also has it spread over the boundary of Greater London. Nearly 30 years ago it was stated:—

"In considering the population of London attention cannot be confined exclusively to the Metropolitan Police area, since the proximity of London affects the volume and growth of population far beyond its somewhat arbitrary limits. In many districts, urban and rural, outside the boundary, both the volume of population and its abnormal rate of increase must be partly attributed to their situation with respect to the Metropolis, and although the distance to which the Metropolitan influence extends cannot be defined with accuracy, it can hardly be put at less than 30 miles from the centre. In exceptional cases it is even greater, as, for example, the town of Southend-on-Sea, 36 miles from London, where the population, now nearly five times as large as it was 20 years ago, increased from 13,242 in 1891 to 28,857 in 1901 and to 62,723 in 1911—showing increases of 117·9 and 117·4 per cent. in two successive periods of 10 years. The rates of increase in many seaside places and inland towns which, though outside the 30-mile limit, are within easy reach of London, have also been far above the average. Men, whose daily work is in London, often reside at a distance corresponding to a railway journey of not less than an hour's duration."¹¹⁴

333. Some would concur in the suggestion of the London County Council that for the present consideration of problems relating to the Metropolis the relevant area for review is one which extends beyond Greater London so as to correspond

¹¹³ Royal Commission on London Government, p. 51, par. 185.

¹¹⁴ Report of the London Traffic Branch of the Board of Trade, 1911 (Cd. 5972), p. 4.

more closely, for instance, with the London Traffic Area, which in its area of about 1,820 square miles contained in 1936 a population of about 9,700,000.²¹⁵ Others, again, would take the view that a still wider area should be taken: for instance, that on the East the London conurbation stretches as far as Southend on the North bank of the Thames and Sheppey on the South bank. In the population statistics, the Registrar-General for England and Wales often gives particulars not only for the county of London and Greater London but for a more extensive area comprising the counties of London, Essex, Hertfordshire, Kent, Middlesex and Surrey. The Ministry of Labour have supplied statistics relating to the insured population for an even wider area embracing those six counties and also Buckinghamshire and Bedfordshire, because, e.g., Bedfordshire's " industrial towns are in the extreme South of the county and their rapid development is probably due largely to their proximity to London."²¹⁶ In the remainder of this Report these eight counties are referred to as London and the Home Counties. Their combined area is 5,978 square miles, or rather less than 7 per cent. of the total area of Great Britain. Their rateable value is £130 millions, or about 37 per cent. of the aggregate rateable value in Great Britain, which is £351 millions.²¹⁷

POPULATION.

334. The following table shows the populations contained within the areas of the city and county of London (which together are described as Inner London), Greater London and London and the Home Counties in 1801 and 1937 and expresses those populations as percentages of the national populations as existing at those two dates.

Area.	Population in 1801.		Population (estimated) in 1937.	
	Number of persons.	Percentage of population of Great Britain.	Number of persons.	Percentage of population of Great Britain.
Inner London	958,791	9.1	4,094,500	8.9
Greater London (including Inner London)	1,114,644	10.6	8,655,000	18.8
London and the Home Counties (including Greater London)	1,891,678	18.0	11,842,790	25.7

²¹⁵ London County Council, p. 379, par. 4.

²¹⁶ Ministry of Labour, p. 278, par. 8. See also London Passenger Transport Board, p. 361, Q. 3099.

²¹⁷ Figures compiled from Return of Rates and Rateable Values in England and Wales, 1938-39; and Return of Rates, etc., in Scotland, 1938-39.

335. Inner London in 1937 contained a slightly smaller proportion of the national population than was contained in the same area in 1801. The proportion of the national population contained within the wider area of Greater London (including Inner London) advanced, however, from 10.6 per cent. in 1801 to 18.8 per cent. in 1937, while the area of London and the Home Counties which in 1801 contained less than one-fifth of the national population, contained in 1937 more than one-fourth. It is apparent from the figures that over those 136 years an extraordinary growth of population occurred in the zone between the boundary of Inner London and the boundary of Greater London. This zone is commonly known, and is hereafter referred to in this Chapter as Outer London. The growth of its population is brought out more clearly by the following figures:—

Area.	Population in 1801.		Population (estimated) in 1937.	
	Number of persons	Percentage of population of Great Britain.	Number of persons	Percentage of population of Great Britain.
Inner London	958,791	9.1	4,094,500	8.9
Outer London	155,853	1.5	4,560,500	9.9
Zone between the boundary of Greater London and the outer boundaries of the Home Counties	777,034	7.4	3,187,790	6.9
Total of above areas, which together represent London and the Home Counties ...	1,891,678	18.0	11,842,790	25.7

336. Between 1801 and 1937 Inner London, and the zone between the boundary of Greater London and the outer boundaries of the Home Counties, increased in population by a little more than fourfold or slightly less than did Great Britain as a whole. In 1937 both those areas held a rather smaller proportion of the national population than in 1801. The population experience of the intervening zone of Outer London has been remarkably different. Whereas in 1801 Outer London contained only 1.5 per cent. of the national population, in 1937 it contained 9.9 per cent. of the national population. At the latter date its population was nearly 30 times as large as in 1801. Whereas in 1801 its population was much less than that of either Inner London or the outlying Home Counties zone, in 1937 the reverse was true.

337. The growth of Greater London's population is shown in more detail in Appendix V. The figures given there indicate that Greater London taken as a whole has grown in population at a rate consistently above the national rate except in the decennia 1901 to 1911 and 1911 to 1921. The following figures show that since 1921 Greater London has on average absorbed more than one-third of the annual increases of the national population.

<i>Period.</i>	<i>Percentage of increase of national population absorbed by Greater London.</i>
1801-31	13.7
1831-61	19.2
1861-91	24.4
1891-1901	23.8
1901-11	17.5
1911-21	14.7
1921-31	34.0
1931-37	35.4

338. Until 1871-81 the decennial increases of population were invariably greater in Inner London than in Outer London. In 1881-91 the position of Inner London and of Outer London were reversed in this respect: the increase was 469,488 in Outer London against 397,657 in Inner London. In the next decennium the increase in Inner London, though still exceeding 300,000, was less than half of the increase in Outer London. That decennium of 1891-1901 was the last decennium in which the population of Inner London rose: in the following ten years the area experienced an absolute decline in the number of its population to the extent of 14,582. In subsequent periods Inner London's population has decreased by much greater numbers.

339. The diminution of population experienced by Inner London in the course of this century is not to be explained by some exceptional excess of deaths over births among its population. Up to 1921-31 the natural increase of population (i.e., the excess of births over deaths) in Inner London has exceeded the natural increase in Outer London, the figures for 1921-31 being 239,000 for Inner London and 214,000 for Outer London.²¹⁸ It is migration from Inner London to Outer London that largely accounts for the decline in Inner London's population.

²¹⁸ On present indications the excess of births over deaths in Inner London in the decennium 1931-1941 will be strikingly below the figure for 1921-1931, as the excess of births in the period 1931-1937 was only 37,807.

340. The extent of the movement of population from Inner London over the 66 years 1871 to 1937 is shown by the figures in the following table:—

Period.	Gain or loss (—) by migration.		
	Inner London.	Outer London.	Total Greater London.
	Persons.	Persons.	Persons.
1871-1881	108,000	198,000	306,000
1881-1891	-118,000	278,000	160,000
1891-1901	-182,000	397,000	215,000
1901-1911	-553,000	321,000	-232,000
1911-1921	-323,000(a)	20,000(a)	-303,000(a)
1921-1931	-360,000	604,000	244,000
1931-1937	-348,000	604,000	256,000

(a) After allowing for losses by war deaths, estimated at 74,000, 50,000 and 124,000 for Inner London, Outer London and Greater London respectively.

On that table two points in particular call for comment. First, it will be noted that in the decennia 1901-11 and 1911-21, Inner London's total losses by emigration were far greater than Outer London's total gains by immigration. This indicates that in these two periods at any rate large numbers of migrants from Inner London were going further afield than Outer London. Many went overseas to the dominions, etc. Others doubtless followed the movement of industry to the provinces which was proceeding before the War.²¹⁹ Secondly, in other periods, e.g., 1921-31 and 1931-7, emigration from Inner London was insufficient to account for the migrational gains experienced by Outer London. The fact is that besides an outward movement of population from Inner London there has been an inward movement of population, at times of considerable proportions, from the rest of the country towards London. Much of these two movements has met and largely merged in Outer London; but some of the outward flow has spread beyond Outer London, while some of the inward flow has stopped short of that area. If the preceding examination of migration is extended to London and the Home Counties as a whole, it is found that the zone between the boundary of Greater London and the outer boundaries of the Home Counties gained by migration 251,000 persons in the decennium 1921-31, and 254,000 persons in the period 1931-7. Adding these figures to the figures for Greater London for the same period, as given in the foregoing table,

²¹⁹ Report of the London Traffic Branch of the Board of Trade, 1911 (Cd. 5972), p. 7.

the net gain of population by migration in London and the Home Counties is shown to have been 495,000 in the decennium 1921-31 and 510,000 in the period 1931-7, a total migrational gain of 1,005,000 persons in the 16 years 1921-37.

In that period 1921-37, the total population of London and the Home Counties increased by 1,802,970, or 18 per cent., from 10,039,820 to 11,842,790. In the same period the total population of Great Britain increased by 3,259,870 or 7½ per cent. The proportion of that national increase of 3,259,870 which was absorbed by London and the Home Counties was no less than 55 per cent.

341. Since the War the industrial population of Greater London has expanded at a greater rate than the total population. Between 1921 and 1931 the total population of Greater London increased by 9.7 per cent. Over the same period the occupied population of the area increased from 3,498,000 to 4,117,000, or by 17.7 per cent. Between 1923 and 1937 the number of persons aged 16-64 insured against unemployment in Greater London rose from 1,950,180 to 2,653,610, or by 36.1 per cent. as compared with an increase of 22.3 per cent. in Great Britain. Thus the expansion of the industrial population of Greater London has been proceeding not only at a greater rate than the expansion of the total population of the area but also at a greater rate than the expansion of the industrial population of the country as a whole. The same is true for the wider area of London and the Home Counties, where the number of insured persons increased by 42.7 per cent. between 1923 and 1937.

342. A comparison which has been made by the Ministry of Labour of the districts in which the unemployment books of insured persons were issued and the districts in which they were exchanged provides interesting information as to the movement of insured persons to London and the South East. The full figures supplied by the Ministry are given in Appendix VI. In brief they show, as regards London and the South East, that of the 3,163,300 insured persons aged 21-64 in the area at July, 1937, 281,290 had come from other areas. At the same date there were located in areas outside London and the South East 84,920 insured persons who were located in this area when they first became insured. Thus there has been a movement of insured persons both into and out of London and the South East. The movement into the area has, however, been greatly in excess of the movement out of the area.

INDUSTRY.

343. The high immigration into Greater London and the great increase which has occurred in its insured population are largely due to industrial development. Figures compiled from

the Censuses of Production of 1930 and 1935 enable the following comparison to be made between Greater London and the United Kingdom as a whole:—

Area.	Gross output (selling value of goods made and value of work done) (a)	Net output. (b)	Average number of persons employed (except outworkers)	Net output per person employed. (c)
	£'000	£'000	No.	£
Greater London—				
1935	826,723	386,115	1,410,948	274
1930	733,203	339,239	1,218,011	279
Total—				
United Kingdom—				
1935	3,462,081	1,576,064	7,076,593	223
1930	3,367,556	1,504,040	7,142,501	211

(a) Excluding subsidy on home-grown sugar (£2,219,000 in 1935 and £6,022,000 in 1930).

(b) Excluding estimated Excise duties (£64,237,000 in 1935 and £77,590,000 for 1930).

(c) The value of the net output per head depends upon the state of trade and is not necessarily synonymous with the productivity per head.

Relatively, gross output and net output both increased more in Greater London than in the whole of the United Kingdom. Whereas the average number of persons employed in the United Kingdom fell by about 66,000, the number in Greater London increased by nearly 200,000. The only respect in which Greater London is shown not to have advanced in relation to the United Kingdom as a whole was in the net output per person employed, which fell from £279 to £274 in Greater London, but rose from £211 to £223 in the whole of the United Kingdom.

344. The industrial expansion of Greater London is further illustrated by the information as to factories established or extended in the period 1932-7 given in the annual Board of Trade Surveys of Industrial Development. The Surveys contain particulars of the establishment of new factories, of extensions to existing factories, and of factories closed, in cases where 25 or more people are employed or have been employed. Establishments (such as laundries, and dry cleaning works) not engaged in manufacture or in the processing of new goods are excluded from the Surveys and accordingly are not included in the following table.

Year.	Greater London.				Great Britain.			
	Factories opened.	Factories closed.	Net increase in number of factories.	Factories extended.	Factories opened.	Factories closed.	Net increase in number of factories.	Factories extended.
1932	261	94	167	44	636	418	218	174
1933	218	107	111	29	467	416	51	109
1934	235	164	71	50	520	502	18	151
1935	215	185	30	54	514	485	29	201
1936	256	164	92	61	542	394	148	185
1937	215	154	61	69	541	361	180	237
Totals	1,400	868	532	307	3,220	2,576	644	1,057

Of the net increase of 644 during the six years in question in the number of factories in Great Britain employing 25 or more persons, no less than 532, or five-sixths, were located in Greater London. In addition, nearly one-third of the extensions to existing factories occurred in Greater London.

345. With regard to the employment value of the new factories, the following figures²²⁰ are given in the Board of Trade Surveys:—

<i>Employment provided.</i>	<i>Greater London.</i>	<i>Great Britain.</i>
At end of 1933 in factories opened in 1932	21,500	53,750
At end of 1934 in factories opened in 1933	14,650	31,700
At end of 1935 in factories opened in 1934	19,400	46,550
At end of 1936 in factories opened in 1935	19,650	63,750
At end of 1937 in factories opened in 1936	22,500	57,850
	<u>97,700</u>	<u>253,600</u>

²²⁰ The figures relate to new factories opened. They do not take account of (i) the additional employment provided following extensions, or (ii) the number of persons thrown out of work by the closing of factories. Figures including (i) and (ii) for Greater London for the two years 1935-36 are as follows:—

		<i>Employment affected.</i>
Factories opened	...	39,700
" extended	...	12,800
" closed	...	23,850

The figures as to employment in factories opened relate as far as practicable to employment as at December of the year following that in which the factory was established.

Thus the new factories erected in recent years within Greater London have provided almost two-fifths of the employment provided by all new factories opened in the whole of Great Britain. In connection with that fact it has to be borne in mind that Greater London contains less than one-fifth of the total population of Great Britain and just over one-fifth of the insured population.

346. The net increase of factories opened in Greater London in the four years 1934-7 was due entirely to factory development in Outer London: indeed balancing the number of factories opened against factories closed Inner London suffered a net loss in that period of 126 factories. The distribution of the net increase in Outer London in these four years is as follows:—

South East	16
South and South West	59
West	112
North	104
East and North East	97

Especially noteworthy is the fact that the amount of factory development shown to have taken place on the West and North of the Metropolis, i.e., in a situation favourable for serving the heavily populated belt stretching across the Midlands to the North West, as well as London itself, greatly exceeded the amount which took place elsewhere in the area. This is true not only in the increase in the number of factories but also in the employment value of the new factories.

347. Though London is not predominantly a manufacturing centre it absorbed the bulk of the net addition made to the number of factories in Great Britain between 1932 and 1937. On average the employment value of the new factory in London appears to have been less than that of the new provincial factory. Generally speaking, London's industries are small. An analysis made eight years ago showed that 34 employers in Greater London employed more than 2,000 insured workers each. Of 32,435 employers covered by the analysis 21,729 employed less than 25 insured persons each.²²¹

348. The cause of the recent industrial growth of Greater London is not far to seek. As the capital city and the centre of national administration, as a focus of finance and commerce with a world-wide influence, and as the greatest distributing centre in the country, large numbers of the population of the area are engaged in sheltered callings. This feature of the

²²¹ New Survey of London Life and Labour, Vol. II, Table 1, pp. 472-5; London Passenger Transport Board, p. 349, par. 1, and Q. 2964-8, p. 354, par. 5 (h); p. 357, Q. 3061.

industrial structure of the area is illustrated by the following figures²²² as to the number of people employed in seven groups of non-manufacturing industries at the time of the last Census of Population.

Numbers employed in Great Britain, Greater London and London and the Home Counties in various industries, 1931.

Industry.	Great Britain.	Greater London.	London and the Home Counties.
Total population	44,795,357	8,203,942	11,842,790
Total in Industries (a)	18,550,049	3,766,659	4,980,225
Gas, Water, Electricity	225,001	64,582	81,018
Transport and communication	1,286,035	304,244	380,141
Commerce and Finance	3,099,439	820,773	1,015,191
Public Administration and Defence... ..	1,519,470	343,122	476,820
Professions	642,436	172,535	224,672
Entertainments and Sport	163,388	48,718	59,002
Personal Service	2,444,801	582,910	812,294
Totals	9,380,570	2,336,884	3,049,138

(a) Excluding persons out of work. These numbered—Great Britain 2,524,702; Greater London 350,000.

349. Whereas these seven groups of industries contained 50 per cent. of the industrial population of Great Britain they contained over 60 per cent. of the industrial population of the Metropolitan area. In great measure the persons employed in that area in such industry groups as public administration and defence, transport and communication, commerce and finance and professions are engaged in rendering services to the country as a whole, and their remuneration is largely drawn from the remainder of the country. Thus there is concentrated in London and the adjoining area a great purchasing power which is to a considerable extent provided by the rest of Great Britain.

350. Figures are given in Appendix VII as to the rates of wages in certain industries in the larger towns in Great Britain at 31st May, 1939. It will be seen that wage rates in London are high as compared with those paid in some large provincial towns and that, in fact, higher wage rates are often paid in London than in any other of the large towns.²²³

Further, London and the South-eastern area have for long experienced a lower rate of unemployment than the rest of

²²² Compiled from the Census of England and Wales and Scotland, 1931, Industry Tables.

²²³ The Trades Union Congress stated in evidence that the practice of fixing a London wage rate higher than that for the rest of the country is not as general as it is often imagined to be. Trades Union Congress, p. 892, par. 11.

the country. From 1925 the percentage of unemployment among insured persons in those two areas has been consistently lower than that in any other area of Great Britain.²²⁴ The difference in this respect between them and the rest of Great Britain is shown by the following figures as to the percentages of unemployment in 1937 and 1938 among insured persons in the various divisions of the Ministry of Labour.

Division.	Percentages unemployed among insured persons.	
	1937.	1938.
London	6.3	8.0
South-Eastern	6.7	8.0
South-Western	7.8	8.1
Midlands	7.2	10.2
North-Eastern	11.0	13.5
North-Western	14.0	17.8
Northern	17.9	18.3
Scotland	15.9	16.3
Wales	22.3	24.7
Average for Great Britain	10.6	12.6

The point is further illustrated by the results of an analysis²²⁵ made by the Ministry of Labour of male applicants for unemployment benefit or unemployment allowances at 1st May, 1939, who had been continuously on the registers of employment exchanges for various periods. The results of the analysis are summarised in the following table.

Division.	Number of male applicants at 1st May, 1939.	Percentage of male applicants at 1st May, 1939, who had been continuously on registers for under-mentioned periods.						Total.
		Less than 1 yr.	1 yr. but less than 2 yrs.	2 yrs. but less than 3 yrs.	3 yrs. but less than 4 yrs.	4 yrs. but less than 5 yrs.	5 yrs. or more.	
London ...	145,510	91.6	5.2	1.7	0.8	0.4	0.3	100.0
South-Eastern	66,768	92.1	4.4	1.8	1.1	0.3	0.3	100.0
South-Western	51,717	90.9	4.6	1.7	0.9	0.6	1.3	100.0
Midlands ...	113,006	80.1	8.8	3.6	2.1	1.6	3.8	100.0
North-Eastern	122,213	79.8	8.1	4.1	2.8	1.5	3.7	100.0
North-Western	215,544	73.7	9.5	5.3	4.5	2.1	4.9	100.0
Northern ...	118,852	66.7	11.5	5.6	5.0	2.6	8.6	100.0
Scotland ...	160,990	68.7	10.2	5.8	6.8	2.1	6.4	100.0
Wales ...	109,746	66.9	11.5	5.6	3.9	2.9	9.2	100.0

²²⁴ 22nd. Abstract of Labour Statistics in the United Kingdom, p. 59.

²²⁵ See Ministry of Labour Gazette, July, 1939, pp. 242-244 and pp. 262-264.

Thus, London workmen, generally speaking, enjoy higher wages and more regular employment than those in the rest of the country.

351. The size, and the high purchasing power, of the population of the area make Greater London an incomparable consuming market. As the greatest centre of population it holds the greatest supply of labour. Roads and railways radiate from it in all directions. Vessels depart from it to all quarters of the globe. It was in the van of progress in the adoption of electrical power and the modernization of public services.

352. The obvious attractions which Greater London possesses as a market, a centre of potential labour, a distributing centre, and as an area in which electrical power is universally available, inevitably tend to attract many consumers' industries to locate themselves in or near to it. The extra employment provided by the new factories further adds to the importance of the area as a market. Thus higher industrial activity and purchasing power are induced. The magnetic pull on industry is strengthened; and, as respects the industrial population, wide opportunities of employment add to the attractive power which London naturally exerts through the advantages which it possesses as a Capital city. So the process of growth continues—market and population acting and reacting upon one another to build up an ever greater collection of people and industries. Nothing succeeds like success.

TRANSPORT AND TRAFFIC.

353. The population statistics given above were compiled from census or other records relating to the place of residence of the population. The fact that the number of people dwelling in Outer London was in 1937 nearly thirty times as large as the number of people living there in 1801, does not mean that the number of people employed within that area has increased in similar measure. To draw such a conclusion from the figures would be to presuppose that the place of a person's employment was inseparable from the place of his residence. Of course that is not the case. As a distinguished economist has remarked, "the possibility of severing work-place from dwelling-place is a very important social fact."²²⁶ It is a social fact which has long been of immense practical importance in London, where severance of work-place from dwelling-place has taken place to a degree unparalleled elsewhere in Great Britain.

354. From information as to the relationship between residences and workplaces which was obtained in the Census of

²²⁶ Professor A. C. Pigou, *Essays in Practical Economics*, "The Concentration of Population."

Population of 1921 it appears that out of a total of about 2,685,000 persons working in the county of London, 608,000 or 22.6 per cent. came from without the county, namely 475,000 from Outer London and 133,000 from beyond Greater London. Of the 2,174,000 occupied persons resident in the county of London, 97,000 or 4.4 per cent. went outside the county to work, 68,000 going to Outer London and 29,000 beyond Greater London. Of the 542,162 residents in Essex, Hertfordshire, Kent, Middlesex and Surrey who came to the county of London to work 48 per cent. had workplaces in the City of London or the City of Westminster.²²⁷

355. The London Passenger Transport Board supplied the Commission with the following statement,²²⁸ which was also compiled from the information collected in the Census of 1921, showing that persons working in Central London²²⁹ but residing elsewhere in the county of London, or in Essex, Hertfordshire, Kent, Middlesex or Surrey, resided in the following zones:—

Zone.	Number of persons. (1)	Distribution per cent. (2)	Persons in Column (1) as percentage of occupied persons resident in zone. (3)
Within 5 miles of Charing Cross	424,000 (a)	50	28
Within 10 miles and beyond 5 miles	345,000 (a)	41	24
Within 15 miles and beyond 10 miles ...	32,000 (a)	4	14
Beyond 15 miles ...	47,000 (a)	5	5
Total in counties of London, Essex, Hertfordshire, Kent, Middlesex and Surrey (a) ...	848,000 (a)	100	21

(a) The Census of 1921 was taken in June. Persons working in central London but enumerated at holiday resorts outside the counties mentioned are excluded from these figures.

356. The foregoing figures are now 18 years old. When the information on which they are based was collected the enormous

²²⁷ London County Council, p. 383, par. 23.

²²⁸ London Passenger Transport Board, p. 376, Exhibit M.

²²⁹ That is the Cities of London and Westminster and the Metropolitan boroughs of Holborn, St. Marylebone, Finsbury and Southwark.

amount of house building which has proceeded in the Metropolitan area since the war was only at its beginning. Since 1st January, 1919, no fewer than 853,000 houses have been built in Greater London. Of that number only 179,000 have been built within Inner London. The total number of houses built in London and the Home Counties in the same period is 1,279,000, or 30 per cent. of the total number built in the whole of Great Britain. Relatively few of those houses were built by 1921. The figures given in paragraph 340 above show that between 1921 and 1937 as many as 708,000 persons moved from Inner London to new places of residence outside. By reason of the continuance of that outward movement of population from Inner London, the proportion of the persons working in Inner London but residing elsewhere has no doubt increased.²²⁰ The London Passenger Transport Board suggest that the centripetal movement of the population of London may amount to roundly 1,700,000 persons for every working day, representing almost a third of the total passenger movement.²²¹

357. The separation of workplace from place of residence to the extent illustrated by the foregoing statistics has been made possible and largely stimulated by improvements in transport. The concentration of the main line railways upon London equipped it early in the Railway Age with a radial system of railway communication which enabled urban development dependent on the Metropolis to take place at considerable distances from its central area. Special suburban railways were also developed to an extent not paralleled elsewhere in Great Britain. Later, electrically-operated tube railways were made, and electrical operation was introduced on the suburban tracks of the main line railways, and has within recent years been extended even to some of the main lines themselves.

The decentralising influence of railway facilities has been reinforced and accelerated by the transition from horse tram to electric tram and electric tram to trolley bus; by the evolution of the modern pedal bicycle; and, most important of all, by the development of the motor vehicle.

358. The London Passenger Transport Board calculate that the burden of cost which falls upon the average family in London for transport is about £15 per annum, a sum which is estimated to be equivalent to 8 per cent. of the average income of working-class families.²²² To be added to the burden of cost is the expenditure of time by the workpeople in travelling to and from work. The time involved may represent a substantial addition

²²⁰ London County Council, p. 383, par. 24.

²²¹ London Passenger Transport Board, p. 366, par. 9. Also p. 376, Exhibit M. (III).

²²² London Passenger Transport Board, p. 357, par. 7.

to the length of the working day: e.g. Morden, Barking, Enfield West and Edgware are all about 40 minutes by train from Piccadilly.

359. Obviously the distance between home and workplace cannot continue to increase indefinitely. Sooner or later the burdens of both cost and time must bring the process to an end.³⁵⁹ Even now cost is a serious burden; and during the inflow to work in the morning and the outflow to home in the evening, it is impossible to provide seats for all the passengers on the railways—upon which the bulk of the people coming from any distance must depend for their transport. Indeed it appears that, at one point at least, the traffic simply cannot be cleared; for Mr. Frank Pick, the Vice-Chairman of the London Passenger Transport Board, is reported recently to have stated in evidence before the Railway Rates Tribunal that as regards Morden Station:—

“ You have two peaks of traffic in the morning there, one at about half-past eight, when you come to the end of the workmen’s period, and one at about 9 o’clock, when you come to the ordinary business movement. In both cases it is practically physically impossible to lift away in complete the volume of traffic offering.”³⁶⁰

360. The transport difficulties arising from London’s growth are not confined to the transport of passengers on the railways. The traffic problem of the streets is not less acute. Drastic treatment alone will bring relief but can be secured only at enormous cost; it has been estimated that the cost of the road schemes envisaged in Sir Charles Bresssey’s Report of 1937 on Greater London Highway Development would amount to between £160,000,000 and £230,000,000.³⁶¹

361. As long as the number of persons employed in Inner London continues to increase while the population resident in that area continues to decline, it stands to reason that the density of traffic in Inner London will still grow. Though there is a centrifugal movement of factories to Outer London, this movement does not relieve the transport difficulties, for owing to the limited availability of land and rising values the sites of Inner London tend to be more and more intensively used. Non-manufacturing activities, such as commerce and administration, are absorbing an ever greater portion of the central area. Each acre is being made to provide working space for more and more people. The market of the great retail establishments is stretching further and further afield. In 1911 it was noted that such

³⁵⁹ Trades Union Congress, p. 892, par. 6-10; Robson, p. 783, par. 41.

³⁶⁰ Proceedings of Railway Rates Tribunal, 20th April, 1939, p. 450.

Q. 5447.

³⁶¹ Hansard, 17th June, 1938, Col. 598.

establishments delivered goods by motor vans up to 30 miles or even more from the centre.³³⁶ In 1938 the scope of a convenient day delivery service was regarded as reaching easily to 50 miles from Charing Cross.³³⁷ Moreover, working-class dwellings in central areas are sometimes being replaced by "luxury" flats, whose occupants are able to afford the use of mechanical transport more freely than the former dwellers on the site.

362. The latter remark points to another important factor in the situation, namely, the growth of the travel habit among the population generally. In 1921 the number of passenger journeys originating within Greater London on local transport undertakings and on the suburban branches of the main line railways averaged 364 per head of the population. In 1932, the last year for which figures are available for the same area, the figure was 459, and in 1929 and 1930 it was as high as 489. Taking the wider London Passenger Transport Area, the number of journeys per head of the population rose from 418 in 1933-4 to 441 in 1937-8.³³⁸

363. All these influences operate to increase the pressure of traffic upon road and rail; to accentuate the congestion of traffic in the central area; and to produce greater delay and, therefore, increased socio-economic loss in the movement of persons and goods.

Two over-riding causative factors emerge, namely:—

(i) The increasing population and industrial development of Greater London;

(ii) The increasing degree to which the place of residence of the members of the industrial population is becoming separated from the place of their work and the general absence of co-ordination in the location of housing and industry.

The first of those factors is bound up with the general subject of the Commission's inquiry, and is one which falls to be considered by the Commission in dealing with the question of remedial measures under the third section of the Terms of Reference. It is not necessary further to discuss it here. The second factor involves the question of the planning of the area, a subject to which attention is given below.

PLANNING AND THE GOVERNMENT OF LONDON.

364. The evidence of the London Passenger Transport Board laid stress on the essential need from the traffic standpoint of the effective town planning of the Metropolitan area. The

³³⁶ Report of the London Traffic Branch of the Board of Trade for 1911,

p. 7.

³³⁷ London Passenger Transport Board, p. 353, par. 5.

³³⁸ London Passenger Transport Board, p. 370, Exhibit D; and Board's Report for 1937-38, p. 12.

criticism was advanced on behalf of the Board that at present effective town planning is lacking.²⁹⁹ The following illustrations of the unplanned character of London were included in the Board's evidence:—

“ There has been a tendency in post-war years to concentrate large quantities of labour on extensive housing estates without regard to workplaces. An acute problem was created at Becontree in this fashion. Fortunately the development of industries along the banks of the Thames has tended to a fresh daytime distribution of this population. A demand has grown up for north and south routes across the housing estate which have released to some extent the pressure upon east and west routes converging upon Central London. At Burnt Oak Station upon the Edgware Line the originating workmen's traffic, which is dealt with in roughly half an hour in the morning, consists of nearly 49 per cent. of the total outwards traffic from opening up to 10 a.m. At Morden workmen's traffic is even larger in volume. It amounts to 7,300 passengers every weekday morning, all to be dealt with within a limited period of time covered by workmen's tickets and representing almost 55 per cent. of the total outwards traffic at this station from opening up to 10 a.m.

“ Industrial districts have been created where there are not reasonable transport facilities for their support. For instance in North Acton there are now about 180 factories employing approximately 34,000 people. The whole area has been developed on an industrial basis, with the result that there are heavy traffics at the times when the factories open and close and practically no traffic during the rest of the day. The bulk of the traffic has to be dealt with by bus (56 seats), or trolleybus (70 seats), which is a small unit for the purpose, with the result that there are constant complaints with regard to service, and the services provided by the Board are definitely uneconomical to run. They are costly to operate and wasteful of both material and man power.”³⁰⁰

365. It is perhaps not surprising that such things have happened seeing that there are 77 separate planning authorities in Greater London, while in the larger London Passenger Transport Area as many as 133 authorities are exercising planning powers. With such a multiplicity of jurisdictions and interests, which may sometimes conflict, it was bound to be difficult to secure the coherent planning of the area. In point of fact the evidence submitted to the Commission indicates that cohesion is conspicuous by its absence.³⁰¹

²⁹⁹ London Passenger Transport Board, p. 352, Q. 2998.

³⁰⁰ London Passenger Transport Board, p. 366, par. 9.

³⁰¹ *Ibid.*, and p. 409, Q. 3357.

366. The planning of the area is closely bound up with the local government of the area. It is possible on the one hand to conceive of a new local government authority being formed with an area of jurisdiction ranging over an area more closely resembling London than does the present administrative county of London or Greater London and that this authority would be made responsible for the planning of the area. Alternatively, means of dealing with the planning difficulty might lie in the establishment of an *ad hoc* authority charged solely with the function of planning the area.

367. The problem of London government, of which the planning problem is thus one aspect, is, of course, one of long standing. It has formed the subject of a number of inquiries, the latest being that carried out by the Royal Commission of 1921-3 on the Local Government of Greater London. The charge to that Commission was "to inquire and report what, if any alterations are needed in the local government of the administrative county of London and the surrounding districts, with a view to securing greater efficiency and economy in the administration of local government services and to reducing any inequalities which may exist in the distribution of local burdens as between different parts of the whole area". The proposals submitted to that Commission by the London County Council envisaged the establishment of a Central Authority which would have jurisdiction over an area that would not be smaller than Greater London and not larger than the counties of London, Essex, Hertfordshire, Kent, Middlesex and Surrey combined.²⁴² Among the wide functions which it was suggested that the proposed Central Authority should exercise were those relating to town planning.²⁴³ The majority report of the Commission rejected the Council's proposal for a new executive authority but recommended, *inter alia*, that a statutory committee "should be set up to advise the appropriate Minister upon questions affecting London and a large surrounding area in relation to (a) transport; (b) town planning; (c) housing; and (d) main drainage."²⁴⁴ This recommendation was not carried into effect.

368. In evidence before the present Commission it was stated that the problem of the planning of the area might be simplified if there were a Greater London municipal authority for the larger functions of local government, and that town planning could not be separated from other municipal activities. That is a point of view which demands full consideration. The issue is not, however, one with which we are in a position to deal

²⁴² Report of the Royal Commission on London Government (Cmd. 1830),

p. 12, par. 47.

²⁴³ *Ibid.*, pp. 16 and 17.

²⁴⁴ *Ibid.*, p. 114.

since many problems of local government are involved which lie outside the sphere of our inquiry.

369. Moreover a large body of opinion is undoubtedly in favour of the second alternative, viz., the establishment of an *ad hoc* authority for planning, though this is apparently not a course which is favoured by the London County Council. The establishment of such an authority would be a natural development of the policy which has hitherto been followed in this matter. In 1927 a Greater London Regional Planning Committee, representative of all the planning authorities within the London Traffic Area was set up. This Committee, which was a purely advisory body, made two reports in which problems arising in the planning of the area were reviewed. In addition, in its first report, the Committee expressed general approval of a suggestion which had been made that a Regional Planning Authority with executive powers should be established for Greater London.³⁴⁵ In the Committee's second report, however, it was recommended that in view of the new powers for regional action which had been made available in the Town and Country Planning Act, 1932, the Committee should be replaced by another advisory committee (whose constitution was outlined in the report) to which the local authorities of the area would be free to delegate their planning powers if they thought fit to do so.³⁴⁶ In 1933 a new Committee was constituted to which local authorities were free to delegate their planning powers, in accordance with that recommendation. It has been given in evidence that the second Committee came to an end in 1936 without having achieved anything.³⁴⁷ In 1937 another effort was made, by the establishment of a Standing Conference on Regional Planning, to deal with the planning of the area on an advisory basis.³⁴⁸

370. Since the formation of the Standing Conference the view has continued to be pressed that an authority with executive powers is required. Indefinite continuance of the grave and growing difficulties involved in the existing situation can hardly be contemplated; and, unless there is a definite promise of satisfactory progress in the coherent and effective planning of the area being made at an early date under the aegis of the present Standing Conference, the Government should, in our opinion, give immediate consideration to the problem. Short of direct responsibility for the planning of the area being laid upon a Department of the Central Government, action would appear to rest between the two alternative courses already

³⁴⁵ Greater London Regional Planning Committee, First Report, pp. 6 and 7.

³⁴⁶ *Ibid.*, Second Report, pp. 10 and 11.

³⁴⁷ Robson, p. 787, par. 71.

³⁴⁸ Reports of Ministry of Health for 1936-37, p. 130, and for 1937-38, p. 119.

indicated, viz., reorganisation of local government in the area so as to secure the introduction of a comprehensive authority which, *inter alia*, would be responsible for the planning of the whole area, or the establishment of a special planning authority with executive powers including power to precept on the rating authorities.

CHAPTER XV.

REGIONALISM AND THE DISTRIBUTION OF INDUSTRY.

INTRODUCTION.

371. Regionalism as usually understood involves primarily issues relating to the reform of local government in Great Britain which lie beyond the scope of this Commission. But if such reform of local government should take place, especially in the reasonably near future, material assistance would be given towards the solution of several difficulties inherent in the issues before the Commission. These two aspects of regionalism, (a) the reform of local government, (b) the relation of such reform to problems before the Commission, must be kept distinct: it is not, however, possible to appreciate the latter without some explanation of the former.

372. Regionalism may also be viewed from a somewhat different angle and its basis analysed, and the regional areas defined, in relation to industrial rather than to local government considerations. On this basis, for instance, a metal trade area or region might be defined in the Midlands pivoting on Birmingham, or a textile region in South Lancashire with Manchester as its centre. This basis for the regional idea is further considered in paragraphs 384 and 385.

REGIONALISM AND LOCAL GOVERNMENT.

373. The principal units of local government in Great Britain are (a) in England and Wales the county, the county borough, the non-county borough and the urban and rural districts, and (b) in Scotland the county and the large and small burghs. In recent years doubts have arisen in some quarters whether those units are not proving for many purposes too limited; and the possible adoption of larger units, generally referred to as "regions," for administrative and other purposes has been a matter for discussion.²⁴⁹

²⁴⁹ Fawcett, "Provinces of England," 1919, esp. p. 69; Carr Saunders and Carodoc-Jones, "Social Structure of England and Wales," 2nd ed., 1937, p. 30: an essay, which won the Haldane Prize, by Edgar Ashby, on "Regional Government or the next step in Public Administration," published in "Public Administration," October, 1929, p. 365.

374. Experience in the last decade or so shows that, whether the machinery of local government be viewed (a) from above, i.e., vis-a-vis the central government authorities, or (b) from below, in relation to the public served, a larger and more comprehensive unit tends to thrust itself into the picture.

(a) From the point of view of the central authorities, Government Departments which are concerned with local administration—the Ministries of Health, Labour and Transport, the Post Office, etc.—have all found themselves forced to adopt for administrative purposes large regional divisions and to place responsible senior officials at the regional centres; the areas chosen for England and Wales have varied according to the needs of each Department from, e.g., seven used by the Ministry of Labour up to 13 or 14 by other Departments. For purposes of civil defence the country has been divided into regions each with its own regional capital.²⁵⁰

As regards Scotland there has lately been introduced a considerable measure of devolution of Scottish Office (London) business to Edinburgh.

(b) From the point of view of the public and the services rendered, the advantages of wider areas of administration than are afforded by the ordinary units of local government have been recognised in respect of particular services, e.g., establishment of Joint Boards for water supply, hospitals, etc., joint electricity authorities, regional planning committees, regional smoke abatement committees, etc.

In Scotland, a regional system of medical services embracing the city of Aberdeen and the two counties of Aberdeenshire and Kincardineshire has been established and is in successful operation.

375. The case for a larger or regional unit of administration found definite expression in the Report of the Royal Commission on Tyneside, 1937:²⁵¹ the area under review included the county of Northumberland and part of the county of Durham, four county boroughs, namely, Newcastle-on-Tyne, Gateshead, Tynemouth and South Shields, with various boroughs, urban districts, etc. The Majority Report declared that the existing system of local government in the area considered did not allow of the numerous local government services being administered in the most efficient and economical manner (paragraph 132), and a re-classification of services into "regional" and "local" was therefore recommended (paragraph 134); the

²⁵⁰ There are eleven regions for England and Wales and one for Scotland; the Regional Headquarters are London, Birmingham, Manchester, Cardiff, Bristol, Reading, Cambridge, Nottingham, Leeds, Newcastle, Tunbridge Wells, and Edinburgh, the last named having 4 subcentres.

²⁵¹ Cmd. 5402.

regional services were to be administered by a new regional authority for the whole area (paragraph 139). The grouping of important services under one central authority would tend, it was argued, to attract the type of men and women qualified and willing to undertake the work. The regional services were to include public health, medical and allied services, education, public assistance, police, etc.; the remaining—or local—services were to remain in the hands of the existing local authorities. The retention of existing local authorities for non-regional services would be an essential feature of any such proposals, though some adjustment of powers might be necessary.

376. In Scotland the Scottish Economic Committee have, under the Chairmanship of Sir Steven Bilsland, recently reported in favour of a Planning Authority with a scope extending to Scotland as a whole, assisted by regional bodies representing wider areas than those comprised in existing local government boundaries.²⁵²

377. It is claimed that development of local government²⁵³ along regional lines would have various advantages:—

(i) The definite establishment of regional areas would do much to preserve valuable local traditions and local culture, and their capital towns would become important centres of urban life for the region, where administrative, business, financial, educational and artistic ability could all find scope without drifting in so many cases, as at present, to London.

(ii) Moreover, responsible representatives of the great Departments of State—the Board of Trade, the Ministries of Health, Labour, Transport, and the Post Office, etc.—could be located in these capital towns; and with the co-operation of the big Banks and of the “City” authorities, these towns would become, even more than at present, important wheels in the financial and industrial machinery of the country.

(iii) It is important to have high cultivation near large centres of population and if agriculture were considered regionally, the regional authority might be expected to ensure that the best possible use was made of the agricultural land in the region. A proper local balance would be secured between rural produce and urban needs, and the authorities in the regional centre would see to it that building schemes or location of new industries did not encroach

²⁵² Scotland's Industrial Future: The Case for Planned Development.

²⁵³ Some Associations of Local Authorities consulted as to Regionalism generally by the Ministry of Health have indicated that in their view the subject required more study than the Royal Commission on Tyneside were able to give it; and that it was early days to have to reconsider the big resettlement of local government arrangements carried through in 1929/30: Min. Health, p. 155, Q. 1667.

on rich agricultural land necessary for fruit and vegetables to supply regional consumption so long as other less rich land otherwise suitable was available. The regional amenities would also be safeguarded.

378. Difficult questions in regard to:—

(a) the constitution of the Regional Council—whether by direct election or by delegation;

(b) the powers and duties of that body and the financial readjustments involved;

(c) the basis of the delimitation of areas;

would eventually arise, but do not require consideration here.

REGIONALISM IN RELATION TO THE PROBLEMS BEFORE THE COMMISSION.

379. A regional system if adopted would be of assistance in the consideration of several of the problems that face the present Commission. For instance:—

(i) The Special Areas. Depressed localities within a region would be able to call upon the co-operation and sympathy of the regional capital and of the whole region. It would be to the direct interest of all in the region to promote recovery, and some provision for regional adjustment of rates would be desirable.

(ii) The problem of planning would be greatly simplified; the Regional Council would become the principal planning authority for the region, certainly for major regional requirements, leaving probably to joint Committees where existing, or to existing local authorities, the detailed administration of schemes. Planning would receive a great stimulus and on more comprehensive and better organised lines than is at present possible with the multiplicity of small planning authorities; and housing could be better related to industry. Larger financial resources would be available and decentralisation in proper cases could be encouraged, e.g., to satellite towns.²⁵⁴

(iii) Regionalism has an important bearing on future policy with regard to balanced distribution and diversification of industry. Any scheme for regulating the location of industry would be materially assisted if regional areas were established. Thus, if certain industries were prohibited in a particular town they might suitably be located in another part of the same region and in that way the objection on the part of the town to the prohibition might be modified.

²⁵⁴ Min. Health, p. 156, Q. 1682-3; Robson, p. 794, Q. 6628 *et seq.*: Liverpool, p. 839, Q. 7082, 7088.

380. A good deal of evidence before the Commission has given support to the regional idea:—

(a) Evidence has been offered indicating that much interest is being taken in proposals for regionalism in certain areas, e.g., in Manchester:²⁵⁵ it has been suggested that Merseyside should be under one regional authority,²⁵⁶ and also that Greater London needs a common local authority.²⁵⁷

(b) The regionalising of certain services on the lines proposed by the Majority Report of the Royal Commission on Tyneside, would tend to remove or reduce the urge which draws people to the town, for reasons other than those connected with employment. A regional scheme of public health administration which is in successful operation over the whole area of the city of Aberdeen and the two counties of Aberdeen and Kincardineshire has already been referred to.²⁵⁸

(c) Each region should have diversity of industry with a proper proportion of primary and secondary industries and with due proportion also of urban and rural population.²⁵⁹

381. Some evidence was given that the calibre of those who administer the larger units of local government to-day is tending to decline. Councils and committees to be manned are numerous, alike in county and borough; the work is arduous, and volunteers of good administrative ability are not always easy to find. The establishment of councils, few in number and with considerable powers over wide regional areas would, it was anticipated, tend to attract those possessing a high standard of administrative ability, both in town and country life; this was in fact what occurred at the end of the last century when the London County Council took the place of the former Metropolitan Board of Works.²⁶⁰

²⁵⁵ Manchester, p. 805, Q. 6761 *et seq.*

²⁵⁶ Hichens, p. 875; Q. 7538.

²⁵⁷ London County Council, p. 397, Q. 3332 *et seq.* Reference may also be made, to the proposal placed before the Royal Commission on London Government for the establishment of an authority which would cover an area not smaller than the Metropolitan Police District and not larger than the combined counties of London, Essex, Hertfordshire, Kent, Middlesex and Surrey—see par. 367 above.

²⁵⁸ A conference of local authorities was held in Glasgow in March, 1938, to consider the possibility of a regional authority for the Clyde Valley.

²⁵⁹ Scottish County Councils and Counties of Cities, pp. 208 and 220. It is worth noting that the Electricity Commission favoured a regional policy on somewhat similar lines, with proper proportion of urban and rural area (Evidence p. 126).

²⁶⁰ See Report of Royal Commission on Tyneside, par. 139.

382. The international crisis of September, 1938, directed attention to the strategical danger involved in connection with the densely peopled urban areas in the South and East, and particularly Greater London; industrialists, banks, insurance companies, etc., found themselves forced to consider the problem of dispersal. This may tend in future to weaken, especially for the newer light industries, the magnetic pull of London and the South-East area, but the attraction for industry of the *big city* will remain: if the draw of London weakens, facilities in regard to labour, market, transport, supplied by the big urban areas other than London will still prove attractive to employers: Bristol, Cardiff, Birmingham, Manchester, Liverpool, Glasgow, especially if they become Regional capitals (and if these Regional capitals become important governmental, administrative and financial centres) may gather what London scatters.

383. The earlier town planners proposed a limit of 50,000 to 100,000 for the optimum size of a town: some modern experts go further and accept, say, a million as a limit for certain purposes. But for towns of large size the necessary conditions of any growth on the lines indicated are the abolition of slums where still existing, and adequate planning, provision of recreation space, and so on.

REGIONS BASED ON INDUSTRIAL CONSIDERATIONS.

384. From the industrial point of view, and when dealing with problems of location of industry, there might be advantages in taking an industrial rather than a local government groundwork as the basis for regional definition. Industries and industrial areas spread and develop irrespective of county or other local government boundaries. But, equally, if regions are to be set up, it by no means follows that their boundaries would coincide with any existing county or borough boundaries; the regional scheme proposed by the Majority Report of the Royal Commission on Tyneside, which was framed after carefully weighing both industrial and local government points of view, deliberately disregarded local government boundaries and indeed cut across the county of Durham (paragraph 189). Moreover, if regions are to be defined purely in relation to industry and industrial development, it would be difficult to fit certain purely non-industrialised areas such as North Wales or portions of the Highlands into a national scheme of regionalism.

385. These difficulties are probably, however, largely unreal: any scheme of regionalism, if it is to be sound in construction and effective in operation, would have to reckon with the forces alike of local government and of industry, as well as other

factors such as geography, transport, and so on. In many cases most regions would probably assume much the same shape, whether constructed mainly on an industrial or a local government basis; South-east Lancashire with Manchester as its capital, a Midland region with Birmingham as its capital, or a Clyde Valley region with Glasgow as its capital indicate obvious regions whatever basis is assumed.

CONCLUSION.

386. It seems clear that by the adoption of a regional system the solution of several of the problems before the Commission would be materially facilitated.

PART IV. REMEDIES.

Section III of Terms of Reference.

**And to Report what Remedial Measures, if any, should be taken
in the National Interest.**

CHAPTER XVI.

INTRODUCTION.

387. In Part I of this Report we have examined the causes of the present distribution of industry and of the industrial population together with the circumstances under which the industrial structure of Great Britain has undergone change in modern times.

388. As to the big cities, industry and its needs were undoubtedly the main cause of the great aggregations or concentrations, but under conditions of modern civilisation the latter also correspond to other human requirements, to the demand for opportunities of education, mental recreation, medical treatment, professional and commercial advancement, etc. The forces at work in this large scale urbanisation are clearly deep-seated and any attempt to check or regulate them in the national interest is not likely to be generally accepted or to achieve satisfactory results without the fullest investigation.

389. The Terms of Reference also require the "probable direction of any change" in the distribution of the industrial population to be the subject of inquiry. Prophecy in such a connection must obviously be a matter of extreme difficulty, especially under present-day conditions: the rigid control of industry, commerce and finance in many modern states, and the frequent insistence on industrial nationalism or isolation in place of international exchange of products and services, with the attendant severity of tariffs and trade barriers, have made the world of commerce, of export and import and consequently of industry, exceedingly liable to change, and a world in which it is obviously difficult to predict the future.

390. Two probable changes, however, clearly emerge from the evidence before us. The first is the likelihood at least of stationary conditions, possibly even of decline, in the size of the population of Great Britain during the next 30 or 40 years²¹¹ and the second is the trend of population in the direction of London and the Home Counties. That area already absorbs about one-fourth of the whole population, and apart from checks of some kind—

²¹¹ Chapter XI of this Report.

natural, administrative or strategical—seems likely to absorb a still larger proportion.²⁶²

391. Part II of the Report deals not with industry in general, but with the social, economic, and strategical disadvantages arising from the concentration of industries or the industrial population in large towns or particular areas—that is, broadly speaking, with the big scale urban units, and the million mark conurbations.

From the economic standpoint, the experience not only of Great Britain but of the great industrial nations of the Western civilisation clearly indicates that the big industrialised community has definite advantages; but even judged by an economic standard, certain disadvantages are apparent, while the social and strategical disadvantages are of more serious significance, particularly in London.

392. Part III of the Report deals with a number of topics forming part of, or germane to, the Commission's general inquiry.

393. The present Part IV brings the Report to a conclusion and focuses attention on the ultimate questions before the Commission, namely, (A) whether the disadvantages arising from the present distribution of industries or of the industrial population do in fact constitute such a serious handicap or even danger to national life and development as to demand definite action by the Government with a view to remedying them; (B) if Governmental action is required, what form should it take, and (C) by what machinery of administration should such action be put in operation.

A.—THE CASE FOR REMEDIAL MEASURES.

394. In the first place it is desirable to summarise shortly the conclusions arrived at in Part II as to the social, economic and strategical disadvantages that arise from the concentration of industries and of the industrial population.

To take the strategical considerations first. The densely congested conurbations of Great Britain, especially in the South, on the East Coast and in the Midlands, offer *prima facie* easy targets for aerial attacks, and there is no disguising the fact that such attacks, even if aimed primarily at what are usually considered strategical objectives such as munition works, ports, and docks, are likely also to deal destruction to large numbers of the civilian population. London in particular presents an urgent strategical problem.

²⁶² In this connection the drift from rural to urban areas must be borne in mind. See pars. 197-200 above.

395. With regard to the social disadvantages, the sanitary and health conditions of the large towns of a hundred years ago were distressing. Even 50 years later the mortality rates of the large towns were deplorably high judged by present day standards. From the last quarter of the nineteenth century onwards a remarkable improvement has taken place, and is still continuing in the state of the public health in large towns. At present, however, the standard of health in the large towns still tends to lag behind that of the country. The factors which place the large towns at a disadvantage in relation to the country are not inevitable, and, given a well planned town, health conditions may well, if proper progress is continued, be approximately as favourable in the town (allowing for the better institutional and curative treatment which is available there) as in the country.

396. Associated with, and to some extent a cause of, the present disadvantages of the large towns in the matter of health are slums and overcrowding; the absence of adequate provision for open air recreation and games; a lack of proper and regular contact, especially in the case of the young, with the resources and amenity of country life; smoke and dirt, fog and general absence of sunlight; and noise. Not least grave of the social disadvantages is transport congestion, which in the case of the worker travelling long daily journeys to and from his work—whether in London, or, to a less degree, Birmingham, Glasgow, Manchester, or Liverpool—often involves serious loss of time and money and probably some impairment of health. No remedy appears to be in sight for the straphanging and similar difficulties of congested traffic in the Metropolitan area; and, if development is allowed to continue with no more regulation in the future than in the past, these difficulties seem likely on the present outlook to grow even more acute and burdensome on the time, money and health of the community.³⁰³

397. On the other hand, the town, and especially the big town, can offer greatly enlarged opportunities for education in schools and colleges, for medical treatment in hospitals and similar institutions and for recreation and intercourse in theatres, cinemas, clubs, lectures, and social gatherings of many kinds: these opportunities obviously can be more easily and highly developed and specialised in the big centres.

398. It is necessary for many purposes, as indicated in Chapter XIII to distinguish between various types of urban units. Both the advantages and the disadvantages above mentioned will present themselves in different guises and with differing degrees of intensity in urban units of various sizes, or constituted in various ways: for instance, the problem

³⁰³ See Chapter VI, pars. 184-192.

of the worker's daily journey to and from his work presents obviously an entirely different complexion in Ipswich or York, with a population of about 85,000 and limited geographical spread, from that in Bristol or Sheffield, with approximately half a million and covering a larger area; and the problem naturally becomes much intensified in Birmingham and district, with a population nearing two millions covering some 200 square miles, or Greater London with $8\frac{1}{2}$ millions and an area of 693 square miles.²⁶⁴

Similarly, medical or educational facilities appropriate to Birmingham or Bristol might fail of adequate support in towns no larger than Ipswich or York.

399. The economic disadvantages consist largely, if not mainly, of such obvious features as congestion of traffic, involving delay in the transport of goods, and serious economic and financial handicap for the workers; smoke, pollution of the atmosphere, and noise, which are not only injurious to health but also involve economic loss; and high values of land and buildings. As regards the last named, Sir Charles Bressey in his Highway Development Survey (Greater London) 1937, states that the cost of comparatively insignificant street widenings sometimes works out in the Metropolis at a rate exceeding £2 millions a mile. Again, as shown in paragraph 146 above, the financial assistance from the Exchequer and from local rates may amount in the case of a flat in central London to more than three times that in the case of a cottage. Congestion also spells great difficulties where industry desires to expand.

EVIDENCE IN REGARD TO THE NEED FOR ACTION.

400. The choice of location for industry in the past has been mainly at the discretion of the employer or entrepreneur; the State has not directly intervened to control or direct it. Industry in Great Britain, as in other industrialised countries, both in Europe and the West, has prospered exceedingly during the period of unfettered control²⁶⁵ and arbitrary or unreasonable interference with the freedom of the individual industrialist to select his own location might seriously handicap development in this country, especially in a period of fierce foreign trade competition. It is true that some intervention or influence by the State on the choice of industrial location has not been unknown in recent years. The changes by the State in its tariff policy since 1931 are often accepted as having affected the siting of new industries to the advantage of certain areas and

²⁶⁴ G. C. Allen. *The Industrial Development of Birmingham and the Black Country*, p. 5, and p. 458, Table III; and London County Council evidence, p. 379.

²⁶⁵ Board of Trade, p. 93, pars. 112-117.

to the detriment of others;³⁰⁰ town planning schemes, by restricting the development of new industries in many cases to defined areas, have doubtless also not been without effect. But such influence or control has been indirect and limited in character.

So far Government has not attempted to control directly the industrialist's choice of location and if remedies are to be applied to evils resulting from such absence of control both the evils and the remedies must be defined and the objectives of remedial action clearly stated.

401. The evidence shows that there is a large body of opinion amongst those who can speak from experience and with authority, in favour of *some* regulatory action being taken on national lines and in the national interest, and that not only among enthusiasts in town planning such as the Council for the Preservation of Rural England, the Garden Cities and Town Planning Association, and the Town Planning Institute but also among many local authorities. The evidence of the London County Council was clear that:—

“The urban development of Greater London already exceeds the aggregate which would have been desirable on general principles of town planning and in the interests of the well-being of the population of London.”³⁰¹

The Council declined to express an opinion on the question whether the location of industry should be controlled by the State, which they stressed was a question for Parliament to decide, but they did not oppose such control, although they emphasized that if the policy of State control were accepted by the Government certain exemptions and adjustments would be necessary.³⁰² The evidence of the Manchester City Council, while generally advocating that industry should have free choice of location, agreed that control might be necessary on account of “overwhelming public considerations” and these would include strategical dangers, loss of public capital due to ill-regulated transfer of industry, and inconvenient size of town growth.³⁰³ Witnesses representing the Leeds City Council also expressed, but purely as a personal view, approval of the idea of a national authority preferably of an advisory character.³⁰⁴ The evidence of the Birmingham City Council, while opposed generally to any restriction on freedom for industry of choice of location, declared itself in favour of negative restriction in certain cases and of “places being sterilised against industrial development for cultural and aesthetic reasons, health, and so

³⁰⁰ The Federation of British Industries accepted this view—p. 499, Q. 4313—but the Board of Trade expressed doubt; p. 91, pars. 107–108.

³⁰¹ London County Council, p. 421, par. 127(f).

³⁰² Ibid, p. 420, par. 125.

³⁰³ Manchester, p. 804, Q. 6739–44.

³⁰⁴ Leeds, p. 733, Q. 6232–6234.

forth".²⁷¹ And in the case of the Liverpool City Council the principal witness, when asked if he would be opposed to the creation of a national body which would by advice and on principles of general planning show what would be best for the country as a whole, replied that he thought it was the only solution to the problem.²⁷² County authorities such as the County Councils of Durham and Cumberland, in evidence submitted to the Commission, also favoured control; the Cumberland County Council strongly urged the adoption of a National Industrial planning policy while the Durham County Council advocated a survey of the whole country with a view to comprehensive "zoning" by single areas larger than existing administrative Counties or County Boroughs, and effective machinery to direct and supervise the location of industry in the zoned areas. From Scotland the Association of Counties of Cities and the Convention of Royal Burghs, and also the Scottish Economic Committee, advocated a national planning authority for Scotland. The evidence of the Ministry of Labour was couched in terms not unfavourable to the idea of national action in the direction of regulation.²⁷³

402. So far as industry itself is concerned evidence was given by, amongst others, the Federation of British Industries; this evidence was prepared with the assistance of a number of constituent members to whom a questionnaire had been sent. With regard to existing concentrations of industry or industrial population, the view was expressed that these could not be broken up without the gravest of risks.²⁷⁴ The Federation were opposed to compulsion on industrialists in the matter of location, but at the same time they were prepared to accept a policy of "discouragement" of settlement in certain areas and "encouragement" of settlement elsewhere. In the case of London a new industry or industrial establishment, unless it could make out a special claim, might be "urged" to go elsewhere, and the Federation believed that that would be effective.²⁷⁵

The Chairman of Messrs. Stewarts & Lloyds²⁷⁶ in his evidence was emphatic that if industrial progress, on which the prosperity of the nation depends, is to be maintained, the final decision as to the location of each industry and of each factory within the various industries must rest with the directorate responsible for the financial success of the unit in question. But in his opinion this was not in any way incompatible with a strong view that some further organisation is urgently required to give

²⁷¹ Birmingham, p. 722, Q. 6141.

²⁷² Liverpool, p. 839, Q. 7082.

²⁷³ Ministry of Labour, p. 274, 276; Q. 2796-2803. Evidence, p. 274 et seq.

²⁷⁴ Federation of British Industries, p. 507, Q. 4393.

²⁷⁵ Ibid. Q. 4398.

²⁷⁶ Macdiarmid.* Messrs. Stewarts and Lloyds were responsible for the development at Corby frequently mentioned in evidence.

advice both to industrialists and to the Government on the question of location; and an Industrial Development Commission should be appointed forthwith on the lines of the Import Duties Advisory Committee. This proposed Development Commission should not have powers to issue licences for the erection of new factories or the extension of old ones, but full information as to all proposals for setting up or extending factories should be sent to it. No power of veto or compulsion should be given to the Development Commission, but if the Commission's advice in any given case were disregarded, then the Commission should report to the Government who would decide whether it was a case for Governmental action. The Commission could in due course take over the industrial functions of the Commissioners for the Special Areas and give them national application. He did not favour giving the proposed Commission powers to finance new enterprises: he did, however, favour an extension of the present arrangements for provision of funds through the Nuffield Trust, the Special Areas Reconstruction Association, and the Treasury Fund. Finally, the Commission should report regularly and make recommendations as to further action.

403. The Trades Union Congress proposed that a national authority should be set up and given power to exercise both positive and negative forms of control over the location of industry; that such an authority should be directed to exercise such control in the public interest, but that it was not advisable more specifically to direct their activities or narrowly to restrict their exercise. Safeguards against any misuse of the power to control location should be sought in the composition and constitution of the controlling authority. The Congress suggested, therefore, that a Minister of Cabinet rank should be charged with powers of public control over industrial location; his duties would include the collection of information and statistics, he should appoint advisory committees, and co-operate with other Government Departments and bodies likely to be of assistance and he should also be assisted by a National Advisory Committee consisting of a chairman and not less than three other members.²⁷⁷

404. On the other hand evidence was given in the sense that there was no necessity for general control over location. For instance, the Association of Municipal Corporations submitted that, as a general rule, it would be undesirable to interfere artificially with the development of any industry: there may, the Association said, be exceptions and possibly Greater London is one but a general planning system of the country would be neither practicable nor desirable.²⁷⁸

²⁷⁷ Trades Union Congress, p. 912, par. 58.

²⁷⁸ Association of Municipal Corporations, p. 821, par. 3.

ASPECTS OF GOVERNMENT CONTROL.

405. Any measure of Government control of location of industry may be regarded from two possibly divergent points of view, viz., (i) that of industry itself, (ii) that of the nation.

(i) *The Point of View of Industry.*

406. The general attitude of modern industry in relation to the activities of Government is apt to be uncertain and to vary according to circumstances. In times of depression industrialists are prone to welcome and indeed demand Government co-operation; in times of prosperity to reject Government activities as interference. In this matter of location suggestions have been made that on occasions Government may be able to anticipate coming economic changes more readily, and with more far-seeing appreciation of results of such changes than industry itself: one instance suggested was that if a coal seam is petering out, the Mines Department might possibly, though this is not very likely, be in a position to realise that sooner than the individual coalowner and warn him accordingly. The Federation of British Industries itself favoured the creation of a Government Department or Commission which would gather together and make accessible all information bearing on the various aspects of location and locational change. But it is very doubtful whether industry would be willing to accept in its own interest, as is sometimes proposed, anything in the nature of general Governmental prompting. When India was marching towards self-government it was, to say the least, not improbable that fiscal autonomy would mean a hostile duty imposed on Lancashire imported goods, but no controlling interests in Lancashire, before the war or immediately after, would have been likely to listen to such a warning, even if Government had considered it expedient to issue it. Moreover, the quick cut and thrust of modern commerce, the rapid and constant changes involving prompt decisions, and the ready shouldering often of heavy financial risks, represent emphatically a field of energetic individual initiative rather than of cautious Government control. Even if there were at any given moment an optimum location, either for industry as a whole or for given industries, that optimum is subject to considerations that are continually shifting; the picture is not static but kaleidoscopic, dissolving and re-forming with extreme and increasing rapidity. In this quickly moving panorama of economic change there is no reason to suppose that, so far as the profitability of industrial enterprise is concerned, the State, if it should take on itself unduly wide and autocratic powers of regulation and control of industrial location, will be likely in general to prove any wiser, or to make more far-sighted and enlightened choice, from the point of view of industry, than the generality of those who guide individual undertakings.

407. On the other hand, it may be fairly claimed that in certain directions a strong National Board or Commission—so constituted as to carry general confidence, acting on behalf of and with the authority of the State, could command for industry advantages which no individual employer could obtain for himself. Take, by way of illustration, modern traffic in congested areas which, unless regulated by the guiding hand of authority exercised on behalf of the community as a whole, is apt to result in confusion and chaos in which all suffer and which no individual motor or lorry driver can dissolve for himself. Similarly, if industrialists persist in crowding into an area already overloaded with factories and workshops, there is a risk of all, newcomers as well as those already established, suffering such economic disadvantages as high charges and scarcity of labour. A National Authority could by wise advice and encouragement, possibly in extreme cases by more drastic methods, prevent such congestion occurring, or assist in its removal. It is on considerations of a similar character that the accepted policy of redevelopment of congested areas, so far as economic issues are concerned, is largely based.

408. It is to be borne in mind, however, that if the employer is to be asked to submit to anything like control or direction in his choice of location, that carries with it two possible consequences. First, if the State induces or influences an employer to choose a particular location and for any reason, due to location or not, the venture turns out badly, there is a risk that claims for compensation may be put forward, a risk which would have to be foreseen and steps taken to provide against it. Secondly, if the State is to direct or influence, say, new motor works to choose South Wales, or light industries of some kind to settle in, say, Durham or Cumberland, such direction or influence will be useless unless an adequate labour force is available to carry on the new industry. Doubtless under such conditions the co-operation of labour would be forthcoming, though adequate provision of proper housing accommodation would be necessary.¹⁷⁸

(ii) *The National Point of View.*

409. From the national point of view the problem presents a different aspect. Here it must be obvious from the outset that undoubtedly a principal national consideration is the successful conduct of industry: any control which fatally hampered or handicapped industry would in any Western nation, and especially in one so highly industrialised and so dependent on manufacture as Great Britain, deal a blow of the gravest character to the national existence. Those who in their evidence

¹⁷⁸ Trades Union Congress, p. 913, Q. 7894. See S. R. Dennison, "Theory of Industrial Location," Manchester School Publications, Vol. VIII, p. 23, 1937.

before the Commission proposed remedial measures in the form of Government control accepted that as a consideration of primary importance. But while making all necessary allowances on that account, when conditions affecting the health or well-being rather than the wealth of the State demand attention, when slums, defective sanitation, noise, air pollution and traffic congestion are found to constitute disadvantages, if not dangers, to the community, when the problem, in fact, becomes social in texture rather than economic, then modern civilisation may well require a regulating authority of some kind to step in and take reasonable measures for the protection of the general national interests. The claim to some right of regulation in such cases is strengthened by the large share which the State now takes in shouldering with industry, both employers and employed, the burden of insurance.

410. Dangers to health may arise directly in the prosecution of certain industries, and specific remedies may have to be applied. There may have been economic arguments in favour of chain making as carried on at the end of last century at Cradley Heath, but when Mary MacArthur found that many of those engaged in the industry were women, stripped to the waist, working long hours and earning a beggarly pittance, Parliament set up the Trade Boards as a protection to the worker in that and parallel cases. Similarly, dangerous or noxious trades are subject to definite legal regulation. In virtue of arguments of the same character, Parliament in the latter part of last century accepted the restrictions imposed by the Factory Acts.

411. The difficulties indicated, however, have resulted not so much from the nature or operations of particular undertakings or trades as from the general course of industrial development. Industry has been the main compelling cause of the urbanisation of Great Britain, and, above all, of the great aggregations which in time past brought in their train the slums and the polluted atmosphere and other disadvantages set out in Part II. An enlightened national conscience may well be heard to insist that while successful prosecution of industrial activities is vital to the life of the nation, due attention must be paid to social needs, and consideration given to the question how, with the co-operation of industry and those engaged in its management, grave social evils where shown to exist can be mitigated or removed.

412. Similar reasoning applies with increased force where much of the danger of destruction of property, and of death to the population, from air attack is the direct result of urbanisation and the great aggregations of population. Such

danger may menace the life of the nation, and no one, industry least of all, would deny the right of the nation to take proper steps for its own protection in such a case.

CONCLUSION ON A.

413. It is not possible from the evidence submitted to us to avoid the conclusion that the disadvantages in many, if not in most of the great industrial concentrations, alike on the strategical, the social, and the economic side, do constitute serious handicaps and even in some respects dangers to the nation's life and development, and we are of opinion that definite action should be taken by the Government towards remedying them.

B.—THE OBJECT AND NATURE OF REMEDIAL ACTION.

414. Remedial measures require consideration in relation to the various types of disadvantage—social, economic, and strategical—that have been under examination. Turning first to the strategical disadvantages, the remedies sought may relate to (a) industrial undertakings, factories, workshops, etc., (b) the industrial population.

As to (a), industrial undertakings, etc., the Government have already adopted with regard to certain offices or undertakings under their control a policy of dispersal or decentralisation particularly from the Metropolitan area. Such dispersal or decentralisation is taking various forms, whether by means of removal of Government arsenals and factories to the North and West of Great Britain, or by transfer of Government offices with their staffs to distances well outside the London area. There has also been direction or encouragement of state-aided munition works or developments, to take similar action.

So far as (b), the industrial population, is concerned, the problem of the immediate and presumably temporary disposition of large portions of the industrial population on the outbreak of war is not closely related to the issues before the present Commission: on the other hand, the policy contemplated under head (a), namely, the dispersal or decentralisation of industrial establishments, whether under State or private control, is closely linked up with and indeed forms part of the long-term inquiry entrusted to the Commission.

Clearly, if in the coming years the tight knots of the Metropolitan and other large concentrations can be loosened, and the density of population in and around their areas diminished, the risk of destruction to the civilian population in war time will be substantially reduced.

415. The Civil Defence Act, 1939, contains an elaborate series of provisions for the protection of the civil population and of industry in time of war. Moreover, the responsibility now placed on employers, under Part III of the Act, to make reports to the proper authorities and to execute works for the purpose of providing shelter for their staffs, and under Part V, to take other measures for the protection of their workpeople so far as lighting and camouflage are concerned, can hardly fail to influence employers in their choice of location: such responsibilities, which must, even allowing for substantial Government assistance, involve considerable financial outlay on the part of employers and industrial undertakings, may be less costly in smaller towns or even in the neighbourhood of large centres such as Birmingham, Bristol, or Cardiff, than in the larger Metropolitan area. There is evidence already that employers are realising in their choice of location the strategical dangers involved in dense conurbations, especially in the case of London and the Home Counties; and in the latter case a definite movement by employers in the direction of decentralisation or dispersal, to areas surrounding the Metropolis, further afield to smaller towns, or to areas surrounding the bigger cities in the North and West, seems not unlikely.

416. With regard to the social and economic disadvantages it is not necessary to repeat what has been emphasised in earlier paragraphs in this Part of the Report, nor to reiterate the desirability of decentralisation or dispersal in appropriate cases. The salient fact that emerges with regard to the social, economic and strategical disadvantages alike is that the remedial policy required should proceed in each case on much the same lines, viz., to quote the words of the Report of the American National Resources Committee when considering similar issues:—

“ To loosen up the central areas of congestion and to create a more decentralised Metropolitan pattern.”³⁰⁰

The applications of this policy may, however, differ; strategical needs might be reasonably met by decentralisation within narrow limits, limits too narrow, however, to meet the social and economic disadvantages. To summarise, the policy on which remedial measures should in our opinion be based is succinctly described by the three words, redevelopment, decentralisation and dispersal.

417. It is now necessary to consider somewhat more closely how such a policy can be worked out; in other words, how far, without any serious handicap or danger to industry, it is possible to apply remedial measures in the national interest for the disadvantages suffered by the larger urban units, and how

³⁰⁰ “ Our Cities,” June, 1937, p. 84.

far it is possible also to mitigate or eliminate those disadvantages, especially on the social side, while preserving, so far as feasible, the advantages which these large urban units have been shown to possess.

It is only the broad lines of policy that are here in question: the application of policy in detail to individual cases will fall naturally under the jurisdiction of the Ministers concerned, or of the National Industrial Board whose establishment we propose at a later stage.

METHODS OF DECENTRALISATION OR DISPERSAL.

418. Assuming that in the case of congested conurbations decentralisation or dispersal is the right policy, and that further growth of industry in them is to be "discouraged"—to use the phrase employed by the Federation of British Industries—it may be questioned whether the "encouragement" of settlement in garden cities, satellite towns or trading estates in the vicinity of such conurbations will be adequate to meet the needs.

419. Moreover, Government may in the coming years, as is the case to-day, be forced to take active steps in an attempt to influence the location of new industrial establishments with a view to helping local or regional needs. On these lines, munition factories and foreigners desiring to start undertakings in this country, have within recent years been directed or encouraged with considerable success by Government Departments to choose sites in the neighbourhood of specially distressed areas,¹⁰¹ and financial inducements and assistance of various kinds under the Special Areas legislation, as well as the fund of two million pounds generously established by Lord Nuffield, have been freely and skilfully made use of by the Commissioners and the responsible authorities for the same purpose. Should the need arise in future, State action on similar or more widely developed lines may have to be pursued.

420. Further, if a regional system of a character described in Chapter XV were adopted many undertakings would doubtless find in the regional centres or capitals in the West and North, with their big markets, good labour supply, transport facilities, etc., and with the help that such regional centres could afford as important outposts of Government administration and finance, considerable counter-attractions to London and the Home Counties—counter-attractions doubtless enhanced by the strategical advantages those centres at present enjoy as compared with the London area. The enlargement of smaller towns, or even the creation of new urban units, should

¹⁰¹ See Ministry of Labour, p. 266, par. 99, and p. 269, par. 109. Also Chapter XII and Annual Report, Min. Labour, 1938, p. 25.

also receive attention. But in this, as in the other cases above mentioned, adequate measures should be taken by the proposed National Industrial Board, if entrusted with this work, with a view to securing:—(1) that all aspects of national resources are duly borne in mind—for instance, that so far as possible where land is absorbed for industry or urban extensions, this should not be at the expense of areas of the highest fertility or unique natural beauty; (2) that such industrial developments should only be encouraged where the conditions of successful industrial growth in the crucial matters of market, labour, transport and power are properly safeguarded; (3) that when seeking to remedy congestion in certain areas, the creation, directly or indirectly, of similar congestion elsewhere is avoided.

SPECIALISATION AND DIVERSIFICATION OF INDUSTRY.

421. Care must also be taken that in a highly developed and closely industrialised country like Great Britain the policy proposed does not conflict with well established principles and methods of industrial progress.

The well-known tendency of modern industry to specialisation and the advantages which accrue therefrom have been considered in earlier portions of the Report: and it is not necessary to emphasise afresh or at length here the advantages which specialisation affords. Moreover, not only does industry itself derive benefit from specialisation, but it may be said that the regions in which specialisation has been developed also reap certain advantages. The economies of large-scale production make inter-regional division of labour profitable; in other words, the advantages of specialisation tend to promote inter-regional trade; and this is of importance in connection with the question of Regionalism discussed in Chapter XV.

422. Specialisation, as already indicated, has led to the firm establishment of certain industries with their attendant "subsidiaries" and "cognates" in well-defined areas of Great Britain, e.g., textiles in South-east Lancashire, metal trades in the Midlands, engineering of various types on Clydeside. Such specialisation has proved highly profitable in the past to the industries and areas concerned and may well achieve similar success in the future, even in such a case as South-east Lancashire, though not necessarily along the old lines.

It is of significance that in connection with an important Lancashire electric light and power undertaking,²²² it was recently stated on behalf of the undertaking that the general industria

²²² Annual meeting of the Lancashire Electric Light and Power Co. "The Times," 24th February, 1939. In any case, considerable difference exist between industries as to the extent to which they lend themselves to electrical development.

development of the area had provided the company with consumers which made the prosperity of the company no more dependent on the textile industry than upon any of the other industries of the area: and while in the year under review the company had suffered a reduction in output of 16½ per cent. for textile purposes, the substantial increases from other consumers overtook this reduction and provided an over-all increase of 14 per cent.

423. There are in fact different types of specialisation. Take an area A, which, for example, possesses coal seams, a river with banks and tidal facilities suitable for launching ships, and also deposits of sand and materials needed in the production of glass and chemicals. These natural advantages will enable area A to secure a substantial amount of economic development, but the resulting localised industries will depend largely upon the presence of the specific resources mentioned, which are of a kind that may easily become exhausted or be rendered obsolete by changes in technology.

Secondly, assume that an area B has specialised, say, in textiles, but was suitable for other industries than textiles and in fact established such other industries. Then even if a drop in the world's demand for textiles arises, area B will be much less vulnerable to depression than area A. In other words, it may be possible in future to distinguish between those areas in which localised industries can survive so long as certain natural resources or technological processes retain their economic importance, and other areas which, while specialised in the sense that at present they depend on one or two localised industries, are nevertheless potential sites for a large range of industrial processes. It is clear that while specialisation has proved in the past to possess many advantages from the point of view of productivity, it may in such cases as A above be fraught with serious risks.

424. It must be borne in mind that, from the point of view of the labour employed and of liability to severe unemployment in periods of prolonged crisis or depression, specialisation may present grave difficulties. At such a time the presence of other industries in the area, especially if those are of an expanding character, may offer valuable opportunities for employment. The labour conditions in such other industries should preferably be of such a character that workers in the main industries, when temporarily unemployed, can easily adapt themselves to a change-over: and there should, if possible, be reasonable hope of continued expansion in the other industries when a crisis attacks the specialised units.²²²

²²² See R. C. Tress "Unemployment and Diversification," Manchester School publications, Vol. IX, No. 2, p. 143.

The advantages in certain circumstances of this feature of diversification of employment in a given area have been placed in evidence before the Commission by Government Departments such as the Ministry of Labour and the Board of Trade, and by local authorities such as the Association of County Councils in Scotland.²⁸⁴ The Ministry of Labour stated without hesitation that as a matter of policy diversification was to be preferred to concentration, at any rate so far as problems of unemployment were concerned.²⁸⁵ The Board of Trade agreed that the development of a particular atmosphere means a specialisation which rules out a balanced industry, and that from the point of view of distribution of population and the prevention of further depressed areas, the question of balanced industry is important.²⁸⁶

425. Specialisation, balance of industry, diversification—these terms indicate policies which in their broad national aspects extend far beyond the bounds of our inquiry; but in so far as the present Commission are concerned, and especially in relation to the problem of London, these policies will require continuous and careful attention in the coming years on the part of the proposed National Industrial Board.

The suggestions made in the preceding paragraphs are not propounded as panaceas of universal application; immense variety of conditions, problems and possibilities prevails throughout Great Britain; no two areas or regions are alike or present the same problems. It will be for the proposed Board to consider how far and in what circumstances the policies indicated can and should be applied.

The activities of the Commissioners for the Special Areas have been described briefly in Chapter XII of this Report. The work of the Commissioners has so far been to a large extent experimental, but substantial success has been achieved and the Board will no doubt derive material assistance from the experience gained by the Commissioners.

THE URGENCY OF THE PROBLEM OF LONDON AND THE HOME COUNTIES.

426. The disadvantages under all three heads—social, economic and strategical—and the problems which arise in consequence, present themselves with special insistence in the case of London and the Home Counties. It is not only that the mere size, spread and growth of this great conurbation tend to accentuate the various disadvantages present in greater or less degree

²⁸⁴ Ministry of Labour, p. 248, Q. 2558-9; Q. 2598; Q. 2647 et seq.; Board of Trade, p. 84, Q. 959 et seq.; Scottish County Councils, p. 216, Q. 2323.

²⁸⁵ Ministry of Labour, p. 248, Q. 2559.

²⁸⁶ Board of Trade, p. 84, Q. 959 and Q. 962.

in other conurbations, but also the trend of migration to London and the Home Counties is on so large a scale and of so serious a character that it can hardly fail to increase in the future the disadvantages already shown to exist. For instance, the persistent pull of the Metropolis and the growth in the density of its population and of that of some of the centres on the periphery beyond, are enlarging the Metropolitan target and rendering it more and more vulnerable to aerial attack. In the view of many who have given evidence before the Commission—a view with which we find ourselves in complete accord—the circumstances are such as to demand that steps be taken without delay with the object of checking its further growth.

CONCLUSION ON B.

427. The problems of location of industry are national in character—they touch and indeed tend to overlap those of agriculture, land, water, transport, roads, amenities and many of the major activities of the national life. The solution of the problems of location, therefore, must be sought along the lines of national inquiry and national guidance. So far as any inquiry or guidance by Government is available at present, it is departmental and not national in character. It is true that the Ministry of Health has important functions to discharge with regard to the housing of the industrial population, and also as to schemes which may involve the allocation of particular areas for industrial growth. But of the four major criteria of successful location frequently indicated above, markets fall under the Board of Trade, labour and transport under their respective Ministries, and power mainly under the Grid authorities or the Mines Department; while to the Ministry of Agriculture falls the protection of agricultural land and of its cultivation.

428. The Commission unanimously accepted the following nine conclusions:—

(1) In view of the nature and urgency of the problems before the Commission, national action is necessary.

(2) For this purpose, a Central Authority, national in scope and character, is required.

(3) The activities of this Authority should be distinct from and should extend beyond those within the powers of any existing Government Department.

(4) The objectives of national action should be:—

(a) Continued and further redevelopment of congested urban areas, where necessary.

(b) Decentralisation or dispersal, both of industries and industrial population, from such areas.

(e) Encouragement of a reasonable balance of industrial development, so far as possible, throughout the various divisions or regions of Great Britain, coupled with appropriate diversification of industry in each division or region throughout the country.

(5) The continued drift of the industrial population to London and the Home Counties constitutes a social, economic and strategical problem which demands immediate attention.

(6) The Central Authority, whether advisory or executive, should, in pursuance of objectives 4 (b) and (c), examine forthwith and formulate the policy or plan to be adopted in relation to decentralisation or dispersal from congested urban areas in connection with the following issues:—

(i) In relation to what congested urban areas is such decentralisation or dispersal desirable.

(ii) In cases where such decentralisation or dispersal is found desirable, how far should the following be encouraged or developed:—

(a) Garden cities or garden suburbs.

(b) Satellite towns.

(c) Trading estates.

(d) Further development of existing small towns or regional centres (provided adequate planning schemes are applicable thereto).

(e) Other appropriate methods.

In all cases adequate provision must be made:—

(a) For the requirements of industry (i.e. in respect of labour supply, markets, transport and power), and for the social and amenity needs of the communities.

(b) That the risk of unnecessary competition is avoided.

(c) That strategical considerations are given due weight.

(iii) The time factor is important in developments under (ii). Without excluding activities of private enterprise, such as authorised associations under the Town and Country Planning Act, 1932, municipalities (which have special facilities in respect of housing, roads and other social services) should be encouraged to undertake such development, and:—

(a) Where considered necessary they should be given opportunity for dealing with the problem, so far as found desirable, on a regional rather than on a municipal basis.

(b) In cases approved and to the extent approved by the Central Authority, financial assistance should be available for the municipalities from Government funds, especially in the early years.

(7) The Central Authority should have the right to inspect all existing and future Planning Schemes under current Town and Country Planning legislation, whether regional or local, and to consider, where necessary, in co-operation with the Government Departments concerned the modification or correlation of existing or future plans in the national interest.*

(8) The general problem of unemployment lies outside the Commission's Terms of Reference; and the problem of the Special and Depressed areas is only covered by those Terms in so far as those areas represent disadvantages arising from the concentration of industries or the industrial population in large towns or particular areas.

The Special Areas legislation and the work of the Commissioners appointed thereunder will afford increasingly valuable experience. The Central Authority, whether advisory or executive should in the light of this experience study the location of industry throughout the country with a view to:—

(i) Anticipating cases where depression may probably occur in the future (e.g. the armament industries when normal peace conditions are again definitely secured), and encouraging before a depression crisis arises the development in such cases, so far as possible, of other industries, or public undertakings.

(ii) Pursuing the plan laid down in 4 (c) above.

(9) The Powers of the Authority should also include:—

(a) Collection and co-ordination of information relating to location of industry, now in the possession of the various Government Departments.

(b) Research; and collection of information as to the various natural resources—land, agriculture, amenities, etc.—that may be affected by industrial location.

(c) Advice to Government, local authorities and industrialists as to problems of location.

(d) Publicity and Annual Reports.

* The Commission were also unanimous in recommending that the Government should appoint a body of experts to examine the questions of compensation, betterment and development generally.—See Chapter IX, paragraph 250.

C.—THE MACHINERY OF GOVERNMENTAL ACTION.

429. The evidence before us disclosed a considerable consensus of opinion in favour of the creation of a new body or authority with powers extending beyond the bounds of any one existing Government Department; but there were differences of opinion as to what the nature of the new body or authority should be, and still more, as to what powers it should possess. A Commission or Board found favour with some witnesses; others advocated the creation of a separate Department of Government presided over by a Cabinet Minister.

430. As to the powers to be assigned to the new authority, the evidence disclosed various lines of cleavage:—

(a) Many witnesses thought that these powers should be only of an advisory or supervisory character. Others were of opinion that the authority should have power to offer inducements of one kind or another with a view to influencing location; or that it should after a period in which no more than advisory powers were exercised, be given further and executive powers in the light of experience.

(b) Others, while supporting generally the principle of advisory powers, were so much impressed by the urgency of the problem of London and the Home Counties that they pressed for powers being given forthwith to the authority to deal with that area, with a view to preventing its further growth.

(c) And finally, others proposed a definite Ministry of Industry with full executive and administrative powers from the outset.

431. In the Commission itself, while there was unanimity as to the necessity for a new National Authority to deal with industrial location on national lines and in the national interest, differences of opinion arose, in particular with regard to the powers to be assigned to such Authority, and, in spite of prolonged and anxious deliberation, it was not found possible to reconcile the conflicting views.

432. Finally, the majority of the Commission who sign this Report agreed to recommend that a new National Authority should be established with Constitution and Functions as set out below:—

CONSTITUTION.

(1) A National Authority to be established by Statute for the purpose of making research into, advising upon, and regulating the location of industry.

(2) The Authority to take the form of a Board comprising a Chairman and three other Members chosen by reason of their eminence in public life, regard being had

to their experience in industry and business from the side of both employers and employed. The Board to be called the "National Industrial Board."

(3) The Chairman and Members of the Board to be appointed by the President of the Board of Trade after consultation with the Ministers of Health, Labour, and Transport, and the Secretary of State for Scotland.

(4) The Chairman and Members of the Board to hold and vacate office in accordance with the instruments of their appointment.

(5) The Chairmanship to be a whole-time salaried post.

(6) The Board to have power to appoint staff, as may be approved by the Treasury.

(7) The Board to have the right to require Government Departments to nominate representatives to attend its meetings as assessors.

(8) For the purpose of securing the advice and assistance of persons having local knowledge and experience in matters affecting the functions of the Board, the Board to have power to establish divisional or regional bodies to study problems of industrial location throughout the country.

FUNCTIONS.

(1) The advisory and non-executive functions of the Board to include:—

(a) Collection and co-ordination of information relating to location of industry in the possession of the various Government Departments.

(b) Research; and collection of information as to the various natural resources—land, agriculture, amenities, etc.—that may be affected by industrial location.

(c) Advice to Government, local authorities and industrialists as to problems of industrial location.

(d) Publicity and Annual Reports.

It is contemplated that the Statute will stipulate that the Board's Annual Reports shall be presented to Parliament.

(2) The Board to be charged with the duty of preparing and submitting to the President of the Board of Trade a Special Report (which would be presented to Parliament) as to what further powers it requires, in addition to those described in the following paragraphs, for the purpose of giving effect to the objectives of national action as indicated in paragraph 428 above, viz:—

(a) Continued and further redevelopment of congested urban areas, where necessary.*

(b) Decentralisation or dispersal, both of industries and industrial population, from such areas. In this connection consideration to be directed to the methods by which such decentralisation or dispersal should be encouraged and secured, in the form of garden cities or garden suburbs, satellite towns, trading estates, or by the development of existing small towns or regional centres.

(c) Encouragement of a reasonable balance of industrial development, so far as possible, throughout the various divisions or regions of Great Britain, coupled with appropriate diversification of industry in each division or region throughout the country.

(3) As the drift of the industrial population to London and the Home Counties (Beds., Bucks., Essex, Herts., Kent, Middx., and Surrey) constitutes a social, economic and strategical problem which demands immediate action, the Board to be vested from the outset with powers to regulate the establishment within that area of additional industrial undertakings. The Board to have power to refuse consent to the establishment of such additional undertakings except in cases where the intending undertaker establishes to the Board's satisfaction that the proposed undertaking could not be conducted on an economic basis elsewhere than in the area in question.

For the purposes of this regulatory power the expression "industrial undertaking" to mean an undertaking which will occupy and use an "industrial hereditament" within the meaning assigned to this expression in Section 3 of the Rating and Valuation (Apportionment) Act, 1928. Broadly speaking, under this interpretation an industrial undertaking would be defined as including a factory or workshop or a mine or mineral railway, but not as including a factory or workshop carried on in a hereditament primarily used for the purpose of—

- (a) A dwelling-house;
- (b) A retail shop;
- (c) Distributive wholesale business;
- (d) Storage;
- (e) A public supply undertaking.

In the exercise of this regulatory power, the Board should give full consideration to the question of the appropriate measures to be taken in the case of small undertakings and the extension of existing undertakings.

(4) The Board to have power to attach conditions in cases where consent is given, and provision to be made for the imposition of suitable penalties in the event of an industrial undertaking being established in the area without the consent of or contrary to the decision of the Board.

(5) The Board to have power to make Regulations as to the form in which application for consent should be made by intending undertakers, and as to the nature of the information to be supplied to the Board.

(6) The Board to have power to hold public inquiries into applications for consent.

(7) Provision to be made for the extension to other areas, by Orders in Council, of the negative powers applicable in the first instance to London and the Home Counties.

433. In conclusion we wish to express our keen appreciation of the assistance given to us by our Secretary, Mr. J. Leader, and our Assistant Secretary, Mr. N. C. Rowland, in organising the work of the Commission and in analysing and co-ordinating the large body of evidence which was placed before us. Our grateful thanks are due to them for their untiring zeal and for the valuable help we received from them in the preparation of our Report.

All which we humbly submit for Your Majesty's gracious consideration.

MONTAGUE BARLOW (*Chairman*).

ARTHUR ROBINSON.

FRANCIS JOSEPH.

*W. E. WHYTE.

F. D'ARCY COOPER.

M. N. HILL.

*J. HARRY JONES.

PARKER MORRIS.

SYDNEY A. SMITH.

*GEO. W. THOMSON.

J. LEADER (*Secretary*).

N. C. ROWLAND (*Assistant Secretary*).

December, 1939.

NOTE OF RESERVATIONS BY PROFESSOR J. H. JONES,
MR. GEORGE W. THOMSON AND SIR WILLIAM
E. WHYTE.

INTRODUCTION.

There are several matters upon which we find it necessary to make reservations to the Majority Report.

We agree with the general analysis in the Report, for which we share responsibility. Where we differ is in regard to the extent of the executive powers proposed for the new National Industrial Board, which is the result of placing a different emphasis on certain parts of the evidence. It follows that we do not share responsibility for the summary and argument upon which the recommendations of the Majority are based. We submit our argument below.

We have looked upon the several problems before the Commission as problems the solution of which would mean the economic and social rehabilitation of the country as a whole.

The general background of the inquiry was undoubtedly public concern regarding the lop-sided development of industrial activity in certain parts of the country, the social and economic evils of which became apparent in the disasters of the depressed areas. The heavy chronic unemployment from which they suffered was apparently almost incurable by the economic processes which had operated in the past. Their partial revival under the stimulus of the huge rearmament programme may conceivably result in even greater disaster in the future when that programme is finished.

Consequently we have looked upon the excessive concentration of population in London and other large conurbations as more a symptom of the main disease than as an evil in itself, although socially and strategically we believe, with the other Commissioners, that it definitely is an evil, and one which should be remedied at the earliest possible moment. We are therefore driven to the conclusion that positive action by way of regulating new industrial development throughout the country is an even more essential and a more effective way of treating the problem than simple restriction on the industrial growth of a particular area.

A beginning must be made in regarding the country as a social and economic unit as well as a political unit. We believe that if it be possible (and we consider that it is possible), by positive action through inducement, advice and direction, to achieve a better balanced industrial development in the areas

where excessive specialisation has brought disaster, unemployment will be reduced in these areas without increasing it elsewhere, whilst taking away the urge to locate new industries or to extend old ones in the admittedly congested area around London.

The economic waste of enforced idleness in men, machinery and sites, with the social consequences involved, needs no stressing. We therefore consider it should be the duty of the proposed new Board to give continuous study to the problem of achieving a well balanced industrial society, so that the creation or perpetuation of areas of great distress in the future may be obviated. Problems associated with the incidence of economic and industrial decline and unemployment should be under constant survey, for the purpose of devising action to counteract undesirable trends. The new Board should be charged with the duty of conducting a continuous survey of social conditions, economic possibilities, and available labour and acting upon the results of such investigation.

ARGUMENT.

The Report recommends that a national authority be set up, such authority to be called the National Industrial Board. Clause 8 of the section describing the constitution of the National Authority reads as follows: "For the purposes of securing the advice and assistance of persons having local knowledge and experience in matters affecting the functions of the Board, the Board to have power to establish divisional or regional bodies to study problems of industrial location throughout the country". Clause 2 of the section describing the functions of the Board starts as follows: "The Board to be charged with the duty of preparing and submitting to the President of the Board of Trade a Special Report (which would be presented to Parliament) as to what further powers it requires, in addition to those described in the following paragraphs, for the purpose of giving effect to the objectives of national action as recommended by the Commission"

It will be observed that, irrespective of the intention of the latter clause, it may be construed that the Board should be left to determine whether it requires further powers and, if so, what those powers should be. For reasons given below we believe that a scheme in the restricted terms of the two specified clauses will fail to achieve those "objectives of national action" that have been unanimously approved by the Commission; and we submit alternative recommendations which we believe to be essential to the success of the scheme as a whole.

The problem placed before the Commission by the Terms of Reference was twofold; it was partly the problem of congestion and partly the problem created by recent trends in the geographical distribution of the industrial population. The first is not a new problem: it was recognised as a serious social problem in the nineteenth century, when local transport was far less adequate than it has since become. The Report describes the efforts made in recent years to solve it and indicates some of the causes of the failure of those efforts to prevent further concentration.

The degree of congestion to be found in an urban area is determined not only by its population but also by its industrial and social texture. The Report stresses the evils of over-concentration of industry and population, and contains a recommendation to the effect that, for the London and Home Counties area, the proposed National Industrial Board should be granted "negative" powers, that is to say, powers to restrict the erection of industrial establishments within that area.

We not merely admit but would stress the urgency, on strategic grounds, of the need for such action in respect of London and the surrounding area. And we recognise and emphasise the value of the proposed action as an instrument for regulating that future growth or redistribution which would be permitted or fostered within that area under the proposed scheme. But we believe that, for social reasons, if not also for strategic reasons, the need for similar control is urgent in other parts of the country. The evidence placed before the Commission has led us to the conclusion that the Board should unequivocally be given general executive power, that is to say, power to regulate industrial growth throughout the country; and that it should not be left to the Board itself to determine the answer to this general question of policy. In no other way is it possible, in our opinion, to achieve those objectives which the Commission have unanimously approved and emphasised. We regard our recommendations as a corollary of approval of such objectives.

We recognise that before the Board could effectively exercise such authority as we recommend, it would require to frame precise powers and regulations and build up criteria by which its decisions and actions in specific cases would be guided. If the Commission had been able to indicate the precise powers that were necessary or desirable we should have included them in our present recommendation; but as we are not in a position to do so we recommend that the Board be instructed to prepare a report, *with the least possible delay*, indicating the precise powers required to bring into operation the policy that we outline in this note. We would again venture to stress the point that in our view the Board should not be given the option of acting merely as an Advisory Body for that part

of Great Britain lying outside of London and the Home Counties. It should be an executive body for the whole country, with similar powers for dealing with all parts. Its decision in individual cases would be determined by relevant considerations, which might not—and would not—be the same in, say, London and Chester; but its general powers would be national in conception and extent. We regard the scheme for the London and Home Counties area, recommended in the Report, as no more than an immediate application, in one area, of a wider or national scheme to be brought into operation at the earliest possible moment. Experience in improvising a scheme for that area should serve as a guide in preparing a scheme to be applied to the whole country.

In reaching the recommendations that we here submit as alternatives to the two specified clauses we were partly guided by the considerations that we have already indicated. But there are other considerations to which we attach even greater importance. We do not believe that the right way to prevent or check the further growth of the London and Home Counties area is merely by the exercise of "negative" powers. We believe that the more important function of the Government, with the aid of the instrument recommended below, is to create more favourable conditions of life and work in other parts of the country and thereby weaken the inducement to seek work in or near London. Part I of the Report on "Causes", combined with the statistical analysis contained in Appendix II, shows that it is impossible to regard the recent growth of London and the neighbourhood as an isolated phenomenon. It is inseparable from the absolute or relative decline of industries and employment in other parts of the country and should be dealt with as one part of a national problem.

In the first place the foundation of the economy of other areas, such as the West of Scotland, Lancashire, and Glamorgan, consisted before the last war, and still consists, of industries that suffered, after 1919, not only from industrial fluctuations commonly known as cyclical fluctuations, but also from a persistent decline or downward trend in output. In the second place, in most of such industries, particularly in coal mining, large-scale mechanisation, combined with concentration of output in the most "economic" undertakings—both being accelerated by the depression—has reduced employment to an extent far greater than the reduction in output. In the third place, the depression in the main industries spread to many subsidiary industries, which depended upon the former for their chief markets.¹ In the fourth place, the prevalence of unemployment on a large scale in the Depressed Areas, by reducing the purchasing power of the unemployed workers from the amount previously represented by wages to that represented

¹ Some subsidiary industries (such as the industry supplying mechanical coal cutters and underground conveyors) benefit by the process of mechanisation, which has been itself accelerated by the depression.

by unemployment insurance payments or unemployment assistance payments, caused the depression to spread to neighbouring industries engaged in the production of comforts and luxuries for the people living in the area. Depression breeds depression.

This combination of circumstances, due to forces beyond the control of the industries concerned, created a "psychology" adverse to recovery by the establishment of new industries upon a scale commensurate with the decline in employment. Recovery on a still larger scale would be necessary to maintain a growing population. Local firms engaged in the main industries (such as mining and shipbuilding) could not easily transfer their resources to other industries.^a A Depressed Area is not one that readily attracts firms not already connected with the area. Thus it may be stated that the curse of the depressed areas was their depression—a depression for which they were in no way responsible. They suffered the penalty of having pursued a high degree of specialisation when the industries upon which they specialised bore the incidence of revolutionary changes in the world economic system.

The circumstances of the London and Home Counties area differed profoundly from those of the North and West. The foundation of the economy of that area consisted of a group of industries and services that have expanded, relatively to population, since the last war. The statistical analysis in Appendix II shows that, in the main, and ignoring the special influence of a capital city, the expansion of the area was little more than the normal expansion of a prosperous area able to feed its prosperity by drawing human resources from other places.

We venture to stress this important fact which, though not fully recognised, seems to us to lie at the root of the difficulty experienced by other parts of the country. To the extent that the expanding industries are located in the Depressed Areas they have revealed on the average a capacity to expand at almost the same rate as in the London and Home Counties area. But in the former they are on a smaller scale; they employ a far smaller proportion of the insured persons in those areas than in the London and Home Counties area, while a much larger proportion are attached to the declining industries. It follows that recovery in the Depressed Areas necessitated a far higher rate of expansion of the expanding industries than in the London and Home Counties area. Such a rate of expansion was practically impossible without a large scale constructive effort by the Government. On the other hand, if they had not been

^a In the cotton industry a partial alternative was easily found in the form of rayon manufacture, but the latter was only sufficient to compensate for a fraction of the total loss of output and employment.

enalised by previous over-specialisation upon the declining industries their experience as centres of the expanding industries suggests that they would have been able to maintain their position in relation to London and the Home Counties. Their difficulty is the difficulty of transition from an old economy to a new economy. There is no reason to suppose that, with a new grouping of industries, they would not have been able to support a growing population at approximately the national standard of living.

Migration of the industrial population is not a new experience. During the nineteenth century first one area and then another enjoyed a period of economic expansion more rapid than that of the country as a whole, and attracted workers from other areas. Again, areas have suffered from depression caused by the decline of industries. But when, during the nineteenth century, a rapid expansion in industry occurred in any area, that area attracted the nomadic element in the population of other areas that were also expanding, though not with the same urgency. There has always existed a proportion of the inhabitants ready to seek economic advancement wherever it is offered. But those who preferred to remain at home were able to find employment there. In an expanding economy expansion along more than one line was possible, and migration represented a form of selection.

But the experience of this country since the war does not represent a repetition of nineteenth century experience. The influx into the London and Home Counties area represents, in part, the outward pressure from the Depressed Areas of people who had no strong desire to leave their homes but were forced, or assisted, to do so in the search for work. If the declining industries of those areas had continued to enjoy their pre-war prosperity and rate of growth the attraction of the London and Home Counties area would have been reduced and its growth retarded by lack of workers. Not only would the declining industries have increased their output but the remaining industries would have provided increasing employment, while those industries that have actually expanded in London would have expanded more rapidly than they have done in other areas and less rapidly in London. The influence of the market, always strong in deciding the location of the newer industries, would have produced different results.

For this reason we believe it to be impossible to separate the problem of location from the national problem of persistent unemployment and to regard them as falling into mutually exclusive categories. Nor do we believe that so-called re-location merely means transferring a given amount of employment from one area to another, thus benefiting one at the expense of the other. It is our considered view, in the light of evidence,

that the solution of the problem of unemployment in the Depressed Areas is also the solution of the problem presented by the rapid growth and further excessive industrialisation of London and the Home Counties.

We do not believe that a national authority, in the form of a Board acting alone for the whole country, would succeed in achieving the objectives unanimously approved by the Commission, among the objectives being the restoration of a national balance in industry and greater diversity in areas now suffering from past over-specialisation. The kind of research necessary to understand the problems in an area (such as Mid-Scotland) remote from London cannot be effectively pursued by a National Board without further assistance. Such research must be continuous, and extend far beyond the collection and analysis of statistics of population, industry and employment; and its character and amount necessitate a definite extension of the machinery recommended in the Report. We therefore recommend that the country be divided into Divisions and that in each Division a Divisional Board be set up, not at the discretion of the proposed National Board, but as an integral and highly important part of the new Authority—a body which would act as a "feeder" to the National Board. While the National Board would be the ultimate authority to which each Divisional Board would be responsible, the latter should have the power of initiative and recommendation and be accepted as the agent through which the National Board would operate in any area, including the London and Home Counties area.

In some parts of the country the depression was so severe and persistent that they were scheduled as Special Areas and accorded special treatment through the agency of Commissioners. We venture to pay our tribute to the work of such Commissioners. The evidence submitted to this Commission showed not only that they had made the fullest use of their powers and opportunities, but also that their powers had been too rigidly defined and were too restricted in scope. The solution of the problem of the Special Areas does not necessarily lie within the defined geographic limits of such areas. Moreover, the Commissioners for the Special Areas were not empowered to do more than endeavour to remedy—or mitigate—a serious evil that had already appeared. Anticipation and prevention lay outside their province.

We recommend that the essential powers and responsibilities of the Commissioners for the Special Areas be transferred to the new Board recommended in the Majority Report, and that they be extended to cover the country. The adoption of the recommendation in that Report would appear to necessitate a change of some kind in the machinery for the Special Areas.

if the co-existence of two statutory bodies, each dealing with the problem of location, is to be avoided. But our recommendation is based more particularly upon our belief that the new Board should be given power to provide inducements of various kinds, in appropriate circumstances. The new powers should be conferred upon the proposed Board, which would be the final sanctioning authority (subject to Treasury control) under the scheme, but they would be applied in each area through the agency of the Divisional Board. Thus, for example, if the National Board so decided, a Divisional Board might be empowered or required to take steps to create within its own area a public utility undertaking, for the purpose of building and operating a trading estate. It is not suggested that the Divisional Board itself should become, under any circumstances a body controlling and operating any scheme of development initiated by itself or by the National Board. But, subject to the sanction of the National Board, it should be able (or in appropriate circumstances the National Board itself should be able) to indicate the conditions or inducements under which a development scheme would be operated.

We believe that as far as possible action should be preventive rather than curative. Each Divisional Board should have a full-time Secretary or Commissioner with the status of an Assistant-Secretary in a Government Department. The Board should study closely the economic situation and trend within its own area, endeavour to anticipate changes and, where necessary, recommend preventive action.

In particular we would stress the urgent need for such machinery to study and prepare for the changes that will inevitably occur when the rate of armament production (in the widest sense) is reduced and afterwards stabilised. In some areas the post-war depression was intensified by the policy of disarmament. The new policy of re-armament has resulted in a large increase in activity in such areas, partly on account of the deliberate pursuit of a policy of "dispersal", but mainly on account of the fact that the armament industries (in the widest sense) were already largely located in those areas. Meanwhile the trend towards the London area has been checked. If no preparation is made for the future the problems of the recent past will reappear, even more serious in extent and more difficult to solve. We therefore strongly recommend not only that Divisional Boards be established as an integral and highly important part of the proposed new Statutory authority but also that it should be one of the chief immediate functions of such Boards (under the general policy, of course, of the National Board) to study, each in its own area, the changes that are taking place in the industrial structure and the probable

requirements in the future following re-armament; to recommend the steps that should be taken to fulfil such requirements, and finally, to give effect to those recommendations that may be approved by the National Board.

We venture to point out, in conclusion, that the scheme here recommended would not lead to competition of an undesirable type between the proposed Divisions or Divisional Boards. We have already referred to the fact that the problem of location cannot be isolated from the national problem of unemployment. A rapid relative growth in one area, following the discovery of new economic resources, and facilitated by the immigration from other areas of those who desire to migrate in search of wider opportunities, would present no problem for the remaining areas. But if, in spite of migration from one of the latter, such area is faced with the existence of a declining industry, or the threat of an economic change which will mean heavy unemployment, a problem clearly exists which calls for careful study and solution. In any case, as already mentioned, the general policy for the country as a whole would be regulated by the National Board. We believe that the recommendations which are submitted below not only are essential to the solution of the problem presented to the Commission but would enable the nation to deal more effectively than it has already done with the problem of long-term industrial change and to take fuller advantage of future economic opportunity.

RECOMMENDATIONS.

Our recommendations, therefore, in qualification of the Majority Report, are as follows:—

(a) That it should be an integral part of the policy proposed by the Report, that Divisional or Regional bodies should be established to undertake the functions and duties which have been outlined by us; in other words, that the setting up of such Bodies should not be optional or permissive as is proposed in the Report, but should be a definite requirement of the scheme of regulation and control.

(b) That it should be unequivocally clear that the National Board *are* to prepare and submit a Report showing what further powers are required for the purpose of giving effect to the objectives of national action as recommended by the Commission: in other words, that, the objectives having been unanimously agreed to by all the members of the Commission, it shall be the duty of the Board to report whatever powers or measures are required to enable these to be carried into effect.

(c) In respect of the twofold character of the proposals, namely, "negative control" of the location of industry, and the positive policy of taking such action as may be necessary to ensure that there shall be for the future a better balance and a greater diversification of industry throughout the country, it is essential that these should operate simultaneously, as parts of a national scheme, and the Board should, therefore, be required to present their report on the further powers required, *at the earliest possible moment.*

(d) That it should be made quite clear that the powers of "negative control" will, equally with the other powers proposed to be conferred upon the Board, apply to the whole country. In other words, although "negative control" should be applied to London in the first place because of the urgency of the problem there, the intention of the scheme will be to apply similar control to the other parts of the country by Orders in Council.

(e) That the powers of the Commissioners for the Special Areas, so far as they bear upon the work and functions of the proposed Board, should be transferred to the latter, and that the Board should be in a position to offer such inducements as they may consider necessary in order to make effective the policy of securing a better balance and a greater diversification of industry throughout the country.

The National Board should consist of a full-time Chairman, together with not less than five other persons of knowledge and capacity to be appointed on a broadly representative basis, including employers and employed.

The Divisional or Regional Boards should also be composite bodies, including representatives of industry (employers and employed); of local authorities; of the Development Councils; of the Chambers of Commerce and other appropriate institutions.

W. E. WHYTE.

J. HARRY JONES.

GEO. W. THOMSON.

REPORT BY PROFESSOR PATRICK ABERCROMBIE,
MR. HERBERT H. ELVIN AND MRS. HICHENS.

1. We the undersigned Commissioners appointed by Your Majesty's Royal Warrants dated 8th July 1937 and 23rd June, 1938, regret that we are unable to accept the Report of the Majority in its entirety.

2. We agree with the general analysis in Part I, dealing with "Causes."

3. We are not concerned about any minor differences which exist, either in regard to expression or emphasis, but feel that Part II, which deals with Disadvantages and some of the analysis in the Introduction, Part III and Part IV do not bring out vigorously enough the urgency of the problem; consequently the case for far-reaching reforms lacks the force which it ought to have.

4. Part I clearly expresses in our mind the reasons for the serious position which has arisen, but the Remedies proposed by the Majority are far from being adequate for dealing with the problems submitted for consideration by the Commission in their Terms of Reference.

5. Similarly we endorse the conclusions which are set out in para. 428 of the Majority Report, but here again we think that these propositions have not been carried to their logical conclusions, and we disagree fundamentally with our colleagues as to the immediate steps to be taken to deal with the existing confusion. A single Authority with wide powers is necessary to secure a reasonable balance of industrial development throughout the country, the absence of which has been responsible for the tragedy of the Depressed Areas, the overgrowth of towns and the destruction of the countryside during the last two decades.

6. To prevent the repetition or the aggravation of these evils a continuous review and a general control over the ever changing industrial and social environment is required, and the Authority responsible for it must be fully equipped for its task. All the members of the Commission are agreed upon the urgent need for immediate action; but action implies the existence of a body with executive powers and, failing such a body, no means exist for translating words into deeds.

We therefore recommend that far reaching powers shall be granted to a new Government Department, or one evolved from an existing Department.

7. We realise that this may involve political and administrative difficulties, but we would cite the precedents of the Ministry of Munitions Act, 1916, the Ministry of Supply Act, 1939, and

the transfer of duties and powers from other Departments involved in the setting up and growth of the Ministry of Labour and the Ministry of Health.

8. If such political and administrative difficulties exist, and are insuperable, we should be content with the establishment of a Board (provided that it were entrusted with the powers we outline) associated with an existing Ministry, because we are confident that after the initial stages were accomplished, the nature of the work involved would ultimately require the sole attention of a Minister and an entirely separate Department.

9. In making the foregoing recommendations we have been influenced by certain considerations, a brief outline of which follows.

We have particularly in view the relation of the location of industry to the problems of unemployment not only in the Special Areas, but in other areas of high unemployment. The bad location of industry is partly responsible for unemployment, and certainly if there had been no Special Areas the Royal Commission would not have been set up.

10. There is also the question of preparing for the period when the rearmament programme comes to an end. We consider that it is essential that any action which might be taken should have a bearing on this question.

11. Moreover there are other problems of the future. The Majority Report seems to imply that there is ample time for preparation and research. We consider, however, that the unprecedented amount of new factory location which is taking place owing to the rearmament programme, and the altered character of war risks, which is causing a substantial amount of re-location, makes the problem an immediate one. It would be disastrous, therefore, if a policy of drift were to lead not merely to the perpetuation but also to the exaggeration of existing evils.

12. The fact that since 1909 there has been an increasing body of legislation on the subject, does not mislead us into supposing that the territorial planning movement is in effective operation from the point of view either of the control exercised or the area covered. The Ministry of Health's latest figures show that only a very small fraction of Great Britain is under town planning control apart from the mere passing of resolutions to make a town planning scheme, which is of course of ineffective value. Many of the most important areas, e.g., centres of towns, are incapable of being dealt with under existing powers. It is clear that for reasons of security against air attack the attractive force of the greatest cities is likely to be diminished in the future and industrialists will probably seek to place their factories in more inaccessible positions, quite possibly in the heart of the country, or at any rate some distance

away from large towns. Many large commercial enterprises such as banks, insurance companies and public bodies are contemplating the provision of extensive office accommodation either for present or future use in country areas, or in the vicinity of small towns. Some of them have already acquired large country houses for the purpose of evacuation. There is also to be an extensive building of camps for children and other classes of the community who will be evacuated in time of war. All this suggests that the countryside will be subjected to an onslaught of unrestricted despoliation and haphazard development of an injurious, inconvenient and unsightly character if the matter is left to the ineffective control we have so far tolerated.

13. The evidence given before the Commission has been mainly based on the history of the last hundred years, during which period industrialists were free to start their factories wherever they thought fit. There was no obligation on them to preserve amenities, or to provide housing, transport, or educational facilities, though it is fair to say that there were employers who did much in all these respects, well or badly, according to their lights. There were no restrictions on the siting and few on the nature of the factories and houses built. The choice of the industrialist was primarily a self-interested one; the wider aspect of national well-being was largely overlooked.

14. To-day this is no longer the case. Public control in some form enters more and more into the world of industry. Factory Acts date from the time of Lord Shaftesbury, and the responsibility of the Government for the welfare of the industrial population has advanced progressively since those days. Control of housing and certain aspects of planning came later. It is above all becoming apparent that for many purposes the country has to be treated as a single economic unit. Moreover, the State has latterly, by subsidy, by inducement and by negotiation with other countries done much to help particular industries.

15. All this must imply reciprocal responsibilities. A strong and well-balanced industry, a healthy and well-housed population, good educational and recreational facilities, the absence of slums, of poverty and of unemployment are the necessary environment for individual freedom in a well-ordered community. The nation has not only to maintain freedom for her citizens, but to make that freedom something worth enjoying.

16. The central core of the problem is undoubtedly the control of industrial location and its relationship to a scheme of national planning. Without it, little can be done with any

assurance of effectiveness; with it, much is possible. The problems of dispersal and decentralisation of the overgrown populations of to-day will obviously not be solved in any rapid or arbitrary way despite their social and strategic urgency. The solution must largely be an economic one, but cannot possibly be achieved along lines which are unrestricted and uncontrolled. The progress must necessarily be gradual and it must be based on the broad principle that industry, like any other social activity, is a form of public service which can only be justified in so far as it contributes to the public welfare. The community therefore is in a very real sense a partner in all forms of industrial activity and is entitled both by encouragement and restriction to determine the conditions under which it should operate.

THE CASE FOR A NEW MINISTRY.

17. Broadly speaking, the distribution of population is related to the distribution of industry, and since, as indicated in the Majority Report, a great measure of flexibility is attainable in the distribution of industry, the main problem to be solved is how to control it in the future better than in the past without damage to the trade of the country.

18. Broadly speaking again, industry now determines its own distribution, subject to such conditions as to its siting in the local areas as may be imposed on it by town planning schemes which have been approved or have reached the stage of an interim resolution.

19. The salient defect in the existing situation is that little or quite insufficient attention has been given to the question what is the best distribution of industry in the country as a whole. The town planning schemes are local by definition and there is no machinery by which they are prevented from making provision in their lay-out for the accommodation of a population or industry out of relation to the future probabilities in the area.

20. What therefore is requisite is:—

(i) Unified research into the problem of distribution on a national scale;

(ii) A unified plan of distribution based on the results of such research;

(iii) Effective control meanwhile of such changes in distribution as must continue to take place in the interest of trade.

21. The above task is both national and local and is of sufficient importance to call for the creation of a new separate Ministry, on the same principle as that on which have been created in the past separate Ministries for the partly national and partly local services of education and transport.

22. This Ministry will need to be fitted into the scheme of central and local government, if it is to function properly. It must obviously take over the town planning functions now vested in the Ministry of Health. In our opinion it should also take over, for example:—

- (i) Some part of the planning functions of the Ministry of Transport, and
- (ii) possibly some parts of the housing functions of the Ministry of Health.

23. The functions of the new Ministry would be:—

(a) Enquiry and research, devised to lead up to a systematised plan for distribution of industry on a national scale, bringing with it the attainment of a better balance in the distribution of population than now exists.

(b) Pending the evolution of such a national plan, control of changes in the present distribution of industry as, and if, they occur in the ordinary course of business development.

24. For the purpose of (a), the Ministry will require the assistance of a strong and suitably constituted central Advisory Commission. For the purpose of both (a) and (b), it will require the services of Boards constituted on a suitable regional basis.

25. The essential characteristic of the present town planning legislation is that in itself it does nothing to promote a better distribution of industry over the country. It only produces the result that if an industry wishes to establish itself in a given district, then it must do so in a defined zone or parts of that district, according to what is decided or laid down in the town planning resolution or scheme. Non-industrial zones are themselves subject to variation, in favour of the admission of a business without reference to the Ministry of Health. If the authority will not so approve the *industry* can appeal to the Ministry of Health, but the Minister has no power to overrule the *consent* of a local authority, however small that authority may be.

26. It is felt that some more direct control of the movement of industry is required than the above. When a national scheme is evolved, movement of industry would naturally have to conform to it. Meanwhile it is thought that the Ministry above suggested must be vested with a direct power to control the establishment of all new industries.

27. The special attention of the new Ministry would be directed to the compensation-betterment problem (as referred to in Chapter IX of the Majority Report).

SPECIAL AREAS.

28. We recommend that the new Ministry should have transferred to it the powers and functions of the Commissioners for the Special Areas, which powers and functions would be of general application.

29. The new Ministry should have power to promote, assist or encourage the building of satellite towns and the establishment of trading estates by local authorities, public utility companies or other bodies: and to make grants and raise loans for the purpose of acquiring land and building-development values.

30. We attach considerable importance to this. Where it may not be possible to start new industries, the key to the problem is that long distance mobility of labour is difficult to stimulate, but short distance mobility is easy to stimulate. The Commissioners at present are powerless to start industries outside their Special Areas, but what we are suggesting would make this possible. In other areas industry would be located in existing key points, as near as possible to the distressed areas, or other areas of high unemployment, where there is now some prosperity. This will cause the minimum dislocation and attract labour much more easily.

31. In this way the work of the new Ministry would relate the problem of unemployment to the problem of location of industry, i.e., it would consider the incidence of unemployment in special localities and particular industries, along with the economic and social problems involved.

32. There are economic and psychological causes for the phenomena which have afflicted the Depressed Areas for many years, and at least some of them could be removed by deliberate national action, and by national action only. Their experiences point to the imperative necessity for continuous study of the changes taking place in industry itself, as the result of new inventions, changes of taste, adaptation to the needs of new markets, etc. The broad fact is that these areas have suffered severely in the past through excessive specialisation, aggravated, no doubt, by the war exigencies of 1914-18. Consequently, the industrial slump of the following years fell upon them with peculiar severity. The prosperity of these excessively specialised areas collapsed with the curtailment in armament production after 1919, coupled with the considerable restriction in exports. The result has been that with each successive period of maximum depression there has been a progressively increased percentage of unemployment.

33. The transfer of labour is no solution. The siting of new factories to-day has little to do with proximity to raw materials like coal, iron or other minerals (except in certain well-known and exceptional circumstances). The nation cannot afford to leave great industrialised areas of the country derelict, and allow development to repeat the process elsewhere. Moreover, there is no guarantee that the new and expanding industries of to-day will not be the depressed industries of to-morrow if allowed to develop unrestricted.

34. For these reasons, as stated above, we consider that the new Ministry should absorb the powers of the Special Commissioners, and extend the area of their operation.

SOCIAL.

Health and Urbanisation.

35. The assumption seems to have been made in the Majority Report that the data relating to health is of almost decisive significance. This is not borne out by a closer examination of the task and of the character of the available data. Most of the statistical information which is obtainable from public health authorities is concerned either with general mortality, infantile mortality, the incidence of particular diseases or the mortality arising from them. While the great importance of such factors is obvious they are nevertheless essentially of a negative character. There is a considerable difference between mere longevity and a healthy existence, and the absence of disease does not necessarily betoken the presence of positive health, a good physique or physical and mental vigour. The term "health" must be conceived as a far more positive and creative condition than any state of life which can be revealed by the statistics of public health officers or the tables of the Registrars-General. It is the pattern of social living which is required to produce the maximum amount of material, moral and mental welfare, rather than the effect of urbanisation on the duration of life.

36. The Commission received a large amount of evidence on the question of the relative advantages, from the point of view of health, of town and country areas. The general tenor of this evidence may, we think, be succinctly stated in the following four propositions:—

(1) There is a great natural advantage, from the point of view of health, of country surroundings as compared with an urban environment, particularly when the latter takes the form of a great industrial concentration.

(2) This lead of the countryside over the towns arising from its natural advantages has been greatly diminished

during the past 30 or 40 years through the provision of elaborate sanitary controls and costly health services in the towns.

(3) The public health movement is only just beginning to make serious progress in the rural areas. There are no insuperable obstacles in the way of great strides forward being made, provided that administrative reorganisation takes place and that the services are adequately supported by the State.

(4) Despite the superior achievements of the towns in the field of public health, the rural areas still retain on the whole a perceptible advantage over the towns.

37. It is also clear that certain factors other than those directly related to either the natural environment on the one hand, or public health services on the other, play a considerable part in determining the relative health of the dwellers in town and country. Low wages and bad housing are two of the most conspicuous factors which have had a detrimental effect on the countryman's health. There is a concensus of opinion among the county medical officers of health who submitted their views through the Joint Medical Committee that rural life can be made far more healthy than it is to-day. Furthermore, it must not be assumed that progress in health will necessarily and inevitably continue to be made in our towns in the future. The Joint Medical Committee have warned the Commission that the construction of blocks of flats with small flueless rooms devoid of proper ventilation is likely to lead to a decline in the vigour and efficiency of those who live in them, and may produce an increase in tuberculosis. Further, the opinion is widely held that the rapidly proceeding transfer of a large part of the urban population from houses to small flats in which they are "cribbed, cabined and confined" with scarcely any room to spare, means that any increase in the present size of the family would present great difficulties in regard to accommodation. When we recall that the net reproduction rate in this country is at present only about 0.75 the importance of this question is obvious. There is also the indisputable fact that in the greatest cities the land required for playing fields has been taken for building purposes, with the result that it is no longer possible to provide the population with adequate facilities for recreation. As recently as 1927 there were 32,000 acres of land within 11 miles of Charing Cross suitable for open spaces or playing fields. By 1933 the amount had dwindled to 8,000 acres and there is no reason to suppose that the process has been arrested since that date.

38. We mention these points because it is important to avoid a facile optimism concerning the prospects of the nation's health if it be subjected to the risks and hazards of any further degree

of unlimited industrial and urban development. To suggest that bad urban conditions are a thing of the past, a mere legacy from the Victorian age which we are rapidly overcoming and need no longer fear, is utterly misleading. It is indeed possible that the activities of the speculative builder and the costly flat and fringe re-housing policy of the Government may, unless controlled and modified, inaugurate a new era of social mal-adjustment.

Destruction of the Countryside.

39. Finally, in Victorian times, the introduction of factors inimical to well-being was largely confined to the towns. We, however, with our improved means of communication, have despoiled the countryside and largely diminished the areas in which health-giving elements of the countryside still continue to flourish, and this just at the moment when they have become most consciously valued.

40. While it is clear that there are certain advantages in urban life, it has been pointed out that in the past urbanisation has always meant the growth of towns; but this is not necessarily the case to-day. A substantial stretch of countryside may have its rural characteristics largely destroyed without the emergence of anything which could be described as a town with town advantages. This constitutes indeed the most insidious menace to the countryside which exists to-day.

CONTROL OF LOCATION OF INDUSTRY.

41. As we have stated, the case for the control of industry by a national authority and in the national interest seems to us to be overwhelming on economic, social and strategic grounds.

42. It has been suggested that industrialists will resent any form of control, but, with the safeguards we suggest, we believe they will realise that, so far from prejudicing their efficiency a measure of control will help them in the selection of the most suitable areas for their activities.

43. In the first place, under our recommendations a large part of the country would be included in free zones where permits for the establishment of new or the extension of existing undertakings would be given without question or delay; these zones would be known to entrepreneurs.

44. In the second place, the knowledge and experience which the new Ministry would soon acquire would be a valuable help to industrialists in making so important a decision as the selection of a new site.

45. Thirdly, it will be seen that careful safeguards are suggested to ensure that, where valid reasons exist, industries will not be prevented from starting or extending even in the prohibited areas.

46. Finally, the expense to the community generally incurred in providing housing, schools, roads, and other services for the benefit of de-rated industry and its workpeople, is a very strong argument in favour of the public right to a voice in the location of industry.

47. The new Ministry charged with control over the location of industry and territorial planning on the national scale would have power, *inter alia*, of scheduling:—

(a) Areas in which industrial development is permitted, subject to local planning restrictions, i.e., free zones (see paragraph 43);

(b) Areas in which further industrial development is prohibited, subject to certain exceptions, e.g., service industries, perishable goods, etc.

48. Both the permitted and prohibited areas might contain reservations as to certain types of industry. The areas could be varied from time to time as occasion demanded. The schedules would probably have to be laid before Parliament.

49. Every manufacturer desiring to build or extend a factory or to occupy an existing one not already occupied by him, or to convert other premises for manufacturing or processing purposes, would have to obtain a permit from the Ministry.

50. The entrepreneur would be entitled *as of right* to a permit in respect of a permitted area, unless his proposed factory fell within any of the reservations attached to such a scheduled area.¹ It has been estimated that 80 per cent. of all new factory location would be covered by the establishment of these areas.

51. In the case of a prohibited area a permit would, *prima facie*, not be granted. But there should be a proviso to the effect that the Ministry might in its discretion grant a permit for such an area on being satisfied:—

(a) That it would not be economically profitable to establish the factory elsewhere.

N.B.—It may be desirable to omit this obligation to satisfy the Ministry in the case of a manufacturer proposing to occupy an existing factory, since this may be regarded as a replacement of industrial activity which will normally be required to continue the existing volume of production and employment within the area. If, however, a policy of decentralising population from the overgrown prohibited areas be decided upon—which one hopes would be the case—this would not apply and condition (a) would have to be satisfied in all instances.

¹ Under the Road and Rail Traffic Act, 1933, S.6, a C licence must be granted except in two specified circumstances.

(b) That the workpeople required and likely to be required in the future can wholly or mainly be obtained from among persons living or normally seeking their livelihood within the area.

(c) That reasonable housing and municipal services are available in the area for the workpeople or can be provided without undue expense to the ratepayers.

(d) That the establishment of the factory on the proposed site will not cause a substantial increase in traffic congestion in the area.

(e) That the proposed site is not objectionable on strategic grounds.

(f) That the proposed site will not be destructive of amenities which ought to be preserved, e.g., existing open spaces in towns, or special features of natural, historic, or architectural beauty.

52. The question of extensions of existing factories provides the most difficult problem. Some limitation must clearly be laid down, otherwise a manufacturer might buy up a small plant and then extend it tenfold without having to obtain an industrial permit at any stage. If the restrictions are to be effective, we think all the conditions must apply in full force to any extension which will result in the employment within a period of say three years of an addition of say 10 per cent. or more to the number of workpeople employed by the firm in question. In small factories the permitted percentage increase might be larger.

53. Similar considerations would apply in the case of proposed removals of factories from, for instance, one part of London to another. This has been one of the most powerful forces in the gigantic enlargement in recent years of the continuous built-up area of London. If a policy of decentralisation is to be pursued, the removal of a factory from old or unsuitable premises in a prohibited area is a suitable occasion for requiring the transfer of the undertaking to another area; and hence the mere fact that a firm is already engaged in manufacturing in one part of a prohibited area is no reason for permitting it to remove to another part of that area unless it can satisfy the conditions set out in paragraph 51.

54. Permitted and prohibited areas (see paragraph 47) would not necessarily cover the whole country. There would be much ground not included in either (a) or (b). Permits to locate industry in such places would be governed by the proviso that sporadic factory location was to be discouraged. Location in these would therefore be entirely at the discretion of the Ministry.

55. The following recommendations are intentionally based upon those of the Majority Report, in order that it may be clearly seen in what way we differ from them.

A.—THE CONSTITUTION AND MACHINERY OF THE AUTHORITY.

A NEW MINISTRY.

56. A new Department of State to be established for the purpose of making research into and controlling the location of industry throughout Great Britain, and of promoting and supervising the planning of the country for industrial, agricultural, residential, and recreational requirements.

57. The Department to be in charge of a Minister of Cabinet rank who would be empowered, subject to the usual Treasury control, to appoint staff adequate for the performance of the duties and functions of the Department.

REGIONAL BOARDS.

58. For the purpose of securing close contact with local knowledge and experience and as an integral part of the machinery of his Department, the Minister to be charged with the duty to establish Divisional or Regional Boards³ to cover areas defined by the Minister, through which the Department may act for purposes of industrial location and other matters. The Boards in turn may make representations and recommendations to the Minister on their own initiative as to probable and possible developments within their respective regions and on other cognate matters.

PLANNING.

59. There should be transferred immediately to the Minister the existing powers and functions of the Ministry of Health³ under the Town and Country Planning Act, and of the Ministry of Transport under Restriction of Ribbon Development Act and the Trunk Roads Act.⁴ Other powers and functions necessary to the efficient functioning of the Department and at present vested in other Departments to be transferred to the Minister by Orders in Council as and when found necessary.

SPECIAL AREAS.

60. There would also be transferred to the Minister the powers and functions of the Commissioners for the Special Areas, these areas to be extended and revised as occasion demands.

RESEARCH COMMISSION.

61. For the purpose of carrying out research, and giving advice to the Department on the location of industry and the distribution of the population, the Minister shall appoint a permanent Commission of Research, composed of technicians and others as found advisable.

³ See Chapter XV of Majority Report. These Divisional or Regional Boards will not in any way supersede existing local government authorities or planning authorities.

³ Special arrangements will have to be made for Scotland.

⁴ Powers for planning and not for constructive works, traffic control, etc.

B.—FUNCTIONS OF THE DEPARTMENT—EXECUTIVE.

LOCATION OF INDUSTRY.

62. As the concentration of industries and the industrial population in certain centres and the scattering of new industries over various parts of the country constitute a social, economic and strategic problem which demands immediate action, the *Minister to be empowered* to exercise control over the establishment and location of additional, and the extension of existing, industrial undertakings throughout the country. The power vested in the Department for this purpose to operate generally in a negative way (i.e. the Department will not find sites for individual industries). For the purpose of exercising such power of control the Minister to be empowered to declare, as described in paragraphs 47 to 54 of this Report:—

- (a) Areas in which industry would have free entry, subject to local planning requirements.
- (b) Areas in which further industrial development would be prohibited, subject to certain exemptions.
- (c) Areas in which a special case for consent would have to be made out.

DEVELOPMENT PLAN.

63. In order that the Minister's actions in the direction of Industrial Location may be worked into a pattern of balanced economy, the Minister will need an *outline of Development* on which to base his policy; this should be prepared for the Department by the Commission of Research. *The Minister will have power* to impose the requirements of this Plan upon Regional and Local Planning Schemes; these may need considerable modification (having been prepared only with a view to regional and local necessities), to bring them into conformity with the national industrial policy. The Majority Report indicates that existing planning powers are inadequate for the purpose.

INDUCEMENTS.

64. *The Minister to be empowered*⁵ to authorise financial assistance from Government sources in the form of loans, grants or otherwise, with the object of encouraging desirable industrial location and proper planning, and for other purposes, and in particular:—

- (a) To promote and encourage the establishment and development of satellite towns and garden cities by local authorities, public utility organisations and other bodies.
- (b) To assist the further development of small towns and regional centres.

⁵ Some of those financial powers are included under those of the Commissioners for the Special Areas which would be taken over by the new Ministry.

(c) To promote and encourage the establishment and development of trading estates by means of facilities for cheap land, provision of services, building factories to let, etc.

(d) To continue the work in the Special Areas.

(e) To assist the carrying out of special works of national importance, such as National Parks and Coastal Reservations and purchase of properties which should be vested in the National Trust.

(f) To purchase land.

C.—FUNCTIONS OF THE DEPARTMENT.—ADVISORY AND NON-EXECUTIVE.

RESEARCH.

65. The following matters to be referred by the Minister to the Commission of Research:—

(a) Collection and co-ordination of information relating to location of industry and similar matters affecting the distribution of the industrial population in the possession of various Government Departments.

(b) Research and collection of information as to various natural resources—land, agriculture, minerals, amenities, etc., that may be affected by national development.

(c) Advice to Government, local authorities, industrialists and others, as to problems of planning with special reference to industrial location.

(d) The preparation of a General Scheme of Development, subject to constant revision.

(The Statute would stipulate that the Annual Reports of the Commission of Research and the proposals for National Development, shall be presented to Parliament.)

SPECIAL REPORT ON GENERAL PROPOSALS.

66. The Minister to have the duty imposed on him by statute of preparing and submitting to Parliament, as early as possible, a Special Report as to what further powers he will require, and the machinery necessary for the purpose of giving effect to the objectives of national action as unanimously agreed by the Commission and set out in paragraph 428 of the Majority Report, namely:—

(a) Continued and further redevelopment of congested urban areas, where necessary.

(b) Decentralisation or dispersal, both of industries and industrial population, from such areas. In this connection consideration to be directed to the methods by which such decentralisation or dispersal shall be encouraged and

secured, in the form of garden cities or garden suburbs, satellite towns, trading estates, or by the development of existing small towns or regional centres.

(c) Encouragement of a reasonable balance of industrial development, so far as possible, throughout the various divisions or regions of Great Britain, coupled with adequate diversification of industry in each division or region throughout the country.

In addition, the Minister to further the findings of the body of experts regarding the subject of compensation and betterment which it is recommended in paragraph 250 of the Majority Report should be appointed by the Government.

CONCLUSION.

67. In conclusion, we believe that the country is looking to the Commission to give a clear and bold lead on this matter. Anything less than a Department, or a Board attached to an existing Cabinet Minister, exercising full executive powers and with an adequate staff, would give the impression of seeking to shelve not only the present problems but also those which are almost certain to arise in the immediate future.

LESLIE PATRICK ABERCROMBIE.

HERBERT H. ELVIN.

HERMIONE HICHENS.

A DISSENTIENT MEMORANDUM ON PLANNING IN RELATION TO THE LOCATION OF INDUSTRY.

BY PROFESSOR PATRICK ABERCROMBIE.

I.—THE DEVELOPMENT OF PLANNING POWERS.

1. Chapter VIII of the Majority Report on the difficulties and defects of present Planning Legislation and Practice makes it evident that the powers were not devised for, and consequently are not adequate for, any grouping of the industrial population or location of industries on a national scale. They are not really effective for regional planning of a satisfactory nature, nor is the full extent of the powers themselves utilised, largely through fear of the possible claims for compensation and the impracticability of realising the betterment which actually accrues. No real improvement in the control of land development is possible until this fundamental question of compensation and betterment is adequately resolved. The chapter in question is an understatement, in my opinion. It was decided that statements of fact contained in the Report should be based either on evidence given before the Commission or on material available in published works of authority. The principal evidence on many points was that given by the Ministry of Health, which, though extremely valuable, was naturally somewhat over-cautious.

2. A careful examination of planning schemes on the outskirts of our great cities and of the actual building that is taking place will show that in spite of the great efforts of planning committees and their officers, groups of houses and industrial zones are scattered broadcast over the face of the land and ribbon development continues to spread.

3. I wish particularly to stress the wide divergence between the recommendations of Advisory Regional Reports, adopted and endorsed by groups of local authorities, and the Statutory Schemes which have eventually emerged. For the purpose of the true balance of industry and of the industrial population these Advisory Regional Reports would require further study and re-inforcement: they illustrate the fact that, however enlightened and far-seeing a regional outlook can be, there must be some national guidance in the background. Instead of these advisory plans being re-inforced, they have been weakened: e.g. in many cases they provided for the grouping of the population into moderate-sized urban units separated by agricultural belts, but this pattern of growth has not been realised owing to the impracticability of reserving wide stretches of land un-built-on, through heavy claims for compensation that would be involved, the desire of Local Authorities to secure increase of rateable value within their own boundaries, and the absence of national guidance and inducement.

4. Again, in spite of the growth of the practice of the grouping of local authorities into Joint Committees for the preparation of schemes and the efforts of the Minister of Health to persuade them to continue to co-operate for the administration of the schemes, when approved, it is still possible, *inter alia*, to point to a great city which has no statutory arrangements with the rural districts which march upon its boundaries; to a County district of small extent which, though surrounded by a large Joint Committee, resolutely refuses to give up its planning independence and which has prepared a scheme of incongruity and incompetence; and to a whole county in which rapid development is taking place and whose beauties are being destroyed, without any planning resolution whatever having been passed.

5. An important defect with regard to industrial location in planning schemes, as now being prepared and approved, arises from the absence of any discrimination between general industry and that type of undertaking which is required for normal local existence. The distinction drawn in Part I of the Majority Report (paragraphs 64 and 65) between local and basic industry is not quite what is here meant: a more restricted type (e.g., bakeries, laundries, etc.) is intended. This represents, therefore, a group within the local industries referred to in Part I.

For lack of this separation of what might be called "Neighbourhood Industry," evidence given by the Ministry of Health showed that not only are unduly large or too widely distributed industrial zones included in planning schemes, but consent to industrial use can be given in nearly all other zones, including the newly devised Rural Zone.¹ Thus, without national or regional guidance, industry may be, and is being, spotted sporadically over the face of town, suburb and country. If a schedule of such neighbourhood industries could be prepared, they could be dealt with direct by local planning authorities and would be exempt from a permit under the Industrial Location Authority recommended in the Minority Report. With regard to the non-neighbourhood type of industry, signs of scattering are already evident; planning authorities are at a loss as to whether to welcome or refuse permission: guidance and control are urgently needed, particularly in country places.

6. If industrial control is to be exercised upon a national basis, it must be integrated into regional and local planning in all their aspects, so that allocation of a reasonable amount of land for building may be made, with requisite services available, and rich agricultural land may be protected and recreation provided for.

¹ In the Ministry of Health Model Clauses for use in the preparation of Schemes (1939) out of 9 "use zones" suggested, *only* Special or Noxious Buildings are prohibited; other factories are given *free entry* in 2 zones and may be allowed by *consent* in the remaining seven.

But beyond all these minimum requirements a proper pattern or design must be given to human environment, so that not only economic but social and artistic needs may be satisfied.

The components of such an outline scheme of national development would be similar to those of a normal local planning scheme and would include:—

- (i) Industrial and Commercial Location.
- (ii) Agriculture including Afforestation.
- (iii) Grouping of the Population and consequent Housing, and provision of centres of social and economic life.
- (iv) Transport (Rail, Road, Water, Air).
- (v) Recreation (National Parks, Coastal Strips, Holiday Camps, etc).
- (vi) Power, Electricity and Gas.
- (vii) Land Drainage and Water Supply.
- (viii) Other Services.

7. Each of these has its national aspect; and it is true that already a considerable amount of national planning of each has been and is being carried out compartmentally. Electricity, for example, has already completed its National Grid and the Ministry of Transport has more recently taken charge of the Trunk Roads. The country again is mapped out for land drainage and a good deal has been done to secure a water supply that is not based upon the big authorities securing the rights: but these two aspects of water are not always inter-related.

Nor, again, is there any suggestion that the new Ministry which is proposed in the Minority Report should take over these activities wholesale; that would entail absorbing the whole local and economic control of the country. But some headquarters is required to which the different Departments could bring their needs, as they work out topographically, for co-ordination and combination. By this means it would be possible to prevent any one of these aspects, through zeal for its own importance, becoming hypertrophied. The evidence given on both sides as to the relationship between the Ministries of Health and Agriculture was not satisfactory, and showed the necessity for such co-ordination in planning. The mere routine submission of schemes from one Department to another for comment is not enough.

Another example which perhaps may be quoted, although it is somewhat remote from the subject of the Royal Commission, is that of the controversy which has arisen between afforestation of mountainous areas on a commercial basis and their use as National Parks. Although the creation of these National Parks has been recommended by an Inter-Departmental Committee, their realisation has been left to some of the poorest local authorities in the country. The decision as to whether these areas or

parts of them should be used for national recreation or commercial timber growing (or the further question whether these two uses are antagonistic or not) is left to be decided between the Government Forestry Commission on the one hand and a voluntary body, the Council for the Preservation of Rural England, on the other.

8. There are, again, several Government undertakings of first-rate importance which are concerned with development or ownership of land for their own purposes and which, while claiming freedom from interference, could benefit much from access to a central Bureau of Information; at present, when obliged, they consult numerous Departments and Boards.

The principal of these Government undertakings at the moment are the great Service Departments: much of their locational work is already done, but the last sites are in some ways the most difficult to obtain. A great deal of time would be saved, privacy maintained and smooth working guaranteed, if authoritative information could be given from a single source and ancillary action taken (such as the provision of houses when required, which is now left chiefly to unguided private enterprise) to complete the new developments, whether of a temporary or permanent kind. There is also the need to prevent Defence precautions from clashing with those of Evacuation.

9. The National Camps Corporation is an example of a smaller emergency effort: at this early stage it has been possible to locate the camps on suitable sites (in relation to the centres of population) by dint of consultation with numerous Departments. The camps movement is in its infancy; when it is expanded and joined up with Holiday Camps, it will entail a complexity of location which can only be satisfactorily dealt with as one aspect of national recreation and which is linked up with such matters as National Parks, Foot-paths and Bridle Tracks, Access to Mountains, etc.

10. Statutory undertakers and Crown Lands are at present to a considerable extent "protected" or exempt from local planning control, but they would equally benefit from being consulted and worked into general planning arrangements. The creation of new lines of communication and opening up of new areas for development should not be left in the power of even the largest statutory undertaker.

11. Lastly the work of the Special Areas Commissioners represents a species of "Inducement" planning for the purpose of dealing with a particular problem on a national basis, yet applied to defined areas. The cure of unemployment in these distressed areas, without a full consideration of industrial location throughout the country, i.e. on a wider national scale, cannot be effectual.

12. The above list of the numerous aspects of national development does not pretend to be exhaustive: nothing has been said about the extremely important aspect of conservation of existing beautiful assets, natural and human, of country and town. National Societies are actively engaged upon this work, the National Trust having a quasi-official status; the Commons, Open Spaces and Footpaths Preservation Society; the Society for the Protection of Ancient Buildings; the Council for the Preservation of Rural England (which is equally interested in the promotion of proper country development). But these organisations are left to fight and raise money without any national help.

A great many of the objectives of these societies are of course already dealt with locally and regionally by energetic local authorities, enlightened landowners and public-spirited donors.

13. The Research Commission proposed in the Minority Report should be charged with the preparation of this outline of general development. The point was made in evidence that it is difficult for the Minister of Health to prepare a national scheme and subsequently to sit in judgment upon local or joint committee plans which may not conform to the national framework: "he cannot be advocate and judge in the same cause."

It need not be emphasised that such a plan will not resemble a Statutory Scheme in being drawn out, accompanied by a set of explanatory clauses, submitted and approved: it will be rather a policy than a plan, something flexible and continually evolving, based upon research, surveys and experience.

14. The Research Commission, like the proposed new Ministry, should work both centrally and regionally: by means of the Regional or Divisional Boards it will be brought into direct touch with local requirements, in order that there may be no danger of over-centralisation.

In certain cases it may be necessary not only to revise or strengthen existing regional planning but to prepare an outline plan in order to bring coherence into a group of sub-regional schemes.

This is required for Greater London where the work of an elected Advisory Body has broken down. The Bressy Report on Roads, 1937, is a classic example of compartmental planning, on a regional basis, of one aspect. On the other hand the L.C.C.'s South West Area scheme (for Battersea and Wandsworth) shows no road proposals at all, (through fear of claims for compensation), though there may be a secret road plan in existence. Industrial areas, focal centres, population grouping, separating open spaces,* and many other matters, are equally in need of continued inter-regional study and guidance, particularly in view of the special position of London and the Home Counties in relation to the location of industry.

* The London Green Belt represents a gallant attempt at another piece of compartmental planning on a regional scale. For a further statement on London Planning see Chapter XIV of the Majority Report.

II.—DETAILED DEFECTS IN PLANNING POWERS.

15. The following notes are intended as supplementary to Chapter VIII in the Majority Report. They include certain, more detailed points in connection with Planning Powers under the Town and Country Planning Act, 1932, ending with some notes on the difficulties arising from Departmental duplication and omissions.

Neither Chapter VIII nor these notes are intended to be a comprehensive review of all the powers available for the preservation, development or redevelopment of land. Similarly, they are not criticisms of the workings of these powers, nor a list of gaps in legislation, except in so far as those powers—their use or their absence—may be said to affect the objects for which the Royal Commission was appointed. Thus the general subject of amenities, including the control of the appearance of buildings, the prevention of disfigurement, the preservation of trees, etc., however important, is not primarily the concern of the grouping of the population. These requirements, including detailed site planning, should be satisfied whatever policy of grouping is adopted.

ZONING RESTRICTIONS.

16. The standards of density, etc., are largely determined by the zoning which, in the Minister's view, is "proper and reasonable and expedient having regard to local circumstances." Planning authorities are, however, unwilling to take the risk of preparing really strong schemes, particularly with regard to built-upon or rapidly developing areas, although they have the right to modify later any provisions that give rise to claims for compensation. Thus some schemes are weaker than the Minister would in fact be prepared to approve. The new Rural Zone is not a density provision and is not subject to compensation; but it may easily degenerate through weak administration.

The Minister's discretion as to what is "proper and reasonable and expedient" in excluding claims for compensation is a wide one, and in principle, at least, would enable him without compensation to approve a scheme, limiting the density of building to any extent justified by his view of expediency and reasonableness, or entirely prohibiting the erection of buildings because their situation might involve danger or injury to health or excessive public expenditure on services.* He could, theoretically, under this power, exclude compensation for zoning a whole planning area against the admission of industry, with or without consent: but he is hampered by directions under Section 19 of the Act.

* Town and Country Planning Act, 1932, Section 19.

PYRAMIDAL ZONING.

17. In practice the policy of the Ministry in approving schemes has been to encourage zoning to accommodate trends and expectations of the local growth of industry, business and population. A typical instance of this is the "pyramidal" density and height zoning applied in London and other large towns, where schemes usually provide for greater density, height and coverage of the sites in the centre of the town, the permitted density being reduced outward by two or three stages, until the Rural Zone is reached. In the case of built-up areas the zoning for future use is affected by present use, any reduction of density or change of use imposed, on rebuilding, involving a risk of compensation. But the permitted density, height or coverage in schemes frequently permits a substantial increase of building bulk on rebuilding. Schemes could be much stronger in preventing such increases without incurring compensation, if the Minister regarded a stricter limitation as reasonable and expedient, a view that in the light of the health, transport, strategical and social considerations brought before the Commission, would appear to be justified in the case of London and the other great towns and agglomerations.

LIMITATIONS ON MINISTER'S DISCRETION.

18. The discretion of the Minister has, however, two important limitations under the Act of 1932, which did not exist under the Act of 1925. (i) Any part of a scheme may be disapproved by either House of Parliament when laid before it (Schedule 1, pt. 1): (ii) The High Court may quash the scheme or any provision in it if satisfied that it is not within the powers of the Act or "that the interests of an applicant have been substantially prejudiced by any requirement of this Act."* These provisions place the Minister in a difficult position, and tend to the weakening of schemes. If a national planning policy is to be consistently applied, it would seem desirable to restore the discretion of the Minister as under the 1925 Act if only in order to avoid the serious drawback of delay.

WEAKNESS OF ADMINISTRATION.

19. A relatively good planning scheme can be ineffective if weakly administered by the planning authority. The following are matters in which defects of administration may arise:—

(a) Permissive uses of land, such as industries and shops in residential areas.

(b) Release of land from temporary restriction of building.

* First Schedule. T. & C.P. Act, 1932, Part II, 3(b).

(c) Approval of plans.

(d) All forms of supplementary zoning; for example, permitting a group of houses or a satellite town in a rural zone.

(e) Consent to buildings (e.g., factories) in rural zones.

(f) Road proposals subsequent to scheme and not shown on plan. These are possible under the Restriction of Ribbon Development Act.

The powers under (a) and (e) of consenting to exceptions in a zone, or under (b) of release from restriction, are a serious danger when administration is weak. In some cases the local planning authority may give consent to industry without advertising, in which case the Minister is not informed unless there is an appeal or refusal. The latter type of zoning should be discouraged, except for matters of strictly local usage.

DEFAULT AND REVISION POWERS.

20. The Minister has frequently been blamed for not speeding up and improving schemes under his powers of revision and default. With regard to the exercise of default powers (either directly or through a local authority), it is well known how difficult it is under our system of local government, unless it is a case of something more patently urgent (e.g., contamination of water) than town planning. It is perhaps more permissible to tax the Minister with reluctance to exercise his right to make an order to transfer the planning powers of an individual authority to a Joint Committee where proper planning requires it.

The powers of revision appear to be wide, but the Minister is put into a difficult position if, by reason of his improvement of a scheme, he lands the responsible planning authority into heavy claims for compensation or purchase.

It has also been stated that by means of his powers of revision the Minister can turn a group of more or less unrelated local schemes into a plan of unified conception. There are two factors, at least, which prevent the Minister from being able to do this: (i) many of the major features of zoning are settled before the schemes are submitted, under interim permits; (ii) the schemes are submitted to him from time to time according as the planning authorities are able to complete them: the Minister never has the chance of seeing all the relevant schemes together.

INTERIM PROCEDURE.

21. There is a serious weakness in the powers of planning authorities in the "interim" stage (defined in Section 1c of the Act of 1932). The only means of enforcing a decision is the threat of demolition, without compensation, at a

later stage if the finally approved scheme does not allow the development. A recent amendment to the town planning law in Eire gives powers to impose penalties for disregard of a decision in the interim period.

Applications for consent have not at present to be advertised, and the public and the Minister do not hear of them if consent is given. There should be a right of appeal against interim consents, as there already is against interim refusals, which might be effected by the interposition of a period of delay before the interim consent becomes operative.

In the area of Joint Committees the Minister has always made each constituent authority responsible for interim development. This reduces the Joint Committee to a merely advisory status during the interim period. The recommendation of the Minister's Advisory Committee on Preservation of the Countryside (1938) that the Joint Committee should be the interim authority has been considered *ultra vires*: he can only hand the power in default to a County Council. A slight amendment of the Act would enable him to act at his discretion.

Agreements with owners under Section 34 can at present be made and varied without publicity and without the Minister's knowledge or consent. They have often been used to great advantage for securing open spaces and amenities, but they could be used in such a way as to prejudice the ultimate scheme. It is desirable that the Minister's consent should be required for agreements and variations thereof.

PRESERVATION OF GREEN BELTS.

22. Two methods are at present available for obtaining a complete "cut-off" between urban units: (1) purchase of the land, or (2) inclusion in a scheme as a permanent agricultural reservation, but in many cases neither method is practicable for reasons of cost in purchase price or of compensation. The temporary prohibition of building under Sections 15 and 16 of the Act, and zoning as a "Rural Zone," as now permitted by the Minister, do not entail compensation; but neither method can be used to obtain a permanent green belt close to the built areas unless there is no prospect of building, which is never the case on the outskirts of a town. In a few areas something can be done under Section 34 by agreements with large and well-disposed landowners. But for the generality of cases nothing really adequate can be done in the absence of a national policy for compensation and betterment.^a

^a See Chapter IX of Majority Report.

PERPETUATION OF USE AND DENSITY IN CENTRAL AREAS.

23. The difficulties of preventing the increase of the density of industrial and business buildings in central areas were explained in the evidence of the Ministry of Health. An industrial use of land discordant to the zoning as approved by the Minister for a replanned central area can be extinguished in order to bring the use into conformity with the provisions of the scheme, on payment of full compensation (section 13, T. & C.P. Act). But the Act also allows "reasonable alterations and in proper cases extensions of existing buildings": also a limited change of industrial use even after the lapse of two years of disuse (or such longer period as the planning authority may permit), and a building "at least as large" as the one formerly on the site. From these it will be seen that it is almost impossible, except by purchase, to eliminate industrial uses which may succeed each other in perpetuity, in discord with the scheme. As stated in evidence, the Act tends to keep industries located in the centre of the town "because it puts the existing industrialists in a very strong position."⁶ A similar difficulty exists as regards dwelling-house zones, compensation being payable if under the scheme the authority requires a lower density than the by-laws allow. The difficulty arises because the Act allows existing buildings to be replaced unless compensated for. This makes the reduction of density too expensive. An amendment of the planning law to exclude compensation for any improvement of density to a proper standard is desirable. The administration of the Act could also be stiffened up to check the tendency to allow a considerably greater number of persons per acre in "flatted" schemes than in house and garden schemes in the same zone. Schemes do not normally prescribe a maximum population density for flats.

DUPLICATIONS AND OMISSIONS.

24. There is a confusion and duplication of powers between the Ministries of Health and Transport. It is possible for a planning scheme (under the Ministry of Health) to show no road proposals whatever, or for roads prescribed under the Restriction of Ribbon Development Act (under the Ministry of Transport) to be shown on a planning scheme "for information only," for fear of claims for compensation for the site of the roads. Several circulars from the two Ministries have urged co-operation in regard to road planning proposals but recent letters in the Press show the confusion that exists for the public. Appeals can be lodged with two Ministries simultaneously. The Restriction of Ribbon Development Act was in some ways useful because its powers came into operation at once and did not

⁶ Ministry of Health, p. 138, Q. 1460.

wait for the preparation and approval of a scheme; it might preferably have taken the form of an amendment of the Town and Country Planning Act.

The Trunk Roads Act, which was intended to make the Ministry of Transport a National Road Authority, does not apply to the area of the county boroughs; and the whole of the area of the London County Council is outside its scope. In other cases Trunk Road proposals have been prepared by the Ministry of Transport without consultation with the planning authorities and suddenly presented to them after years spent in the preparation of schemes and negotiations with owners; this independent action may necessitate the complete revision of local planning schemes.

The Minister of Agriculture appears in the past not to have been actively concerned in planning; it was given in evidence that the Ministry had no contact with the Ministry of Health as to what is happening in the preparation of planning schemes.⁷ Dr. Willatts, on behalf of the Land Utilisation Survey, said in evidence that the best agricultural land has frequently been taken for building without due consideration of its productive value. Recently the Minister of Health has decided that under the Town and Country Planning Act agriculture may be considered as the predominant use of certain land (formerly it was considered in terms of building of greater or less density unless scheduled as a reservation of open space; agriculture being expressly excluded from being deemed a "development" of the land, Section 53) and has drafted a model Rural Zone for use in planning schemes. But such zone allows non-agricultural buildings with the consent of the planning authority.

LESLIE PATRICK ABERCROMBIE.

⁷ Ministry of Agriculture, p. 179, Q. 1859-62. A witness, however, stated on behalf of the Ministry of Health that copies of all planning proposals are sent to other Government Departments interested; see Ministry of Health, p. 16, Q. 179.

APPENDICES TO THE MAJORITY REPORT.

APPENDIX I.

LIST OF GOVERNMENT DEPARTMENTS, ORGANISATIONS AND PERSONS FROM WHOM EVIDENCE HAS BEEN RECEIVED.

I.—ORAL EVIDENCE.

A.—GOVERNMENT DEPARTMENTS AND ORGANISATIONS.

Department or Organisation.	Witnesses.	Day of Evidence.
Agriculture and Fisheries, Ministry of.	Sir Donald Fergusson, K.C.B. Mr. R. R. Enfield.	7
Associated Road Operators ...	Major H. E. Crawford, A.F.C. Mr. Roger W. Sewill, M.A., M.Inst.T.	21
Birmingham Corporation ...	Alderman Harold Roberts, LL.B. Mr. H. J. Manzoni, M.Inst.C.E.	22
Board of Trade ...	Mr. L. W. Faulkner. Mr. W. Palmer, C.B. Mr. R. C. G. Somervell. Mr. H. Leak. Mr. W. G. Nott-Bower, C.B.E. Mr. H. Beer.	3 and 4
Council for Preservation of Rural England.	Mr. J. Ernest Jarratt. Mr. C. Eric Staddon. Mr. W. R. Hornby Steer, M.A., LL.B.	19
Counties of Cities in Scotland, Association of.	Mr. H. G. Griffin, C.B.E. Treasurer Darling. Mr. J. D. Imrie, M.A., B.Com. Baillie A. Ritchie. Mr. J. L. Mackenzie. Treasurer A. T. Morrison. Mr. D. R. Bishop, A.S.A.A.	9
County Councils in Scotland, Association of.	The Viscount Traprain. Mr. G. Cruickshank. Mr. A. A. Templeton.	9
Cumberland Development Council.	Major A. Hibbert, D.S.O., M.C. Mr. G. H. J. Daysh. Mr. R. E. Gamlen. Mr. J. R. Williams. Mr. John J. Adams.	16
Electricity Commissioners ...	Sir John Snell, G.B.E.; M.Inst.C.E., M.I.E.E.	5
Federation of British Industries.	Mr. Peter F. Bennett, O.B.E. Mr. R. Glenday, M.C.	17
Garden Cities and Town Planning Association.	Mr. Cecil Harmsworth (now Lord Harmsworth). Mr. F. J. Osborn.	20 and 21
Garden Cities and Town Planning Association of Scotland.	Baillie Mrs. Jean Mann.	20
Geographical Association ...	Professor H. J. Fleure, D.Sc., F.R.S. Mr. Wilfred Smith.	*

* Evidence not published.

Department or Organisation.	Witnesses.	Day of Evidence.
Health, Department of, for Scotland.	Mr. W. S. Douglas, C.B. Mr. G. H. Henderson. Mr. J. M. Vallance, W.S. Mr. G. Wallace. Mr. W. S. Murrie. Mr. G. Hawley. Mr. P. Taylor, O.B.E. Dr. P. L. McKinlay, M.D., D.P.H.	2 and 29
Health, Ministry of	Sir John Maude, K.B.E., C.B. Mr. T. H. Sheepshanks. Mr. G. L. Pepler, F.S.I., P.P.T.P.I. Dr. T. Carnwath, D.S.O., M.B., D.Sc.	1, 2, 6 and 28
Hundred New Towns Association.	Mr. A. Trystan Edwards. Lord Northbourne. Mr. M. C. M. Athorpe.	19
Imperial Defence, Committee of.	Major-General H. L. Ismay, C.B.	*
Labour, Ministry of	Mr. Humbert Wolfe, C.B., C.B.E. Mr. S. L. Besso. Mr. P. Y. Blundun. Mr. H. H. Montgomerie. Mr. A. Reeder.	10 and 11
Leeds Corporation	Councillor John Tait. Mr. Thomas Thornton. Mr. J. E. Acfield, A.M.Inst.C.E., M.T.P.I. Mr. E. H. Gregory.	22
Letchworth Garden City	Sir Edgar Bonham Carter, K.C.M.G., C.I.E. Dr. Norman Macfadyen, M.B., D.P.H.	20
Liverpool Corporation	Alderman A. E. Shennan. Mr. W. H. Baines. Mr. P. S. Harvey.	24
London County Council	The Rt. Hon. Herbert Morrison, M.P. Sir George Gater, C.M.G., D.S.O. Mr. Herbert Westwood, F.S.I.	13 and 14
Land Utilisation Survey of Britain.	Dr. L. Dudley Stamp, B.A., D.Sc. Dr. E. C. Willatts, B.Sc., Ph.D.	*
London Passenger Transport Board.	Mr. Frank Pick. Mr. F. A. A. Menzler.	12 and 14
Manchester Corporation	Mr. F. E. Warbreck Howell. Mr. J. Lythgoe. Mr. J. Bennett Storey.	24
Municipal Corporations, Association of.	Mr. F. E. Warbreck Howell.	24

* Evidence not published.

Department or Organisation.	Witnesses.	Day of Evidence.
National Industrial Development Council of Wales and Monmouthshire.†	Councillor George Williams. Professor H. A. Marquand. Professor K. S. Isles. Mr. Percy Walker. Mr. Terence Young. Mr. D. J. Davies.	16
North-East Development Board.	The Viscount Ridley, C.B.E. Mr. G. H. J. Daysh. Mr. T. H. Howard.	18
Port of London Authority ...	Sir David Owen. Mr. E. L. Stanley.	18
Railway Companies' Association.	Sir Ralph L. Wedgwood, C.B., C.M.G. Mr. O. H. Corble. Mr. A. Forbes-Smith.	21
Registrar-General for England and Wales.	Sir Sylvanus Vivian, C.B. Dr. P. Stocks, M.D.	28
Registrar-General for Scotland	Mr. J. G. Kyd. Mr. A. McKinlay. Dr. P. L. McKinlay, M.D., D.P.H.	29
Royal Burghs of Scotland, Convention of.	Sir Henry S. Keith, LL.D. Ex-Provost J. R. Rutherford.	15
Royal Geographical Society ...	Professor E. G. R. Taylor, D.Sc. Dr. L. Dudley Stamp, B.A., D.Sc.	*
Scottish Economic Committee	Sir Steven Bilsland, Bt., M.C. Mr. Norman Duthie, C.A. Sir William Goodchild, C.M.G.	15
Slough Estates, Ltd. ...	Mr. A. Noel Mobbs, O.B.E. Mr. E. H. Dullely. Mr. C. W. Fairall.	11
Town Planning Institute† ...	Major Leslie Roseveare, O.B.E., M.Inst.C.E., P.P.T.P.I. Mr. W. Harding Thompson, M.C., F.R.I.B.A., V.P.T.P.I. Mr. E. G. Allen, F.R.I.B.A., P.P.T.P.I. Mr. John Dower, M.A., A.R.I.B.A., A.M.T.P.I.	19 and 23
Trades Union Congress ...	Mr. A. A. H. Findlay. Mr. G. A. Isaacs. Mr. G. Woodcock, M.A.	27
Transport, Ministry of ...	Mr. L. Browett, C.B., C.B.E. Mr. R. H. Hill, C.B. Mr. H. W. W. Fisher, M.B.E. Mr. A. E. Kirkus, O.B.E. Mr. A. Clark.	8
Welwyn Garden City ...	Sir Theodore Chambers, K.B.E., F.S.I. Mr. John Eccles, A.C.A.	20

* Evidence not published.

† The Royal Institute of British Architects and the Ramblers' Association have associated themselves with the Report of the Committee of the Towns Planning Institute reproduced in the Minutes of Evidence, 23rd Day.

‡ The Welsh Parliamentary Party have associated themselves with this Evidence.

B.—WITNESSES APPEARING IN AN INDIVIDUAL CAPACITY.

<i>Name of Witness.</i>	<i>Day of Evidence.</i>
Sir Charles Bressey, C.B.	*
Mr. J. R. H. Cartland, M.P.	18
Sir Daniel Hall, K.C.B.	*
Sir Gwilym Gibbon, C.B., C.B.E., D.Sc.	25
Mr. W. L. Hichens	25
Mr. Harold Macmillan, M.P.	18
Lord Portal	*
Mr. W. A. Robson, B.Sc., Ph.D., LL.M.	23
Sir Ernest Simon	*
Sir Raymond Unwin, P.P.R.I.B.A.	25 and 26

* Evidence not published.

II.—WRITTEN EVIDENCE OR MEMORANDA.

Amery, Rt. Hon. L. S., M.P.
 Association of Development Officers.
 Atlantic Steam Navigation Co., Ltd.
 Barking Corporation.
 Birkenhead Corporation.
 Blythe Borough Council, and the Urban District Councils of Ashington,
 Bedlington, and Seaton Valley.
 Board of Education.
 British Cycle and Motor Cycle Manufacturers' and Traders' Union.
 British Electrical and Allied Manufacturers' Association.
 " Engineers' Association.
 " Furniture Trades Joint Committee.
 " Iron and Steel Federation.
 Brooke, Mr. Henry.
 Charity Organisation Society.
 Chelsea Metropolitan Borough Council.
 Commissioner for the Special Areas (England and Wales).
 " " " " " (Scotland).
 Co-operative Wholesale Society.
 County Councils Association.
 Courtaulds, Ltd.
 Crompton Parkinson, Ltd.
 Cumberland County Council.
 Daly, Mr. Michael, M.A.
 Department of Agriculture for Scotland.
 " " Scientific and Industrial Research.
 Durham County Council.
 " Rural District Council.
 English Linear Cities Association.
 Essex County Council.
 Flintshire County Council.
 Garland, Dr. T. L.
 Glasgow Corporation.
 Grimsby Corporation.
 Goyder, Mr. G. A.
 Holsinger, Mr. F. E.
 Jarrow Borough Council.
 Joint Committee of Cotton Trade Organisations.

Land Settlement Association.
 London Scots Self-Government Committee.
 Macdiarmid, Mr. A. C.
 Markham, Mr. S. F., M.P.
 Middlesex County Council.
 National Council of Social Service.
 " Gas Council.
 Newcastle-upon-Tyne Corporation.
 Newport (Mon.) Corporation.
 Paper Makers' Association of Great Britain and Ireland.
 Pearson, Dr. S. Vere.
 Population Investigation Committee.
 Price, Mr. M. Phillips, M.P.
 Radio Manufacturers' Association.
 River Severn Development Association.
 Royal College of Physicians.
 " " " " (Edinburgh).
 Rural District Councils Association.
 " Reconstruction Association.
 Scottish Education Department.
 " Office.
 Sheffield Chamber of Commerce.*
 Shipbuilding Conference.
 Silk Association of Great Britain and Ireland, Incorporated.
 Society of British Aircraft Constructors.
 Stapledon, Professor Sir R. G., C.B.E., M.A.
 Surrey County Council.
 Thameside Industrial Development Board.
 Trafford Park Estates, Ltd.
 Travel and Industrial Development Association.
 Tyneside Industrial Development Board.
 Ulster Development Council.
 Unemployment Assistance Board.
 Urban District Councils Association.
 Wool Textile Delegation.

* The evidence of the Chamber of Commerce is supported by the Sheffield City Council.

APPENDIX II.

A MEMORANDUM ON THE LOCATION OF INDUSTRY.

BY PROFESSOR J. H. JONES.

CHAPTER I.

FACTORS IN LOCATION.

Introduction.

It is, perhaps, idle to search for a theory of location which may be used to explain the present distribution of industry and the industrial population. The analysis must be descriptive. In the Middle Ages and for long afterwards Great Britain was an agricultural country and its trade with other countries was relatively small in amount, though not necessarily unimportant in character. The people of the country were widely scattered, mainly on farms and in hamlets. Here and there villages and small towns had become centres of crafts and trades, supplying the needs of the farming communities in their respective regions, while a few grew to be relatively important centres of marketing and distribution, particularly of exports and imports.

The present distribution of industry and the industrial population represents a growth from that past, and can only be understood in the light of the past. It does not necessarily bear resemblance to the distribution that would have been deemed desirable if the present population had been brought into this country from without, in recent years. The scattered population of earlier centuries everywhere tended to increase, and all had to live. In order that they might live they had either to find work in their native places or to migrate to other places that provided better opportunities. As Adam Smith long ago pointed out, of all baggage human beings are the most difficult to remove. People sought, and found, the kind of work to which they and their locality seemed most easily adapted in a changing economy, and their choice was determined by numerous influences, not the least being the urgency of the need to do something that would enable them to live, and the strength of the desire to live as generously as possible.

The explanation of the present distribution of industry and the industrial population must therefore be sought in a combination of circumstances, including "historical accident," rather than in a single cause or an inevitable chain of causation. Nevertheless, it is possible to disentangle many of the factors influencing the distribution of industry during the nineteenth century and afterwards, and to provide some measure of their strength. Before doing so it is necessary to distinguish between industry and the industrial population. Without discussing in detail, at this stage, the importance of the existence of a suitable supply of labour as a factor tending to attract a new industry or industrial establishment to a given district it is clear that Lancashire and Yorkshire, for example, were populated before the cotton and woollen industries were concentrated in those counties, and that the people had to live, and to work in order to live. It was they who selected their line of industrial development, and they followed the line of least resistance or greatest opportunity. Those who were fortunate in their choice made their district attractive to others in search of work.

Migration.

The importance of migration as a factor in industrial development is immediately apparent. The growth of large urban areas in the nineteenth century was clearly due primarily not to an exceptionally high rate of natural increase of the native population, but to a large influx of people from other places. It is highly probable that these were mainly drawn from the surrounding districts, particularly agricultural districts, where the rate of increase in population was far below the rate of natural increase. When agricultural land is fully employed and its employing capacity has reached its limit the surplus population is compelled to find employment elsewhere, and the greater part tends to migrate to the nearest places at which employment is available, such places being the rapidly growing urban areas containing developing industries.

This factor in migration deserves greater attention than it has yet received. One result of the industrialisation of Great Britain and the growth of international trade in the nineteenth century was that the agricultural industry grew less rapidly than population, and was, therefore, unable to absorb all those representing the rate of natural increase in the agricultural population. Moreover, large agricultural communities did not maintain a proportionately large army of workers supplying those local services, such as transport and distributive services, to be found in urban areas. For these reasons agricultural areas were characterised by a steady migration of a continuing surplus to industrial centres. In large regions that were predominantly agricultural regions, such as East England and South West England, the rate of growth of population was much lower than the average rate for the whole country, while that of large regions containing the new industries, such as Northumberland and Durham, West Riding and South Wales was much higher, for long periods, than the national average. Thus migration from agricultural districts to urban districts within the same region was supplemented by migration from regions predominantly agricultural to others that included the new and rapidly developing industries. Nevertheless it is broadly true to say that such industries were nurtured by the people of the region within which they were established, and that their establishment represented, in large measure, the search for local employment by such people as the alternative to long-distance migration. The degree of success attending the search was largely determined by the natural resources of the region, but also partly—and in increasing measure—by man-made facilities.

Process of Selection.

But that is not the whole of the background against which the forces determining the location of individual industries should be examined. The mining and the chief manufacturing industries of the nineteenth century were in existence before the industrial revolution and at that time were widely scattered. A process of selection followed and one effect of the revolution was to foster geographic concentration, those areas being favoured which appeared in the circumstances of the time to offer the greatest advantage. In the case of many industries, such as textile manufacture, it is literally true to say that it was a process of trial and error. Again, the introduction of steam power and the factory system meant an enormous increase in the producing capacity of an industrial establishment, with the result that the number required to supply a given output was correspondingly reduced. This change was obvious when the factory industry supplanted the cottage industry, but it continued throughout the nineteenth century, and still continues. In the early days of rapid expansion the number of establishments in an industry naturally increases—witness the recent history of the motor vehicle and electrical industries—

but it does not increase so rapidly as the output. In most of the older industries, such as flour milling and boot and shoe manufacture, concentration has been so pronounced that while the output has increased the number of producing establishments has steadily diminished. It will thus be seen that the process of geographic concentration, based upon trial and error, may not mean any increase, and never means a proportionate increase, in the number of employers (by whom the location of an establishment is determined) in the area favoured by the industry.

Moreover, when, during the period now under consideration, new employers entered an industry, it may be presumed that they were usually people who had been trained for the work in an establishment already existing in the same industry or in a cognate industry. Usually they were encouraged to embark upon a new enterprise by the prospect of success offered by the proved success of their own employers. Presumably, therefore, the location of the latter's establishment was satisfactory; in any case the new venturers knew the district and its facilities and opportunities far better than they knew other districts and their relative advantages. It was, therefore, natural that they should become neighbours as well as competitors of their former employers. Thus a growing industry tended to grow in the district in which it not only already existed but was also sufficiently profitable to excite the spirit of emulation among the ambitious employees of existing employers. It was partly in this way that the process of trial and error worked out.

Nor should it be forgotten that, just as districts competed for an industry, so, too, industries competed for a district. Men needed work but industries also needed workers. A district might relax its hold upon one industry not because it was less advantageous than another district which strengthened its hold, but because another industry offered even greater opportunity for profitable development. There is a limit, dictated by population, to what a district can undertake, so that districts, like people, are forced to make a choice. This is part of the explanation of the restricted growth of the textile industry in the Clyde region, where it was held in check at the critical stage by the growth of the shipbuilding and metal industries, which offered greater attractions. The history of Birmingham in the nineteenth century shows that when one industry declined its place was taken by another for which the district afterwards proved to be well adapted.

It follows that one of the factors by which the home of an industry may be fixed is that an even better home may have been reserved for another industry, for which it is better suited. An engineering firm may find it more profitable to make underground conveyors than surface conveyors, while able to make the latter more cheaply than they are actually being produced by many successful firms. The principle of delegation operates in the case of districts as well as in the case of firms and individuals; and it will be shown that the adaptability of areas that are suffering from or threatened with industrial decline is influenced by this principle. Thus, for example, to destroy first class agricultural land by devoting it to an industry that could be established elsewhere with little loss of efficiency may be to employ the economic resources of the nation in a wasteful manner. What has been done cannot be undone.

Finally it should be observed that, just as an increase in the average size of industrial establishments means that the number of establishments does not increase so rapidly as output, and frequently diminishes in a growing industry, so, too, the increase in efficiency which is associated with the concentration movement means that the number of people employed in an industry does not increase so rapidly as output, and may even diminish in an expanding industry. That being so an industrial community founded upon one big industry may find it necessary, even if the output of that

industry is increasing, to attract other industries in order to find employment for the growing industrial population. Thus the limit of specialisation is reached and an inevitable tendency appears towards real diversification,¹ which may also be favoured by other circumstances. Thus, for example, if it be assumed that since the war the efficiency of the mining industry has been increased by twenty per cent., an increase of less than twenty-five per cent. in the output of a district would mean an actual reduction in the number of miners employed in that district. While, measured by output, the importance of mining in the economy of a district may increase, it may decrease when measured by employment. It will be shown that a considerable proportion of the post-war unemployment in the mining districts has been associated with the increase in the efficiency of mining and the failure of some of the districts to attract other industries that would provide alternative employment.

Natural factors.

The above preliminary considerations show that a discussion of the factors determining the geographic distribution of industry should be concerned not only with the factors that determine the location of new industries but also with those that determine the geographic concentration of older industries that were once widely dispersed. On the other hand, it is restricted to those industries that may be described as the "basic" industries² of an area. In every community there are industries and services that are essentially local in character, and others that are regional. Such industries and services, therefore, continue to be widely dispersed, and create no problem of regional location. Cheap and easy transport is a condition of concentration—which means the distribution of products over a wide area. Commodities that are heavy or bulky relatively to their prices, such as building bricks and metal containers, cannot profitably be conveyed great distances, and are, therefore, made as near their respective markets as possible. The element of choice (regional as distinguished from local) only becomes important in the location of industries if and when the products can be conveyed considerable distances and, therefore, command a wide market. But it will presently be noted that, even in such cases, the comparative cost of transport (i.e. differences in the cost of transport) may be an important element in the location of an industry or in the line of specialisation followed by a part of an established industry.

It has already been submitted that the choice of region or district is determined by a combination of circumstances rather than a single cause. In some cases, such as mining, there is an overriding factor, such as the existence of mineral deposits. But in the early days of coal mining it was the outcrop near the market that was favoured; and even at the present time the London market is served by those areas from which

¹ Diversification is an ambiguous term when applied to industry. It may mean (a) diversity of occupations, (b) diversity of industries, (c) diversity of products for the general market. The shipbuilding industry covers a large variety of occupations. It supports a great variety of subsidiary industries. But these occupations and industries depend upon shipbuilding for their existence. The term is here used in the third sense, the industries being as independent of each other, or of some other industry, as industries can be in the modern economic system. Thus, coal production, cotton manufacture, general engineering and the manufacture of leather goods would constitute a group of diverse industries.

² A definition of "basic industries" in this sense is given in Part I of the Commission's Report (par. 65). Briefly they are the industries the products of which are "exported" to markets outside the area. They are the foundation of the economy of the area in the sense that without such industries no area could maintain a population in excess of that which could be maintained under a self-sufficing economy.

(other things being equal) transport costs are lowest, or in which (if other things are not equal) the costs of coal delivered in London are lowest. Thus the parts of the coalfields that are developed in any period are determined by a number of factors, among which the cost of transport to the market is important. Again, some industries, such as textile manufacture, require a plentiful supply of soft water. But this condition is satisfied in many parts of the country, so that the existence of the necessary supply of suitable water can never provide a simple and complete explanation of the location of the industry. The fact that a supply of suitable water is a prerequisite merely reduces the number of areas between which a final choice is made; such choice being influenced by other considerations.

A Double Distinction.

It is important, at this stage, to draw a double distinction, the first being between the original forces or prospective advantages that first attract an industry to a particular region and those advantages that are afterwards created by man and tend to foster the growth of the industry in that region. The latter, which are not the monopoly of any region but may be provided in most places, may become so important as to overshadow the former and to enable the industry to flourish long after the original forces have lost their strength, or relative strength. The second distinction is between the forces determining the region, or part of the country, in which the industry is established and those determining the particular localities, within the larger region, in which the industrial establishments are erected. It is the distinction between regional distribution and intra-regional or local distribution.

This double distinction is important for two reasons. In the first place, it will be shown that man-made advantages have been largely responsible for the growth of large conurbations in particular regions, not only because they have tended to concentrate the establishments of the first industry into relatively small areas but also because they have attracted other industries for which the area is not inherently more suitable than other less developed areas. In the second place, it will be shown that even regions selected for the location of many new industries have been determined far less by inherent or natural advantages than by acquired or man-made advantages, one of which is the previous existence of a large conurbation. A conurbation tends to perpetuate its own growth; on the other hand it will be shown that this tendency is itself of such a nature that it can be controlled.

Transport and Power.

The purpose of production is to provide goods or services to the members of a community at the lowest possible total cost. Costs may be divided into three parts, those of collecting the materials, of preparing the product and of conveying it to the consumer. Minerals can only be collected where they lie, and their markets are mainly determined by the relative costs of distribution; for even if such costs are comparatively low, minor differences may be of major significance. Thus the Scandinavian countries and Baltic ports are mainly supplied from the coalfields in the North-East of this country, while Atlantic and Mediterranean ports are supplied from South Wales. Both Durham and South Wales, before the 1914-1918 war, exported nearly one-half of their respective outputs.

In the iron industry differences in the cost of converting iron ore into pigiron are due to differences in management and technique and as a factor in location may thus be regarded as negligible—the most efficient technique was available in all places. The governing factor was the cost of transport. Coal was used as raw material in the manufacture of

coke, which, in turn, was mixed with ore and limestone in the blast furnace. Thus the pigiron industry was attracted to those districts which offered the lowest combined transport costs per ton of pigiron. If the ore had a high content of iron and a relatively large amount of coal was needed to produce a ton of iron, the industry was naturally located near the coal, and on that part of the coalfield which was within easy reach of limestone. Similarly steel production, which needed coal for the gas producer plants, was irresistibly drawn (like all "furnace" industries) to the coalfields where, moreover, the cost of transporting the pigiron was low, if the local iron was of a suitable character.

Such was the explanation of the location of the industry during the greater part of the nineteenth century. But the industry was slowly shifting. Local ores near the coalfields were slowly being exhausted and it became necessary to import the raw material of the rapidly extending steel industry. In some cases the iron ore was imported, and a saving of transport costs was effected by erecting blast furnaces on or near coalfields that were themselves near the coast. But there was a marked tendency to develop the steel industry upon imported pigiron. This was particularly marked in South Wales and Scotland.

Again, the importance of transport costs is shown by the process of specialisation within the steel industry, a process which is explained by the effort to reduce to a minimum the cost of distributing and marketing the product. Thus, for example, the South Wales steel industry specialised in the production of small ingots and bars, the raw material of the tinplate industry, which, in turn, formerly exported nearly three-quarters of its output; the Sheffield steel industry specialised upon cutlery steel and upon forgings &c. required in the finishing industries of the district; the steel industry in the North-East specialised upon the production of steel for ship plates, boiler plates, girders and other materials required in engineering and shipbuilding. More recently, the industry in the West Midlands has concentrated upon the production of motor sheets for the motor car industry of the Midlands. Thus iron and steel production is the centre of groups of industries and in any attempt to measure the changing factors in location, each group should be regarded as a unit.

Finally it should be observed that in recent years a material technical change in the iron and steel industry has exercised a profound influence upon recent geographic trends. The conservation of heat and other economies achieved in modern integrated plants has made it profitable—particularly with the aid of tariffs upon imported iron and steel—to utilise low grade ores in Central and East England. Among those economies is a considerable reduction in the amount of coal required to produce a ton of steel; and this, combined with the fact that the ores have a low content of iron, has led to the establishment of new integrated plants near the ore deposits and remote from the nearest coalfield. This is in keeping with modern trends. Iron ore is smelted in the North of Spain where, presumably, integrated plants will eventually be constructed. Swedish ore is smelted in Sweden. Copper ore, once imported into and smelted and refined in South Wales, is now treated near the mines in the United States of America and elsewhere.

It will thus be seen that the cost of transport has played an outstanding part in determining the location, and changes in the location, of the iron and steel industries—partly the relative costs of transporting the coal to the ore and the ore to the coal, and partly the cost of distributing the product, the latter influencing the type of product produced in a given district. But it should be observed that the method of charging has tended to reduce the cost of transport as a "location" factor. Coal and iron ore, being bulky in relation to value, are placed in a low class

in the railway classification of traffic and charged a relatively low ton-mile rate. Moreover, the "tapering" system of charging, under which the rate per ton mile is reduced as the distance over which the goods are conveyed is increased, tends to reduce the disadvantage of distance and to weaken the centripetal force exercised by the coalfields. Nevertheless, in the smelting and refining of metals and the production of semi-manufactured products, coal is a raw material and a source of power, so that the pull of the coal producing areas, in combination with the areas producing other minerals, is irresistible.

Until recent years coal was also the almost universal source of power employed in other manufacturing industries, so that the mining areas exercised an attracting influence, determined, other things being equal, by the amount of power needed per unit of the product of the industry. Other things were never quite equal. Cheap coal was an advantage, but the coal producing regions offered further advantages to which reference will presently be made, so that many manufacturing industries were attracted to coal producing areas partly for reasons other than the existence of cheap coal. Even before the advent of electricity many important industries flourished at considerable distances from coal mines, their location being influenced to but a small degree by the cost of transport, either of materials or of the finished products. The textile industries provide examples of this fact.

Transport Facilities.

But a clear distinction should be drawn between transport costs and transport facilities, which include convenience and economy of time. Before the discovery of the internal combustion engine and the development of transport by road, industrial traffic was carried by rail and canal. Most of the railways were built, between 1840 and 1860, to link up the relatively populous centres of that period. Apart from London, Hull and Liverpool, all such centres were in or very near coal producing regions, some of which contained several sufficiently large aggregations of people and factories to justify the construction of transverse railways or of railways running almost parallel, at no great distance from each other. The railway facilities created in those days exercised a profound influence upon subsequent industrial development. Industries were established along the paths of the railways. In the larger centres, such as Birmingham and Manchester, both railway and canal facilities were available, and these, combined with other advantages, both natural and acquired, attracted many industries during the remaining decades of the nineteenth century. But even other industries, in which the forces favouring dispersal were strong, were attracted by the existence of transport facilities, and were grouped at different places along the railway lines.

It may thus be stated that while the railways were first constructed to link up the populous centres then existing, they exercised a profound influence upon the distribution of the increase in population until the end of the first decade of the twentieth century. Moreover, the influence of railway junctions was greater than that of other parts, even when such junctions were rendered necessary (as in the case of Crewe) for geographic reasons rather than by the existence of aggregations of people sufficiently large to attract competing railway companies. A railway junction gave the surrounding district a high "nodality." Birmingham, for instance, owes its nodality to railways and (to a less extent) canals. Before these were constructed its central position, remote from the coast and the possibility of coastwise trade, constituted a handicap to industries supplying products to other populous areas in Great Britain, and an even greater handicap to exporting industries.

Cost of Distribution.

It has been shown that transport costs and transport facilities influence the location of an industry mainly by influencing the cost of collecting the materials and the cost of distributing the final product to the market. If the cost of distribution comprises but a small proportion of the value of the product the market for that product will be correspondingly wide and its influence (other things being equal) upon location correspondingly weak. On the other hand, even if the general influence of transport costs is weak, differences in costs between competing areas may have a profound effect upon their relative progress. If the cost of collecting the materials is relatively high, the attraction of the industry to the source of supply will be correspondingly strong.

But there may be many sources of supply, in which case other factors exercise a decisive influence. It is often stated that one such factor is the existence of a supply of labour. Before the influence of labour upon the regional distribution of industry is examined it should be observed that in the case of shipbuilding the decisive influence was the existence of a suitable natural waterway. First the Thames and afterwards the Clyde, Tyne, Tees, Wear, and Mersey revealed their natural advantages for the construction of ships, always increasing in size and complexity, and making evergrowing demands upon the steel, engineering and allied industries. By placing coal and iron ore within easy reach of four of these rivers, nature practically dictated the chief regions to be devoted to modern shipbuilding. And it will be shown that their claims have been strengthened by human effort.

Labour Supply.

The influence of labour upon the regional (as distinguished from local) distribution of industry is probably more difficult to estimate than that of any other factor. It is obvious that the possibility of obtaining an adequate supply of labour is a prerequisite of the establishment of an industry, or part of an industry, in a place favoured by other circumstances. Just as a manufacturer in the nineteenth century avoided places remote from railways, so, too, he avoided places at which there was no opportunity for securing labour. But opportunity did not necessarily imply the pre-existence of labour in a chosen place; if housing facilities existed or could be provided, it was always possible to attract labour from other districts. Many mine owners found it necessary to build cottages for their workers in order to secure the necessary supply of workers, and their example was followed by many manufacturers. In general, however, manufacturing establishments were not tied so rigidly as coal mines to particular localities, while the construction of houses and the provision of other facilities necessitated considerable expenditure of capital and the assumption of risks and responsibilities alien from those associated with manufacture. The result was that industrial establishments were usually placed within easy reach of a supply of labour.

But this action influenced local rather than regional distribution of industry, and provided part of the explanation of the growth of large urban areas; it does not explain why those areas should have been urbanised, rather than areas in other parts of the country. In all the main regions there was an adequate supply of labour for employment in the new and the growing industries, such supply representing not only the natural increase of population but also (as already stated) the surplus created by the increasing efficiency of established industries that were not expanding with sufficient rapidity to re-absorb that surplus. Regions that were unable to attract the new establishments were unable to retain that surplus, while the selected regions were only able to provide the necessary labour by receiving that surplus, for which housing and other

facilities were provided by speculative builders and in other ways. In the former the total increase in population was less rapid than the natural increase: there was net emigration; in the latter the total increase was more rapid than the natural increase: there was net immigration. It may thus be stated, while emphasising the importance of the exceptions, that, in general, the availability of labour was not a significant factor in the regional distribution of industry during the nineteenth century.

Skill.

In some cases, however, the existence of a supply of labour was not merely a condition but also an active influence upon the location of an industry or part of an industry. The growth of the shipbuilding industry on the Clyde produced a large supply of skilled engineers trained in the processes associated with heavy engineering, and the fact that such engineers were available largely explains the growth of other branches of heavy engineering, including the production of heavy machine tools, sugar-crushing machinery and mechanical coal cutters and conveyors. There is, perhaps, no more striking example of the importance of specially trained labour as a factor in location than the heavy chain and anchor industry in the Cradley district of South Staffordshire, presumably the least likely of all places for the production of anchors and ship cables. The earlier and decisive advantage possessed by that area (a supply of iron and of coke most suitable for the industry) has disappeared. Nevertheless, the workers are so expert in their work (which calls for both skill and heavy physical effort) that attempts made to establish a similar industry near the shipyards failed. If an industry requires highly skilled workers and these are already concentrated in one region their existence may exercise a decisive influence upon the location of that industry.

Female Labour.

But that is not the only case in which labour influences the distribution of industry. The cotton industry flourished in South East Lancashire and the neighbouring districts as the result of a combination of several factors none of which was sufficiently important to be decisive. The spinning section of the industry was developed in the southern part of the area, around Manchester, and gave employment to the available supply of female labour, for which reason the weaving section was established farther north, where a large supply of women workers became available with the steady decline in hand loom weaving.

It is possible that, in future, the influence exerted by the existence of a supply of women workers will become a stronger and more active, if not a decisive, factor in the location of industry, but it cannot be confidently asserted that it has already done so to any great extent. Many of the newer nineteenth century industries and of those that have since been born are light manufacturing industries in which power is not so important a factor in costs as in the case of older and "heavier" industries. For this reason they were not so strongly attracted to the coalfields even in the days when steam power enjoyed a monopoly. Many such industries employ female labour and thus congregated early in fairly large towns in which such labour was available. But they were drawn to towns that also offered other advantages. Such industries were established, for example, in Leeds, but not merely or wholly on account of the existence of female labour. Women and girls were already employed in the wool textile industry in the manufacturing towns of West Yorkshire. Leeds, an engineering centre, possessed a reservoir of female labour that could be drawn upon. But a similar reservoir exists in the mining and steel districts of South Yorkshire, such as Sheffield and Rotherham, and has not yet been drawn upon. Leeds attracted the industries employing females because it offered other local advantages. On the other

hand, when the reservoir has been exhausted industrial establishments employing female workers must either draw from surrounding areas (as is done at York) or be transferred to (or be supplemented by additional establishments erected in) other places. Already mining districts in the West Riding are beginning to attract industries employing female labour, partly on account of the growing scarcity of female labour in the larger and more "mixed" towns and partly because such mining districts offer greater advantages of other types than are to be found in other mining districts. But these are preferences shown within a region rather than preferences over other regions. In the latter case special skill rather than sex is the relevant factor.

If, during the period with which this section is mainly concerned, an industry was to be attracted to any region it was necessary that labour should be available, and those districts, within the region, were selected in which there was no serious danger of a prolonged shortage. But (as already stated) it was not necessary that it should already be there, in the form of an unemployed pool. Both labour and the industry were attracted by the same set of influences, and for each the other was to be added to those influences in a dynamic world. The influences to which reference is here made are those advantages that are acquired as the result of industrial concentration and are created by human effort. It is impossible to enumerate all such advantages, which vary from place to place and are partly determined by the character of the main or basic industry or industries. It will be sufficient to submit illustrations.

Economies of concentration.

When several establishments in the same industry are located in the same district they constitute a market for a number of subsidiary industries. These may provide special services or supply miscellaneous materials other than the chief raw material, but including, in many cases, component parts. In an engineering centre the main establishments gather around them numerous subsidiary establishments providing many of the smaller parts that need no longer be made in the former, which is partly an assembling industry. A real economy was achieved when these were made on a large scale for the market provided by a collection of foundry and engineering establishments. Again, the existence of the Liverpool Cotton Exchange, the Manchester facilities for marketing cotton piece goods, the Bradford woollen market, the Glasgow market in pigiron "warrants" and the Birmingham and Swansea Metal Exchanges strengthened the attraction of the districts for their respective industries. Industries other than engineering attracted special branches of the engineering industry which concentrated upon the construction of machinery required by the main industries, such as textile machinery in Manchester, Keighley and elsewhere, and in Birmingham small lathes, capstans and other machinery employed in the light metal industries of the district. The deepening of the main rivers and the protection of their banks strengthened their attraction as shipbuilding centres. The provision, at the docks, of facilities for unloading grain, etc., made Hull one of the important centres of the milling industry at a time when that industry was passing through a very rapid process of concentration, and one of the important centres of the oil and oilcake industry.

The growth of subsidiary industries and facilities of this type, along with the growth in the supply of skilled labour and the existence of transport facilities, affected the cost of collecting materials and the cost of preparing the product for the market and thereby strengthened the attraction of the industrial region which had already been created by the natural advantages. But it also strengthened the attraction, within that region, of the district within which, at first, the combined natural advantages appeared to reach their maximum, and in which the subsidiary industries were established.

Thus, during a period of expansion, the main industry tended to grow like a snowball in such a district, and later, when the rate of expansion declined and technical changes favoured concentration, it continued to grow at the expense of other parts of the country. Nor should it be forgotten that the subsidiary industries of some basic industries were also able to serve other cognate industries, which were attracted to the same district even if the latter were not able to offer decisive natural advantages for such industries. These, in turn, were able, if not to attract further labour from other regions, at least to give employment to the increase in working population beyond that which the existing industries were able to absorb. In this way, as already stated, a district that had reached the limit of specialisation set by the growth in the demand for labour in the main industry, tended to create a greater measure of real diversification than had previously existed, though not, in other industrial areas, so great a measure of such diversification as in the Birmingham area.

Enterprise.

Diversification may have other roots. Many industries are free to make a choice from many sites equally or almost equally advantageous, in most parts of the country. The cost of power and of collecting the raw materials and distributing the product forms but a small fraction of the total cost, though the existence of adequate transport facilities is essential. The labour required calls for no special skill, and the location of such an industry can only be explained in terms of the employers. It may be an industry previously characterised by small-scale production in all parts of the country but, through changes in technique, afterwards permitting large-scale production and, therefore, geographic concentration. The location of the large establishment may thus be the homes of the successful employers who foresaw the new development and utilised their opportunity. Such, for example, is probably the most important part of the explanation of the growth of chocolate manufacture at York, Birmingham and Bristol, of motor vehicle production near Oxford, and of electrical engineering in several parts of the country. The active or exciting cause of location was the "personality" of the pioneering employer, combined with the fact that the first choice suffered from no obvious and important disadvantage. The growth of such industries gave the selected districts an "accidental" diversity of industry which was obviously encouraged by the existence of adequate local services.

Urbanisation.

It has been stated that the growth of subsidiary industries strengthened the nineteenth century tendency towards the concentration of certain industries in certain regions and in selected areas within those regions; but this only partly explains the growth of large urban areas and groups of such areas. The rest of the explanation is to be found in the growth of local services, which employ the remainder of the industrial population. Some of these services are essential in urban areas, while others reflect a rising standard of living. First it may be pointed out that the factories in the nineteenth century were erected as close as possible to the railways; in that way expenditure upon sidings and branch lines was kept low or, if there were no sidings, upon horse transport by road. The working population lived within easy reach of the place of employment, so that the areas immediately surrounding the factories were covered by houses. These created the need for roads, water and drainage schemes and public lighting. Central areas, near the railway station, became the natural centres of the community, and contained the local produce market, the main shopping streets, the business offices and the public buildings.

Such small communities, if they existed before the railways were constructed, followed the canal or river; if they came later they followed the railway and resembled a string of separated beads. But industrial growth

meant that the intervening spaces were filled, so that ultimately they merged to form a single and much larger industrial community. Large warehouses became necessary to store foodstuffs, and the stocks of large shops. The warehouses, like the factories, were erected near the railways, where the pressure upon space became severe. The competition for space raised the value of land and, through rising land values, changed the distribution of the local population and the uses to which the land was devoted. The factory ceased to be the geographic centre of a community composed of its own workers and a few others. The workers in the factories of the main industry constituted a steadily falling proportion of the total working population in the district. The increasing population of the district spread outwards, while the workers in different factories and in other occupations were inextricably mixed up. Local transport facilities became necessary to convey the workers to factory, shop and office, and when these were provided increasing numbers of the working population lived in residential areas, thereby relieving the pressure upon the central areas, and enabling the latter to be devoted in increasing measure to industrial and commercial activity. At the same time it was necessary for a proportion of the workers to live within easy reach of their employment, with the result that it was never possible to clear all the valuable spaces for industry. Occupying valuable space the dwelling-houses could only be let at high rents, which were made possible by the process of sub-letting, or splitting the house into flats; and this resulted in overcrowding and all the evils of congestion.

It has been shown that concentration upon a small area of establishments in a basic industry and in subsidiary industries necessitated certain local industries and services, such as building, road construction, public lighting and transport facilities. It also made possible many amenities and pleasures denied to the remote rural worker, such as theatres, music halls, concert halls; shops with an endless variety of products and services that represented a higher general standard of comfort; schools, medical services, etc. It may be stated, in general terms, that invention and organisation steadily increased man's command over nature and made possible a steady rise in the standard of material comfort; and that the elements representing this rising standard were to be found largely in the towns, in the form of local industries and services from which country dwellers could only benefit by visiting such towns. Thus an increasing proportion of the total industrial population of an urban area was employed in local industries and services.

Further, on account of its geographic position or of historical accident, an urban area might become the centre of regional industries and services, supplementing the local industries and services to be found in each of the surrounding urban areas. In such a case it occupied the position of a regional capital. These regional industries and services were so profitable that, through the resulting pressure upon ground rents and other costs, they checked the growth of the original basic industries, which tended to concentrate upon the surrounding urban areas. Such, for example, is roughly the history of Manchester, Leeds and Glasgow, which became not only the commercial and administrative centres of the regions in which they were situated but also the regional centres of social, cultural and specialised medical activities. In other words, they became the centres of conurbations.

Reference has been made to two types of local activities that may be distinguished though not, in practice, clearly separated, the first consisting of those that are essential in all urban areas, the second of those that represent a rising standard of life. There remains a third type, which is again distinguishable though not separable from the others; and the industries and service of this type may be described as those necessary to combat the evils of over-concentration. They may entail

so much expenditure and local employment as to make further growth of the area in which they become necessary uneconomic, from the national point of view, even while the area continues to attract new industries. It is of the first importance to distinguish (in terms familiar in discussions of local taxation) between industries and services that are "beneficial," and others that are "onerous" in the sense that they have been called into being to remove or mitigate evils created by over-concentration.

Finally it should be observed that when an industry, or part of an industry, was attracted to a district already containing industrial establishments it did not leave the latter unaffected. In the early stages of concentration the effect was probably beneficial if the new industry contained no peculiar feature likely to prejudice any of those already established. They strengthened the man-made advantages enjoyed by all. But a stage was reached in the process of concentration when a further addition tended to add to the costs of existing industries, or establishments in the same industry, which had been attracted to their chosen sites by the circumstances then prevailing. When the addition to costs became serious the owners of the older establishments were driven elsewhere. The study of location is a study not only of attraction but also of repulsion. The repelling force of over-concentration may only be strong enough to prevent further growth or it may be sufficiently powerful to drive the older firms to the periphery of the same industrialised area or to some other part of the country. The recent history of London shows that in a rapidly changing world the problem of relocation of long established industries is an important part of the wider problem of location.

Comparison with Canada.

In the preceding paragraphs an attempt has been made to indicate, in general terms, the main factors determining the regional distribution of industry and population and their local concentration within a region. It may be useful, at this stage, to refer to the difference between the problem of location presented by Great Britain and a relatively new country, of which Canada may be quoted as an illustration.

Canada was developed by an immigrant population which first settled in coastal regions but afterwards penetrated inland to exploit the natural resources of a vast area. Inter-regional migration took place on a large scale relatively to the total population. Some of the migrant population became fishermen, selling the "catch" to the inhabitants of the New England States. Others sought—and discovered—precious metals and other minor metals, which were exported to other countries. Some hunted the beaver, or bought skins from Indian hunters, while others felled timber, which was exported for newsprint and for other uses. But the main development took place later, when the transcontinental railways opened up the vast wheat areas of the central plain and the middle west, and brought the fruits of the extreme west within reach of the British market. The chief exports of Canada were the products of hunting, agriculture, forestry and mining. The production of these (with the exception of mining) needed space; the producing areas were, and must remain, sparsely populated.

The earlier products, such as timber, were conveyed by water to collecting centres on the banks of the St. Lawrence, where they were shipped or transhipped for conveyance to distant markets; while wheat was conveyed by rail to convenient centres for shipment via the great lakes to overseas markets. Thus the centres of collection and transhipment, such as Halifax, Quebec and, on a still larger scale, Montreal and Toronto (which are close to the heart of agricultural Canada) became important centres of population, and in later years Winnipeg, a railway centre, became the central marketing centre for wheat. Being large collecting and distributing centres the river and lake ports, supporting relatively large populations, not only developed secondary industries, but, when the Act of Confederation was followed by

the adoption of a Federal system of protective tariffs, became the obvious centres of manufacture for the Canadian market. Thus the two outstanding characteristics of Canadian development that are relevant to this discussion were, first, that economic development was conditioned by immigration from abroad and subsequent inter-regional migration on a large scale and, secondly, that the exporting industries needed great space, the larger centres of population being the centres of collection and distribution, both of exports and imports. Such centres became subsequently the chief centres of protected manufacturing industries for supplying the home market.

In both respects Great Britain differed from Canada. Reference has already been made to the fact that when the industrial revolution took place the population of Great Britain was already relatively large and widely distributed. Industrial development was conditioned neither by immigration nor even by inter-regional migration on a large scale. The natural resources of the country were such—and so distributed—that its exports were the products of the mining, manufacturing and shipbuilding industries, which fostered large concentrations of the industrial population in coastal regions, while most of its imports—such as wheat and raw cotton—were the products of industries that required much space and could only maintain a sparse and widely distributed population. It is, of course, true that some of the largest British ports, such as Liverpool, Hull and Cardiff, developed mainly as collecting and distributing centres, of both imports and exports, and that most of them later became manufacturing centres (for the home market) of considerable importance. But the chief industrial regions of Great Britain near the coast owed their growth and prosperity to the fact that they exported a large proportion of the output of their basic industries, and that coastal regions, possessing coal, were preferred to inland regions, largely for that reason. In Canada the concentrations of population are at the chief centres of collection and distribution; in Great Britain all except two are coal producing regions, within easy reach of the coast. A decline in a Canadian exporting industry may mean a decline in a vast but sparsely populated area; a decline in a British exporting industry may mean a decline in a small but densely populated area.

Dynamic influences.

The rate of growth of population is determined partly by the net rate of immigration or emigration, but mainly by the surplus of births over deaths. The rapid rate of growth during and after the industrial revolution was due less to the rise in the birth rate than to the fall in the death rate, the latter, in turn, being due to improved sanitation and improved medical services, for which the industrial revolution was itself largely responsible. But there was a limit to the population that the pre-revolution economy could maintain, so that the industrial revolution both fostered a growth of population far greater than the earlier economy could have maintained and created the conditions that could not only maintain a rapidly increasing population but also provide a continuously rising standard of material comfort. Since industrialisation, in its modern sense, was a prerequisite of growth in numbers, it is idle to speculate upon the probable or possible distribution of the present population upon the assumption that the industrial revolution had not taken place. Howsoever distributed the present population would have been too dense to make life, or long life, possible. The growth would have been kept in check either by a very low standard of living and a high death rate or by emigration on a very large scale.

The industrial revolution, while stimulating the growth of population, necessitated a fundamental change in the relative distribution of the increasing numbers. These could not be maintained in agricultural areas, employed in agricultural pursuits: on the other hand, they were needed in the new industries and the new type of commerce. Urbanisation, or the growth of densely populated industrial areas, was therefore inevitable.

So much may be stated without suggesting that the degree of concentration actually reached was either inevitable or desirable, socially or even economically. The explanation of the degree of concentration is to be found (as already stated) in a combination of circumstances that may be summed up in the words natural and acquired or man-made advantages. But these operated in a competitively organised society, which was not yet alive to the wider effects of individual action or conscious of the need for planning, and a society in which the possible effects of the action of newcomers to a place upon the industrial efficiency or competitive position of those already there were wholly disregarded.

The new industries of the nineteenth century were attracted to the coal fields, which were scattered in the North, the Midlands and South Wales. These areas already contained large sections of the population, so that development was possible without long-distance migration provided the rate of development was not too rapid. The agricultural industry and the displaced cottage industries within the region provided a surplus which was available for the new industries. The attraction of the latter was, indeed, so strong as to threaten to denude local agriculture of necessary labour, with the result that agricultural wages in places within reach of the new industries tended to rise relatively to those prevailing in more remote districts and regions. But the time and rate of the new industrial development was not the same in all places. In some areas it started earlier than in others, and when started (whether early or late) it gathered momentum which was afterwards lost. During the period of most rapid expansion it needed a larger supply of labour than the region could itself supply, with the result that labour was attracted from other regions. Thus, for example, the rapid growth of the South Wales mining industry near the end of the nineteenth century was associated with immigration to that area from the South Western counties of England and, to a less extent, from North and West Wales. Some of these went into the mining industry itself, while others entered other occupations, such as dock labour and miscellaneous occupations in the coal exporting ports on the Bristol Channel.

It is impossible, however, to estimate the extent to which even inter-regional migration represented long-distance migration. Regional migration statistics are based upon regions defined for statistical or administrative purposes and supply no information about the places of origin of immigrants and the destinations of emigrants: they only give net figures, that is to say, figures indicating the excess of one movement over the other, and these are obtained by measuring the difference between the actual increase of population and the "natural" increase in a given period. Inter-regional migration may merely mean, in an extreme case, crossing the administrative boundary between two contiguous regions, while intra-regional migration may mean movement across the full "diameter" of a region and, therefore, long-distance migration.

Nor should it be forgotten that some inter-regional migration probably approaches the extreme case, being movement to fill a gap created by an earlier movement, within the receiving region, to the growing industrial centres. Long-distance travel, particularly in the earlier years of the nineteenth century, was more difficult and more of an undertaking than it has since become. But even a series of short-distance migration movements served, in due course, to change the balance of population in the country as a whole. Moreover, evidence other than statistical evidence shows that some long-distance migration took place even in the nineteenth century, and to places other than London. Thus, for example, steel workers from South Wales (where the Siemens process was discovered) migrated to Sheffield, the North East coast and even the Clyde valley when the new process was adopted in those areas, while steel workers from Sheffield migrated to South Wales.

Finally it should be observed that one effect of the nineteenth century industrial development was to create "depressed areas." The cry of the handloom weavers in the early part of the century is so well known as to call for no further comment. The growth of manufacturing industry and of international trade was associated with the relative decline of agriculture. Districts ignored by railways were left high and dry by the new development. But the national growth of industry was so rapid that the local depression usually represented little more than a temporary halt to progress, followed by a rate of growth slower than the national average rate and a continuous migration of the surplus population to districts at which employment was available. In a rapidly developing community there were always to be found industries and districts that needed immigrant labour and, therefore, welcomed the surplus labour of those other districts in which employment increased less rapidly than the population.

CHAPTER II.

POST-WAR TRENDS.

The present chapter contains, in considerable detail and in somewhat technical form, an analysis of statistics relating to the movement of industry and population between 1923 and 1937. It is based to a small extent upon statistics published by the Registrars-General, but mainly upon statistics submitted by the Ministry of Labour to the Commission and relating to insured persons. The conclusions to which the analysis leads are interspersed with the discussion, but the outstanding facts are summarised at the end of the chapter.

I am aware of some of the dangers incurred in attempting to measure trends from the statistics for two years separated by a long interval, for the figures in one or both of the selected years may be seriously affected by temporary influences. To compare 1937 with 1923 is to assume that in each of the two years national figures are representative and that the relationship between the figures for different regions is normal. The danger of error would be particularly serious if comparisons were made between the numbers of people actually employed. The use of statistics of insured persons rather than of insured persons in employment (which, indeed, are not available in the necessary form) largely reduces the effects of temporary influences, but it is clear that these should not be used for the purpose of measuring changes in employment. For the purpose of this chapter, which is to describe broadly the trend of industry (as represented by the number of insured persons), an analysis based upon the figures for 1923 and 1937 seems to me to be justified.

The Distribution of Population.

Between 1923 and 1937 the rate of increase in the number of insured workers was considerably higher than that of the population as a whole. The total population of Great Britain increased by 6 per cent., the population between the ages of fifteen and sixty-four by 11 per cent., and the number of persons insured against unemployment, between the ages of sixteen and sixty-four, by 22.3 per cent. The difference between the first two rates is mainly due to the fall in the birth rate. The absolute fall in the number of children under fifteen was not wholly offset by a relatively large increase in the number of people above sixty-four years of age. The difference between the second and third rates cannot be explained so easily. In the first place it is known that during the intercensal period 1921 to 1931 the total population increased by approximately 5 per cent., the population aged sixteen to sixty-four by

9 per cent., and the gainfully occupied population between the ages of sixteen and sixty-four by 10½ per cent. It is probable, therefore, that for the period 1923 to 1937 the gainfully occupied population between the ages of sixteen and sixty-four increased more rapidly than the total population between those ages. In the second place it is clear that during the same period the insured population was increasing more rapidly than the gainfully occupied population; it must, indeed, have increased nearly twice as quickly. The increase is not a mere statistical increase to be explained by periodic extensions of the unemployment insurance scheme, for the figures for 1923 and 1937 from which the increase of 22.3 per cent. is derived are comparable figures. It is clear that the proportion of the working population engaged in the insured trades increased. It is known, for example, that the number of agricultural workers (who did not become insured against unemployment until May, 1936, and therefore are not included in the statistics), as well as the number of permanent railway workers' (who are not insured) declined during this period.

The disparity between the rates of increase in the total population and in the number of insured persons was not uniform throughout the country. The following table shows, for each area,³ the difference between the rates of growth in the two classes as well as the relative growth in the insured population. From the first two columns we see, for example, that between 1923 and 1937, the total resident population of London and the Home Counties increased by 16.4 per cent., while the insured population increased by 42.7 per cent. The third column shows the rate at which the insured population has grown in each area *in relation to the total population*. Thus we see, for example, that the insured population of London and the Home Counties has grown by 23 per cent. in relation to the total population of that area. In other words, the growth of the

	Total Resident Population 1937 (P) Indices 1923=100.	Persons insured against unemployment (16-64) (ex-agriculture) 1937. (I).	(I) ÷ (P).
London and Home Counties ...	116.4	142.7	123
Midland Counties ...	110.4	128.2	116
West Riding, Notts. and Derby	105.0	115.0	110
Mid-Scotland ...	103.7	109.5	106
Lancashire ...	99.8	107.6	108
Northumberland and Durham...	96.5	104.7	109
Glamorgan and Monmouth ...	88.8	95.7	108
Rest of Great Britain ...	104.5	127.8*	122*
Great Britain ...	106.3	122.3	115

* These high figures may be partly accounted for by the exclusion of agricultural workers from the statistics. If they were included, the rate of increase in the insured population would be more heavily reduced in the rural than in the urban areas, and so probably more heavily in the "Rest of Great Britain" than in the seven specified areas.

³ The areas are those selected by the Ministry of Labour. (See paragraph 53 of Commission's Report.)

insured population, in relation to the total population, has been such that, if the total population of the area had not changed, the number insured would have increased by 23 per cent.

The table shows that in all the areas the number of insured persons has grown more quickly, or declined less quickly, than the total population,⁴ but it also shows that the insured population has grown, in relation to the total population, much more quickly in the rapidly expanding areas than in the other areas. In other words, the proportion of the total population that is insured against unemployment has increased at a higher rate in the rapidly expanding areas.⁵ This may, of course, simply mean that the proportion of the gainfully occupied population that is insured against unemployment has increased more rapidly in the rapidly expanding areas, but it is unlikely that this is a complete explanation. The proportion of the total population that is gainfully occupied has also, probably increased more rapidly in the rapidly expanding areas than in the other areas.⁶

The table suggests that the relatively rapid industrial growth of the London and Home Counties and Midland areas has been facilitated, if not indeed made possible, not only by net migration into the former and the absence of net migration out of the latter but also by the entry into gainful occupations of sections of the population that had previously not been so occupied. In the less fortunate areas this may have happened only to a smaller extent, or perhaps not at all. Possibly some women and elderly men (under 65) in the less prosperous areas, who would have been employed or at least seeking employment if they had been in the more prosperous areas, have given up the attempt to find employment, while a number of young people may never have entered the unemployment insurance scheme on account of their inability to find even a first job.

There is also another possible explanation. It is probable that migration into London and the Home Counties tended to increase the proportion of the population in the age-group sixteen to sixty-four, and that it affected especially the lower part of this age-group, which contains most of the unmarried women and in which, for this and other

⁴ There are some inaccuracies (but probably only slight ones) involved in comparing the rates of increase of the two quantities in the various areas. See Questions 2534-38 and paragraphs 5 and 6 in Appendix I of the evidence of the Ministry of Labour.

⁵ In addition to this, we have seen that the proportion of insured persons in employment has increased in the two most rapidly expanding areas, and fallen considerably in Glamorgan and Monmouth. Thus the proportion of the population in insurable employment has increased more quickly in the more rapidly expanding, than in the less rapidly expanding and contracting, areas, for two reasons.

⁶ The following table suggests that this has been the case.

*Changes in the total, and in the gainfully occupied, population, 1921-31.
Enumerated Population 1931.
(1921=100).*

<i>Region.</i>	<i>Total (T).</i>	<i>Gainfully occupied. (O)</i>	<i>(O)÷(T).</i>
South East	109.8	116.4	106
Midland	106.9	111.5	104
Northern	103.1	106.2	102
East and South West	102.4	104.2	103
Scotland	99.2	98.1	99
Wales	97.6	98.5	100
Great Britain... ..	105.5	108.4	103

The above regions are the regions of the Registrars General.

reasons, the proportion of insured persons is highest. In the less rapidly expanding and the contracting areas net emigration may have produced the opposite results.⁷

The Industrial Structure.

The preceding paragraphs are concerned with trends in the regional distribution of the total population and in particular of persons insured against unemployment. The next step is to relate population trends to industrial trends. It has been shown that the total number of insured persons increased between 1923 and 1937 by 22.3 per cent. In some industries the number increased at a higher rate and in others at a lower rate than the national rate, while in some other industries there was an absolute reduction in the number of insured persons. For the purpose of analysis the industries of the country may be divided into two main classes, namely (1) those which send part of their products to markets outside the area of production and therefore permit of geographic concentration and (2) those that are essentially local in character and are therefore to be found in all communities. The first have already been termed basic industries and the second local industries. Again, for the purpose of this analysis, industries may be divided into two groups, namely those in which the number of insured persons declined, between 1923 and 1937, either absolutely or relatively to population, and those in which the number grew at least as rapidly as the total population increased. These may be termed, for convenience, the contracting industries and the expanding industries, always remembering that the terms are used in relation to the number of insured persons as distinguished from volume of output.

During the period under consideration (1923-37) the most important of the contracting industries were coal mining; the textile industries (including cotton, wool and certain other textile industries, such as jute and lace); shipbuilding and marine engineering and iron and steel production. Employment in those industries will presently be examined. But it should be noted that other industries also contracted during the period, including the construction of carriages and carts. The number employed in railway transport and in agriculture diminished, but the statistics of the Ministry of Labour do not include the workers employed in those industries.⁸ The most important industries (including both basic and local industries) in which the number of insured workers increased rapidly were the building industry, including the industries supplying building materials and those engaged in making furniture and supplying wallpaper and other products associated with housing development; the motor vehicle, cycle and aircraft industry and the road transport industries; the various electrical industries, including that supplying wireless apparatus; the silk and rayon industries; and, finally, a group of services and industries closely associated with a rising standard of living and including the distributive trades, hotels, boarding houses, clubs; laundries and cleaners; industries providing entertainment and manufacturing toys and the requisites of various games and sports.

Contracting Industries.

As a first general statement it may be pointed out that in those areas in which the chief contracting industries are located the insured population tended either to decline, or to expand less rapidly than in the country as a whole, while those areas in which the insured population increased more

⁷ No attempt is made to discuss the complex nature of the effects of migration upon the age-composition of the population.

⁸ Among railway workers only the non-permanent group are insured against unemployment, while agricultural workers were only recently brought into the insured group.

rapidly than in the country as a whole have apparently attracted the rapidly expanding industries. We may first consider the first part of this general statement. The following table shows, for each of a number of areas, the percentage of the total insured population that was engaged, in July 1923, in the specified contracting industries. It will be observed that, in general, the higher the proportion of the total insured population that is employed in the five declining industries the lower the rate of growth of that population.

Numbers insured in five important declining industries as per cent. of total numbers insured in each area. July, 1923.¹

	Great Britain.	London and Home Counties.	Midland Counties.	W. Riding, Notts. and Derby.	Mid-Scotland.	Lancs.	Northumberland and Durham	Glamorgan and Monmouth
Coal-mining	11.2	0.1	8.8	21.0	10.7	6.6	37.6	51.4
Cotton ...	5.2	0.0	0.2	3.5	2.5	26.5	0.0	0.1
Wool ...	2.4	0.1	0.5	15.1	0.2	0.5	0.1	0.1
Shipbuilding and ship-repairing	2.2	0.9	0.0	0.1	7.3	1.4	8.9	2.1
Iron and steel manufacture ...	2.1	0.05	2.8	3.7	3.6	0.8	2.6	5.1
Total of above 5 industries	23.1	1.1	12.3	43.4	24.3	35.8	49.2	59.1

It will be observed that none of the areas depended so largely upon one industry as the counties of Glamorgan and Monmouth, where more than one half of the insured population were engaged in coal mining and nearly sixty per cent. were engaged in three of the five declining groups. The liability of the region to prolonged depression is obvious from these figures. The seriousness of the position of Northumberland and Durham is also clearly shown. But the table does not fully reveal the situation. In the first place it does not include all the contracting industries. Thus, for example, marine engineering, an important industry on the North East coast and the Clyde, is included in the Ministry of Labour evidence with constructional engineering in one industry group. Again it will be observed that the ratios in Mid-Scotland differ from the national ratios less than those in any other region. But Mid-Scotland comprises two distinct industrial areas with different characteristics. Separate statistics for the western district suggest greater liability to prolonged depression than those shown for Mid-Scotland as a whole. The West Riding, Notts., and Derby area comprises at least two distinct industrial areas, namely West Yorkshire, where the industrial structure is based upon wool textiles and a declining mining industry, and South Yorkshire, Notts., and Derby, which is largely based upon a specialised and expanding steel industry and a more prosperous mining industry. Thus the table does not tell the full story, but it nevertheless shows the broad connection between the rate of growth of the insured population in an area and the degree to which

¹ Calculated from Ministry of Labour, Tables IV and V, pages 293-4 of Evidence.

that area was dependent upon one or more of the five declining industries.¹⁰ If we exclude the West Riding, Notts., and Derby area, it will be seen that the lower the proportion of the insured population attached to the five most important declining industries in 1923, the greater was the subsequent expansion. In London and the Home Counties, it will be noticed, the proportion attached to the five industries was insignificant.¹¹

Having established the first part of the first general statement, namely, that in the areas in which the declining industries were located the insured population increased less rapidly than in the country as a whole, it is now necessary to examine the second part of the same statement, which is that the areas in which the insured population increased at a higher rate than in the country as a whole apparently provided a greater attraction for the expanding industries than that provided by the relatively declining areas.

To say that the relatively prosperous areas have provided a greater attraction for the expanding industries may be interpreted as meaning that they have had more than their "fair" share in the expansion of these industries. A "fair" share in the expansion of an industry or group of industries may, however, itself be interpreted in at least two different ways, as meaning that the total national expansion in the particular industries has been divided between the areas in proportion either to (a) the number of insured persons attached to the particular industries in each area in 1923, or to (b) the total number of insured persons in each area in 1923. For an area to have a "fair" share in the expansion of a particular industry or group of industries in the first sense simply means that the percentage rate of increase in the particular industries has been the same in the area as in the country as a whole. On the other hand, an area may have had more than its "fair" share, in the second sense, even if the percentage rate of increase in the particular industries has been no higher, or indeed lower, than in the whole country, simply because a relatively high proportion of the insured workers in the area was attached to the selected industries in 1923; and similarly an area that had a low proportion of its workers in the particular industries in 1923 may have had less than its fair share (in the second sense) even if the percentage rate of increase in the selected industries has been as high as, or higher than, in the country as a whole.

The more rapidly expanding areas have, in general, provided a greater attraction, in the second sense, for the expanding industries than have the less rapidly expanding areas. We might expect to find that this has also been true in the first sense, i.e. that the expanding industries have expanded at a higher percentage rate in the more prosperous than in the less

¹⁰ It is perhaps desirable to stress the limitations of regional statistics based upon regions differently defined for different purposes and upon industries classified according to rate of national progress. Thus, e.g., while output and employment in the coal mining industry were seriously contracted the regional incidence of the depression was very unequal. The West Riding, Notts. and Derby region in the above table not only included at least two distinct industrial areas but also two coal mining districts with differing trends. For this reason the greatest caution must be exercised in making any general statements. Thus, e.g., while the insured population of the region as a whole increased between 1923 and 1937 by fifteen per cent., as compared with less than five per cent. in Northumberland and Durham, and nine and a half per cent. in Mid-Scotland, which is apparently less vulnerable, it should be pointed out that both coal mining and iron and steel production in the greater part (though not the whole) of the Midland area escaped that decline in coal mining and iron production suffered by the North east coast and the Clyde areas. Nevertheless, if examined with caution, the above table is one of the most instructive in an investigation of post war trends.

¹¹ It must be remembered that, other things being equal, the larger the insured population in an area the smaller may we expect the proportion in one industry or in a small group of industries to be. This may help to explain the two extreme cases of London and the Home Counties (by far the largest of the seven areas) and Glamorgan and Monmouth (by far the smallest).

prosperous areas. Two reasons might be advanced. First, the development of electrical power together with the great and still growing attraction of the London market might be expected to have caused the expanding basic industries to grow more quickly in London and the Home Counties than elsewhere. Secondly, we might expect to find that local industries have expanded at a greater proportionate rate in the rapidly expanding, prosperous areas, since their size must depend largely on the size of the population and on its purchasing power.

It does not, however, follow inevitably from the fact that the total numbers of insured persons in certain areas have expanded relatively quickly, that the expanding industries in those areas have also expanded relatively quickly. Let us suppose that a community consists of two distinct areas A and B, that in A one half of the occupied population are employed in declining industries and the other half in a miscellaneous group of expanding industries, and that in B all the occupied population are employed in the same miscellaneous group of expanding industries. Let us further assume that the population of the community as a whole is stationary. It is clear that the miscellaneous group may expand at the same rate in both A and B, and that if they are to expand at all it can only be by drawing upon the unemployed workers in the declining industries of A; that is to say, there will be migration both from A to B and from the depressed industries to the expanding industries within A. The same statement will be true if the population of the community is increasing but the rate of expansion of the expanding industries is higher than the rate of growth of the population. For this reason it does not necessarily follow that because the growth of population in London and the Home Counties has been accelerated by immigration from other parts of the country the expanding industries of that area have expanded at a higher rate than in the areas from which the immigrants have been drawn. It is conceivable that in London and the Home Counties the miscellaneous group of expanding industries merely formed a much larger part of the industrial system than in other areas.

Two facts may be mentioned at this stage which, while proving nothing, do suggest that what actually happened corresponds closely to the hypothetical case just described. The first is that, of the twenty-three industries specified in the Ministry of Labour's evidence as having shown a more rapid expansion (in Great Britain) than all industries taken together, as many as eighteen were already heavily weighted in London and the Home Counties in 1923, that is to say, a higher proportion of the total insured population of the area was attached to those eighteen industries than in the country as a whole. The second fact is that only nine of the twenty-three rapidly expanding industries expanded more quickly in London and the Home Counties than elsewhere. These facts suggest at least that the problem may justify further investigation.

Local Industries.

We may first investigate the group known as local industries. From the forty-five industries distinguished by the Ministry of Labour it is possible to select seven that are mainly, though not wholly, local industries. These are (1) the distributive trades; (2) building; (3) gas, water and electricity supply; (4) tramway and omnibus service; (5) road transport (other than tramway and omnibus service); (6) laundries, job dyeing and dry cleaning, and (7) bread, biscuits, cakes, etc. The following table¹² shows the percentage rates of change between 1923 and 1937 in the number of insured persons in each of these industries and in all seven taken together. Particulars are given for the country as a whole and for each of the seven areas under consideration. The last column shows the rate of growth (or decline) for all industries taken together.

¹² Compiled from Ministry of Labour Tables IV-XII, p. 293 et seq., of Evidence.

	Distribu- tive trades.	Building.	Gas, water and electricity supply.	Road transport other than tram and bus service.	Tramway and omnibus service.	Laundries job-dyeing and dry cleaning.	Bread, biscuits, cakes, etc.	Total seven " local " industries.	Total all industries.
London and Home Counties	+ 74·4	+ 41·6	+ 48·9	+ 24·9	+ 37·2	+ 58·5	- 4·3	+ 54·2	+ 42·7
Midland Counties ...	+ 69·4	+ 74·7	- 6·1	+ 89·5	+ 189·3	+ 136·7	+ 42·7	+ 67·2	+ 28·2
West Riding, Notts. and Derby	+ 75·0	+ 57·5	+ 23·4	+ 102·1	+ 149·1	+ 108·2	+ 16·8	+ 68·8	+ 15·0
Mid-Scotland	+ 44·5	+ 51·2	+ 15·1	+ 10·6	+ 92·3	+ 51·7	+ 25·1	+ 42·8	+ 9·5
Lancashire... ..	+ 50·2	+ 42·8	+ 34·9	+ 19·7	+ 142·8	+ 79·8	+ 21·1	+ 47·4	+ 7·6
Northumberland and Dur- ham	+ 59·6	+ 62·7	+ 41·9	+ 56·3	+ 258·4	+ 56·9	+ 16·7	+ 62·8	+ 4·7
Glamorgan and Monmouth	+ 74·5	+ 19·8	+ 30·7	+ 96·4	+ 196·1	+ 51·6	+ 9·5	+ 58·8	- 4·3
Great Britain	+ 66·3	+ 51·4	+ 32·6	+ 43·1	+ 91·7	+ 66·6	+ 12·4	+ 56·8	+ 22·3

Note.—Italics show a rate of increase equal to, or greater than, the corresponding rate in London and the Home Counties.

The table calls for several comments. It will be observed that in every area the growth in the local industries was more rapid than that for all industries, but that there is no statistical connection between the two rates of growth. In London and the Home Counties the rate of growth in all industries was much higher and in local industries was lower than in the country as a whole. In West Riding, Notts. and Derby the rate of growth in all industries was lower and in local industries much higher than in the country as a whole. Again, it can be shown that in each of the five areas that expanded more slowly than the country as a whole the rate of growth, in relation to the total insured population, in each of the seven local industries, was higher than in London and the Home Counties. Moreover, the table shows, broadly, that, relatively to their size, the local industries in most other parts of the country expanded more rapidly than in London, where the growth in the number of insured workers and in economic activity has been popularly associated with the expansion of local services. (It is interesting to note that the least rapid rates of increase took place in London and the Home Counties, Mid-Scotland, and Lancashire, the three areas that were already best supplied with local industries in 1923, i.e., that had the highest proportions of their insured workers in the local industries.) Even when allowance is made for the difficulties involved in interpreting the statistics, it is evident that the relative growth of London and the Home Counties cannot be explained by the growth in the seven local industries specified in the table.

Rapidly Expanding Basic Industries.

We may next examine the expanding basic industries. Of the 45 industries distinguished by the Ministry of Labour, 23 expanded more rapidly in Great Britain than all industries together, and of this total six were local industries. The following table shows, for each area, the percentage rates of growth in the remaining rapidly expanding industries (excluding public works contracting) taken together, and the percentage rates of growth in all industries are also shown for comparison. Again there is no obvious relation between the rates of growth in the 16 rapidly expanding basic industries and in all industries. In London and the Home Counties, for example, the rate of growth of the 16 industries was lower than in the Lancashire and the West Riding, Notts. and Derby areas, and not much higher than in Northumberland and Durham, while the rate of growth was only slightly higher in the Midland counties than in Glamorgan and Monmouth.

	Great Britain.	London and Home Counties.	Midland Counties.	W. Riding, Notts. and Derby.	Mid-Scotland.	Lancs.	Northumberland and Durham	Glamorgan and Monmouth
Total, 16 industries	66	69	51	75	46	86	63	49
Total, all industries	22	43	28	15	10	8	5	4

The details for the individual industries show that in only one case (brick, tile, pipe, etc.) was the rate of growth higher in London and the Home Counties than in any of the other areas. Rates of growth are, of course, misleading; an increase from ten to 20 represents a rate twice as high as an increase from 100 to 150. In the case of motor vehicles, cycles and aircraft the rate of growth in London and the Home

Counties, where the industry is very large, is only (and there only slightly) exceeded in Glamorgan and Monmouth where the industry is very small. Nevertheless the details show that in the case of most industries the rate of growth in London and the Home Counties is exceeded in one or more areas in which the industries are comparable in size.

We have seen that there is no clearly marked tendency for the expanding basic industries, or for the local industries, to expand more quickly in the more rapidly expanding areas, i.e., that those areas have not, in one important sense, provided a greater attraction for the expanding industries than that provided by the relatively declining areas. This suggests, although it does not prove, that in individual industries in general the rate of expansion was, on balance, no greater in the more prosperous than in the more depressed areas, or in other words that the divergence between the rates of growth in the various areas may be almost completely accounted for by the difference, in 1923, in their industrial structures. This possibility is strengthened by the fact that both in London and the Home Counties and in the Midland Counties only 25 of the 45 industries distinguished in the Ministry of Labour's evidence expanded more quickly than in the country as a whole, and that in every other area, except Mid-Scotland, at least 23 of the 45 industries expanded more quickly than in the country as a whole.¹³ In some cases, however, an industry in an area is very small, in other cases very large. Moreover, some of the industries in an area, counted as having expanded more rapidly than in the country as a whole, have only just accomplished this feat, while others have done it by a wide margin. It is therefore not yet possible to say that the divergence in the rates of growth of the various areas can be entirely accounted for by the differences, in 1923, in their industrial structures.

A further calculation has therefore been made, and the results are shown in the following table. The first column shows the percentage rate of change in the insured population that actually occurred in each area. The second column shows the rate of change that would have occurred if the numbers insured in each industry had changed in each area at the same rate as in the country as a whole, i.e., if each area had had its "fair share" (in the first sense described in an earlier paragraph) in the absolute expansion or contraction of each industry.¹⁴ The third column is obtained by subtracting the figures in the second column from those in the first column. It gives some idea of the gain (+) or loss (-) accruing on balance to each area, as a result of the proportionate rates of change in the various industries being different from the national rates—as a result, in other words, of what may be called "shifts" of particular industries towards or away from the areas. (A "shift" may be defined as the actual change in the number attached to a particular industry in an area *minus* the change that would have taken place if the industry had expanded or contracted at the same rate in the area as in the country as a whole. A "shift," in other words, is the amount by which the actual expansion in an industry in an area exceeds or falls short of the "fair" share of the area in the national expansion of the industry.)

¹³ The details are: W. Riding, Notts. and Derby, 28; Mid-Scotland, 11; Lancashire, 25; Northumberland and Durham, 23; Glamorgan and Monmouth, 24.

¹⁴ For the purpose of this table, the industries and services that come under the heading "all other industries and services" in the Ministry of Labour's evidence have been counted as one industry. This group included about 17 per cent. of the total number of insured persons in Great Britain in 1937, and the proportion varied between 12 per cent. and 19 per cent. in the various areas. The rate of increase between 1923 and 1937 was 18.5 per cent. in Great Britain, and this rate varied between 11 per cent. and 19 per cent. in the various areas. It must also be remembered that many of the industries in the Ministry of Labour's evidence are in reality groups of industries, the composition of which may vary from one area to another.

Change in number insured, 1923-37, as per cent. of number insured in 1923.

	I.	II.	I—II.
London and Home Counties ...	+ 42.7	40.2	+ 2.5
Midland Counties ...	+ 28.2	29.2	- 1.0
W. Riding, Notts., and Derby...	+ 15.0	8.9	+ 6.1
Mid-Scotland ...	+ 9.5	18.1	- 8.6
Lancashire ...	+ 7.6	11.0	- 3.4
Northumberland and Durham...	+ 4.7	3.6	+ 1.1
Glamorgan and Monmouth ...	- 4.3	0.5	- 4.8
Great Britain ...	+ 22.3	+ 22.3	—

I. Actual change.

II. Change that would have occurred if number insured in each industry had changed at same proportionate rate in each area as in the whole of Great Britain.

The table confirms what the earlier analysis suggested. The gains or losses due to the "shifting" of industries are, on balance, unimportant, the most marked exceptions occurring in the Mid-Scotland, and in the West Riding, Notts. and Derby areas. There is no clearly marked tendency for the rates of expansion to be greater in the rapidly expanding areas, and smaller in the other areas, than they would have been if each industry had expanded at the same rate in each area. The divergence between the rates of growth in the various areas may be largely explained by the varying patterns of industry in 1923.¹⁵

Certain shifts have, of course, taken place. General engineering, for example, expanded in London and the Home Counties and in the Midland counties, but declined in every other area; the coal-mining industry suffered more severely in South Wales and Lancashire than in the West Riding, Notts and Derby area; while the hotel and allied industries showed a much higher rate of increase in the "Rest of Great Britain" than elsewhere.

As an example of the way in which the shifts into and out of particular areas have, in general, roughly cancelled each other out, we may give the figures for the most important shifts into and out of London and the Home Counties. The industries showing the largest inward shifts were: the distributive trades (31,000); general engineering, etc. (29,000); dress-making and millinery (19,000); miscellaneous metal goods industries (15,000); motor vehicles, cycles and aircraft (14,000); chemicals (including explosives, oil, paint, soap, ink, etc.) (9,000). The industries showing the largest outward shifts were: tramway and omnibus service (25,000); building (22,000); hotel, boarding house, etc., service (16,000); road transport (other than tramway and omnibus service) (10,000); printing,

¹⁵ It should be remembered that the whole analysis refers to insured persons, whether employed or unemployed, and that, for example, the proportion unemployed fell, between 1923 and 1937, in London and the Home Counties and in the Midland Counties, and rose markedly in Glamorgan and Monmouth. This does not however necessarily mean that, if the same analysis were carried out in terms of employment, the more prosperous areas would show marked inward shifts and the less prosperous marked outward shifts. Thus, for example, although the figure for Glamorgan and Monmouth in column I of the table would be greatly reduced from -4.3 per cent. to -20.5 per cent., the figure in column II would also in all probability be greatly reduced, since in the coal-mining industry in the country as a whole the number of insured persons in employment showed a much more marked proportionate fall between 1923 and 1937 (-40.6 per cent.) than did the total number of insured persons attached to the industry (-28.0 per cent.).

publishing and bookbinding (9,000).¹⁶ On balance there was a net shift of only 60,000 into London and the Home Counties, representing 2.5 per cent. of the number insured in that area in 1923. It should not, however, be forgotten that the statistics refer only to insured persons and do not include non-insured workers employed in the business professions, in the central offices of national organisations, in central administration, etc. Although complete statistics for this group are not available there appears to be little doubt that the rate of increase of the group has been higher than in the country as a whole.

It may be noted in passing that the heavy and intermediate basic industries have shown marked inward shifts, while among the light basic industries the net total of inward shifts was relatively small. This is evident from a study of the following table, the exact meaning of which is described in the explanatory notes. The net inward shift in the light industries was small, both absolutely and in relation to the total number of insured persons in the industries.¹⁷

	Insured persons, aged 16-64, in London and the Home Counties, (excluding agriculture). (Thousands).		
	1923.	Increase 1923-37.	Net total of shifts, 1923-37.
7 Local Industries	840	+ 456	- 28
11 Heavy Basic Industries	278	+ 103	+ 58
7 Intermediate Basic Industries... ..	142	+ 81	+ 31
19 Light Basic Industries	588	+ 261	+ 12
Public Works Contracting	30	+ 24	- 19
All other Industries and Services	542	+ 107	+ 7
Total	2,421	+ 1,032.5	+ .60

Notes.—(1) The third column represents the difference between the actual increase in each group and the increase that would have taken place if the number of insured persons in each industry taken separately had changed at the same rate as in Great Britain.

(2) The "heavy" basic industries are those basic industries in which the number of insured females was less than one-tenth of the total number of insured persons at July, 1937. In the "intermediate" basic industries the proportion of females exceeds one-tenth but is less than one-third; and in the "light" basic industries the proportion of females exceeds one-third.

(3) Hotel, etc., service is included among the light industries. In this industry there was an outward shift of 16,000, the number insured in 1923 being 117,000.

We may now bring together the results that have already been obtained. These are shown in the following table, in which some additional figures are also given.

¹⁶ There was also an outward shift of 19,000 in public works contracting.

¹⁷ This statement remains true even if hotel, etc., service is excluded from the light industries.

	Great Britain.	London and Home Counties.	Midland Counties.	West Riding Notts and Derby.	Mid-Scotland.	Lancs.	Northumberland and Durham	Glamorgan and Monmouth
I. Per cent. insured in 1923 in :—								
7 "local" industries	24	35	16	14	25	19	16	11
16 rapidly expanding "basic" industries	14	21	26	9	10	9	6	6
5 rapidly declining "basic" industries (see table on page 268) ...	23	1	12	43	24	36	49	5
18 other industries† ...	39	43	46	33	40	36	28	2
All industries ...	100	100	100	100	100	100	100	100
II. Per cent. increase (+) or decrease (—) 1923-37 :—								
7 "local" industries	+ 57	+ 54	+ 67	+69	+43	+47	+ 63	+ 51
16 rapidly expanding "basic" industries	+ 66	+ 69	+51	+75	+46	+86	+ 63	+ 41
5 rapidly declining "basic" industries	- 25	- 4	-28	-15	-31	-28	- 29	- 31
18 other industries† ...	+ 14	+ 21	+17	+15	+ 5	+ 2	+ 18§	+ 21
All industries ...	+ 22	+ 43	+28	+15	+10	+ 8	+ 5	- 4
III. "Hypothetical" increase† 1923-37, per cent. ...	+ 22	+ 40	+29	+ 9	+18	+11	+ 4	+ 1
IV. Per cent. insured in 1937 in :—								
7 "local" industries	30	38	20	21	33	26	25	22
16 rapidly expanding "basic" industries	19	25	30	14	13	16	9	6
5 rapidly declining "basic" industries	14	1	7	32	15	24	33	41
18 other industries† ...	37	36	42	33	39	35	32	31
All industries ...	100	100	100	100	100	100	100	100

† This group includes (a) all those separately distinguished basic industries, other than the 5 rapidly declining basic industries, that declined, or expanded at less than the national rate (+22.3 per cent.), in Great Britain; (b) public works contracting; (c) a large group of industries which were included, in the Ministry of Labour evidence, under the heading "all other industries and services" and which includes both "basic" industries (some rapidly expanding) and also some industries, such as "local government service," which should probably be called "local."

† i.e., the rate at which the number of insured persons in an area would have increased if each industry had expanded (or contracted) in the area at the same rate as in Great Britain.

§ The high rates of increase in the "18 other industries" in Northumberland and Durham and in Glamorgan and Monmouth may be accounted for by high rates of increase in those areas in "public works contracting" (+377 per cent. and +333 per cent. as compared with +142 per cent. in Great Britain). If this industry be excluded, the expansion in the remaining seventeen is seen to have been considerably lower in the two areas than in Great Britain.

Four groups of industries are distinguished, the 7 local industries, the 16 rapidly expanding basic industries, the 5 rapidly declining basic industries (all of which have already been mentioned) and a fourth group of 18 other industries, the composition of which is explained in the note below the table.

The table may best be appreciated if we first consider Section II. It is seen that, if each group of industries is taken separately, there is little connexion between the rates of increase, in an area, of the group and of all industries taken together. The group does not necessarily increase more rapidly in a prosperous, than in a declining area.¹⁸ (The relatively small rate of decline in the five rapidly declining industries in London and the Home Counties is of little significance, since the proportion of insured persons in those industries was almost negligible.)

Section II therefore offers no explanation of the disparities in the rates of growth of the various areas. This must be looked for in Section I, which shows the proportion of the insured population in each area that was attached to each of the groups of industries in 1923.¹⁹ We see that London and the Home Counties had much more than their "fair" share in the local industries and in the rapidly expanding industries. (35 per cent. and 21 per cent. respectively of the total insured population of the area were insured in these two groups of industries as compared with only 24 per cent. and 14 per cent. in Great Britain as a whole.) On the other hand, the area had an insignificant proportion in the rapidly declining industries.

The Midland counties had less than their "fair" share in the local industries, but much more in the rapidly expanding industries (26 per cent. as compared with 14 per cent. in Great Britain) and much less in the rapidly declining industries.

All the other areas (except Mid-Scotland) had far more than their "fair" share in the rapidly declining industries, and far less in the local and rapidly expanding groups. In Mid-Scotland, on the other hand, the pattern was very similar to the national pattern.

Section I thus explains (except in the case of Mid-Scotland) what Section II does not. It explains why the two most rapidly expanding areas

¹⁸ It may be noted that this statement is not true in the case of the "18 other industries" if public works contracting be excluded. (See Note § below table). The remaining seventeen industries as a whole definitely expanded more rapidly in the prosperous, than in the depressed areas. There were in fact exceedingly high rates of increase in public works contracting in Glamorgan and Monmouth and in Northumberland and Durham. This may reflect one or more of three things:—

(i) It may mean that there were much larger increases in public expenditure in the two areas than in the country as a whole, and that this was mainly responsible for the prevention of large net "shifts" out of those areas.

(ii) It may mean that there was a big move from the use of direct, to the use of indirect, labour, by local authorities in those areas. This would raise the figures for "public works contracting" in the areas at the expense of those for "local government service." If this has been the case, then it is better to include "public works contracting" with the other seventeen industries in the group, since one of those industries, called "all industries and services," included "local government service."

(iii) It may represent merely a big increase in unemployment in the two areas. The unemployment percentage for public works contracting in the whole country rose from about 20 per cent. in June, 1923 to about 35 per cent. in June, 1937, and it is possible that many of those in the two areas classified under "public works contracting" are simply unemployed persons whose last job was an odd one in "public works contracting" and who would have obtained other jobs in other industries had they lived in a more prosperous area.

¹⁹ The proportion attached to each industry within the groups is also, of course, important in explaining the divergences between the rates of growth in the various areas.

did in fact expand more rapidly, and the other areas less rapidly, than the country as a whole. The case of Mid-Scotland remains to be explained by Section II. The figures given in Section I suggest that that area should have expanded at roughly the national rate.

We may now return to Sections II and III and consider the figures by areas rather than by groups of industries. It is fairly easy to explain the relation between the actual rate of expansion in each area and what is called the "hypothetical" rate, i.e., the rate at which the area would have expanded if each industry had grown in the area at the national rate. In London and the Home Counties, for example, both the group of "other industries", and, to a less extent, the rapidly expanding industries, expanded more rapidly, while the local industries expanded less rapidly, than in Great Britain as a whole. The relatively small decline in the rapidly declining industries is of little significance, and on balance we find, as we might have expected, that the actual rate of increase in the area was rather higher, but not much higher, than the hypothetical rate.

In all the other areas except the West Riding, Notts. and Derby, and the Mid-Scotland, areas, the fairly close approximation of the actual to the hypothetical rates can be explained in a similar manner. In every case at least one group expanded more quickly, and at least one group less quickly, than in the country as a whole. On the other hand, we find that in the West Riding, Notts. and Derby area each group fared better than in the whole of Great Britain, while in Mid-Scotland the reverse was the case. As we might expect, the actual rate of increase was considerably higher than the hypothetical rate in the former area and considerably lower in the latter.²⁰

It can be easily shown from the figures in the table how very difficult it would have been for the number of insured persons in the least rapidly expanding areas to have grown as quickly as in the country as a whole. Given the decline in the five rapidly declining industries, Glamorgan and Monmouth and Northumberland and Durham could have expanded at the national rate only if, for example, each of the remaining three groups of industries had grown at three times the national rates in the former area and at twice the national rates in the latter.

Section IV, which shows how the insured population of each area was distributed among the four groups in 1937, may be of some use in estimating future trends, although it is hard to tell which industries will expand and which will decline in the future. It shows how much less the national economy, and in particular the economy of certain areas, is now dependent upon the five important industries that have declined rapidly since 1923. Even now, however, two-fifths of the insured population is attached to those industries in Glamorgan and Monmouth, one-third in Lancashire and in the West Riding, Notts. and Derby area, and one-quarter in Mid-Scotland. A second point that is clearly brought out by the table is the great importance of what we have called the local industries. Thirty per cent. of the insured population is now attached to those industries in Great Britain as a whole, and at least one-fifth in each of the areas.

CONCLUSION.

The present chapter has been devoted to a broad statement of the trends of industry and population and a discussion of the immediate causes of those trends. It has been shown that the occupied population of Great Britain

²⁰ The "explanation" given in this paragraph, and in the one preceding it, of the relation between the actual and the hypothetical rates in the various areas, is of course extremely rough and ready. A full explanation can only be provided by a study of the relevant figures for each of the individual industries specified in the Ministry of Labour evidence.

between the ages of sixteen and sixty-four has increased more rapidly than the total population, and that the number of insured persons has increased more rapidly than the occupied population. It has also been shown that the increase, in population and in insured persons, during the periods for which information was available, has been more marked in London and the Home Counties than in the country as a whole and that in most other areas the increase has been less marked. The fact that migration on a relatively large scale has taken place may therefore be accepted.³¹ It has also been shown that the migration from other areas into London and the Home Counties has been due to a combination of two circumstances.

In the first place migration would have taken place even if the expanding industries had not expanded more rapidly in London and the Home Counties than in other parts of the country provided that the contracting industries were located (as indeed they were) in those other parts; for the rate of expansion of London and the Home Counties would have been determined by the rate of expansion of the expanding industries, which was higher than the rate of expansion of industry in the country as a whole and higher than the rate of growth of the population of the country as a whole. On the other side the rate of expansion of all industries in other areas was determined by the combined rate of expansion (or contraction) of both expanding industries and contracting industries. This was lower than the rate of natural increase of the population of those areas (other than the Midlands) for which reason (even though, as was actually the case, the rate of increase of the expanding industries was not lower than the national rate) there was a surplus population available for migration. Thus it should not be assumed that the other areas failed to enjoy the same relative expansion in the expanding industries as London and the Home Counties enjoyed.

In the second place it has been shown that, over and above the increase in insured population that would have taken place upon the assumption that the expanding industries did not increase at a higher rate than in the country as a whole, there was in the London and Home Counties area an inward shift of only about 60,000 insured persons, to which number there should be added an unknown number representing the shift into non-insured occupations. This inward shift was shown to be due to the tendency for certain specified industries, such as general engineering, to grow in London and the Home Counties more rapidly (in the relative sense) than in other parts of the country.

The broad conclusions suggested by the statistical analysis in this chapter may be summarised as follows. In the main, and ignoring that large group of activities of a financial, social and administrative character associated with a capital city, the relative growth of the London and Home Counties area is due not to an increase in London industries at a higher rate than that of similar industries in Great Britain as a whole but to the fact that (a) the area is composed almost entirely of expanding industries (and largely of those industries that were growing more rapidly than population in the country as a whole) and (b) such industries form a much smaller proportion of the total in other areas in which the contracting industries form a larger, or much larger, proportion of the total. The apparent attraction of London thus means little more than the normal growth of a prosperous area which is able to foster its prosperity by immigration. It does not appear to mean a change in the competitive power of London that may not be capable of explanation by the fact that prosperity breeds prosperity.

³¹ A considerable volume of migration was of a long distance character; a sample investigation by the Ministry of Labour suggested that approximately one half of the persons insured at July, 1937, who had left the Wales, Scotland and Northern Divisions as insured persons, had migrated to the London and South Eastern Divisions. (See Appendix VI.)

This chapter was made possible by the elaborate and careful analysis of the statistical evidence of the Ministry of Labour prepared by my colleague, Mr. G. D. A. MacDougall.

J. HARRY JONES.

APPENDIX III.

I.—GARDEN CITIES AND SATELLITE TOWNS.

Letchworth Garden City.

Letchworth Garden City was founded in 1903 by a public company—First Garden City, Ltd. It was the first attempt to embody the ideal of Ebenezer Howard, namely, the creation of a new town on a new model planned for industry and residence so as to provide healthy and pleasant living conditions for all classes of the community. It was designed to have a civic and social life of its own; it was to be limited in area and population to a size required by social and economic efficiency, to be surrounded by a rural belt, and the whole of the land was to be in public ownership or held in trust for the community.

The Estate comprises some 4,560 acres and was acquired by the Company at a cost of approximately £178,300. When purchased it was purely agricultural land and comprised three small villages with a population of 400. An eventual population of 30,000 to 35,000 was contemplated.

The freehold of the land is retained by the Company. The land is let on lease for terms of 990 years for factory sites, 99 years for shops, and 99 or 990 years for residential sites. In the case of the 990 years leases, provision is made for a revision of the rent at the end of each period of 99 years, on the basis of the then value of the land, exclusive of the value of buildings on it. It was not the original policy of the Company itself to build, but it has in recent years built some small standard factories and let them on rental basis. In the case of larger works, the Company is prepared to arrange in approved cases for erection and sale on a rent purchase basis over a period of years.

The Memorandum of Association of the Company provides that the Ordinary Shares of the Company shall carry a cumulative dividend not exceeding 5 per cent. per annum, any balance of profit being used for the benefit of the town or its inhabitants. No dividend was paid until 1913, when a dividend of 1 per cent. was paid. Dividends were suspended during the War. In each year 1918-1921 a dividend of 2½ per cent. was paid; in 1922, 4 per cent.; in 1923 and each year since, the full dividend of 5 per cent. The arrears of dividend at the end of 1938 stood at about £113,200.

At the end of 1938 the population was estimated at about 17,400, and the number of inhabited buildings at about 4,940, including 3,000 cottages, 110 mechanical factories and 84 non-mechanical factories. Each

cottage has its garden, and the maximum density is twelve to the acre. The number of workpeople employed in the factories was estimated at between 10,000 and 11,000.

The Company owns and operates the waterworks, gasworks and the electricity supply station. The total capital expenditure incurred by the Company to 30th September, 1938, was:—

Purchase and development of Estate	£	655,456
Expenditure on waterworks... ..	94,100	
Expenditure on gasworks	158,025	
Expenditure on electricity supply station	560,199	
	<hr/>	
	1,467,780	

The Letchworth Urban District Council was created in 1919. It took over the public services usually administered by local authorities.

Welwyn Garden City.

Welwyn Garden City was the second attempt to carry out the ideal of Ebenezer Howard, as described under Letchworth Garden City, above.

The Garden City was founded in 1920 by a public Company—Welwyn Garden City, Ltd. The estate comprises some 3,200 acres, the total cost of the property being approximately £175,000. The land was agricultural with a negligible population housed in a few farms and cottages. A total population of about 50,000 is envisaged.

The freehold of the land is, save in exceptional circumstances, retained by the Company. The land is let on lease for 99 or 999 years. During the past twelve years it has been the Company's policy to build standard factories and other enterprises, in so far as is considered desirable for the stimulation of general development, and to let them on short lease. Over 500,000 square feet of factory space is owned by the Company and let to tenants.

The Company encountered exceptional financial difficulties for some years after it began operations. Its capital was reorganised in 1934 and the Company paid its first dividend, 2 per cent., in 1936. The dividend was increased to 3 per cent. in 1937, 4 per cent. in 1938, and 5 per cent. in 1939.

At March, 1939, the population was estimated at 15,000, and the number of houses at about 4,050. The number of manufacturing firms was approximately 85, employing about 4,250 persons.

The Welwyn Garden City Urban District Council was created in 1927, and is responsible for the public services usually administered by local authorities. It purchased the water undertaking from the Company in 1932. The electricity undertaking is controlled by the Company, and the gas supply by the Watford and St. Albans Gas Company.

A residential club to house about 40 boys between the ages of 14 and 18 is a feature of the Welwyn Garden City. Owing to a shortage of local juvenile labour, there was an appreciable influx of youths from other areas, and the club was established in order to provide suitable accommodation for the immigrants. It was established by co-operation between the Company, the Urban District Council and the Ministry of Labour at a cost of about £7,000. The annual deficiency on the club, estimated at £150 to £200, will be met by the Company. The Urban District Council have provided a Community Centre at a cost of about £10,000, the site for the centre having been presented by the Company.

The Wythenshawe Estate, Manchester.

The Manchester Corporation began to acquire the Wythenshawe Estate early in 1927 under "Local Act" powers. The primary object of its acquisition was to satisfy the Corporation's housing needs. It was never the intention, however, to restrict the erection of houses to those built by the Corporation under the Housing Acts: provision was made for better types of houses with a view to a proper balance being secured in the development of the Estate as a satellite town. Provision was made also for industrial buildings so that, while the Estate would be in the main a residential adjunct to Manchester, facilities would be available for the employment on the Estate of a part of the resident population.

The Corporation's proposals, assuming development to the maxima permitted, envisaged the erection of some 20,000 houses by the Corporation, and 5,000 by private persons, making, with houses already existing, a total of approximately 26,950 houses, and an eventual population of 100,000 to 110,000.

The Estate, at the time of its purchase by the Corporation, was outside the City boundary, but it was incorporated in the City in 1931. At March, 1939, the area of the Estate within the Corporation's ownership was 3,787 acres.

At that date the number of working class houses completed by the Corporation was 7,649, and a further 584 were in course of erection. In addition, 814 houses had been erected by private persons on land owned by the Corporation. The population was estimated at midsummer 1938, at 33,000.

The Corporation are empowered to make loans to persons erecting buildings on the Estate, and at March, 1939, had advanced £23,676 in respect of the erection of eight factories, and further loans amounting to £6,360 had been approved. In all, 15 factories had been erected on the Estate and the number of people employed in them was approximately 930. Of this number, about 500 lived at Wythenshawe.

The Speke Estate, Liverpool.

The Liverpool Corporation contracted to purchase the Speke Estate in 1928 and 1931 under "Local Act" powers. The original purpose of the acquisition was for housing and the general development of the City. In 1937 Speke was chosen by the Air Ministry as the site of an airframe factory adjoining the airport which the Corporation had established on the Estate. The lay-out of the housing portion of the Estate then had to be reconsidered and the development now proceeding is for a self-contained community unit, with houses of all types ranging from the smallest non-parlour houses to houses suitable for those employed in the higher management of the factories. Provision was made for industrial buildings with a view to employment being available locally for a part of the resident population.

The complete lay-out for housing development is for approximately 7,000 houses and a population of about 25,000. At March 1939, some 780 houses had been completed and the Corporation anticipate that the whole housing scheme will be completed by 1942.

When the Estate was purchased it was outside the City boundary but it was incorporated in the City in 1932. The Estate consisted of 2,216 acres. In 1937 the Corporation purchased an additional 351 acres and in 1939 a further 418 acres adjoining the Speke Estate, so that the Estate for all practical purposes may be regarded as one of 2,985 acres. The land purchased in 1937 and 1939 is outside the City boundary.

The Corporation's policy is to sell land on the Estate on long lease—999 years. The Corporation have power to make loans towards the cost of erection of factories, and also to build factories to let on lease with option to purchase. At March 1939, the Corporation had advanced loans amounting to about £306,000.

Ten factories were at that date in operation and an additional 18 were in course of construction. The number of people employed, including those employed at the Government's aircraft factory, was approximately 7,000.

II.—TRADING ESTATES.

Trafford Park.

The Trafford Park Estate is situated at the Manchester terminus of the Manchester Ship Canal, with which the history of the Estate is closely associated. Some 1,200 acres in extent, the Estate was acquired in 1896, two years after the opening of the Ship Canal, by Trafford Park Estates Ltd., who proceeded to develop it as a site for factories by providing roads, railways, and tramways, and by arranging for the supply of electricity, gas, water, and other facilities required by industry.

Normally, the factories on the Estate are built by and according to the individual designs of the tenant firms, the freehold of the sites being purchased by the firms from the Estate Company either outright or subject to an annual chief rent. In some instances, however, the Estate Company have themselves constructed factory or other industrial accommodation, including small "hive" factories, for letting.

Statutory powers were obtained by special Act of Parliament for the construction of railways on the Estate; these railways are connected with the main line railways and also with the railways of the Manchester Ship Canal Company at the Manchester Docks. They run alongside every developed site on the Estate, and the hundreds of private railway sidings inside the various premises are connected therewith. Import and export traffic is handled by rail between vessels in the Docks and factories on the Estate at exceptionally low rates of charge.

In the early days, about 700 houses were built on the Estate and these serve the purpose of housing the key men who have to be within call of the factories at all hours.

At 30th June, 1938, the Estate Company had an issued capital of £650,000 and Debenture Stock of £449,300. In the last five years, dividends have been paid as follows:—

	<i>Per cent.</i>
1933-4 and 1934-5	6
1935-6 and 1936-7	7
1937-8	7 and a bonus of 1 per cent.

Owing to the heavy cost (about £1,500 per acre, excluding the cost of land) of preparing the Estate for industrial development by the construction of roads, railways, etc., no dividends were paid for the first twelve years of the Company's life. Spreading the dividends which have been paid over the whole life of the Company, the average annual return amounts to 3.687 per cent. on the nominal value of the shares.

The Estate contains some 200 firms, providing employment for about 50,000 persons. Many of the industries are of the heavy type, including heavy electrical engineering, constructional steelwork, railway wheel and axle manufacture, etc., and are substantial undertakings from an employment point of view: one factory alone employs about 15,000 workers. The importance of the Estate as an industrial centre is illustrated by the fact that the traffic on the Estate railways now exceeds two million tons per annum—a tonnage equivalent to over three per cent. of the total merchandise traffic passing on all the railways in Great Britain.

Slough.

The Slough Trading Estate is situated about 22 miles from central London on the outskirts of the town of Slough. It occupies an area of about 640 acres adjoining and directly linked with the main line of the Great Western Railway and the national trunk road from London to Bristol. The site was originally developed by the State during the war as a motor transport depot. It was acquired in 1920 by the Slough Estate Ltd., a company which had been formed to purchase from the Government and sell the surplus motor transport of the war. In 1924 when the disposal of the surplus motor transport had been completed, the Company began to develop the Estate as an industrial estate, the freehold of the whole of which would be retained in their own hands and of which they would themselves provide factories for renting by manufacturers. In these respects the plan of operations differed from that at Trafford Park, where the manufacturers have mostly acquired the freehold of their factory sites and have erected their own factory buildings.

For the first few years factory accommodation was provided by the letting, after adaptation where necessary, of existing factory buildings. In these early days of the Estate some large undertakings settled upon it—one factory alone covered eight acres. Large factories are, however, the exception, a fact which has doubtless been influenced by the policy of the Estate Company, who have sought to attract a large number and a variety of undertakings to the Estate so as to prevent the finances of the Company being exposed to undue risk owing to a large proportion of income being dependent on rental payments by a single entrepreneur; it has been stated that owing to the large number of undertakings over which the Company's rental risks were spread, probably not more than three per cent. of the Company's total profits were dependent on any one of the factories on the Estate.

The Estate Company have adopted standard types of factories which can be constructed quickly and, owing to the economies secured through standardisation, can be let at rents lower than would otherwise have to be charged. Small—"bijou"—factories are provided for persons manufacturing on a small scale. Manufacturers may obtain supplies of gas, electricity, water and steam from the Company: water is supplied at a cheap rate from the Company's own wells and storage tank. Railway sidings run alongside many of the factories.

About 100 houses have been provided by the Company for workpeople and the Company, the County Council and local manufacturers have co-operated to provide funds for the building of a large social centre at Slough. The centre contains a nursery and infant welfare department, instructional rooms for handicrafts, music, literature, domestic science etc., gymnasia, badminton and tennis courts, billiards and games rooms, an indoor swimming pool, two large halls and canteens. Membership of the centre is open to workers in the Slough area (and also to their families and friends) at an annual subscription of 3s., if their employer also subscribes to the centre, or 10s. if they are employed by a non-subscribing employer.

The following statement shows the Company's issued capital, the dividends and bonuses paid, and the income received from rentals and services in the last five years.

	<i>Capital.</i>	<i>Dividend and bonus.</i>	<i>Rentals and services.</i>
	£	Per cent.	£
1934	588,000	12½	184,398
1935	588,000	12½	200,493
1936	588,000	12½	233,230
1937	735,000	15	282,934
1938	735,000	15	304,217

The Company have launched a similar trading estate at King's Norton, Birmingham. The total number of tenant firms on the two estates is 267 and approximately 30,000 workpeople are employed: the figures for the Slough trading estate are 210 tenant firms and 28,500 workpeople.

Special Areas Trading Estates.

Among the measures taken for the rehabilitation of the Special Areas has been the establishment of Trading Estates financed by the two Commissioners for the Special Areas through Trading Estate Companies. The relation of these Estates to general policy in connection with the Special Areas was described by Sir Malcolm Stewart in his Second Report as Commissioner for the Special Areas (England and Wales). After referring to the fact that while new industries, particularly of the lighter type, had been developing rapidly in the south of England, there had been little development on similar lines in the Special Areas, Sir Malcolm Stewart reported as follows:—

" There seems no doubt that an outstanding difficulty is the lack of vacant sites in good order with adequate facilities readily available. The small industrialist seeking a site for a new factory is attracted by the admirable facilities provided so freely on estates like those at Trafford Park and at Slough, where among other advantages, he is able to obtain suitable factory premises on lease, and is repelled from the Special Areas by the lack of such facilities and the expense of the preliminary work which he realises is necessary in their absence. In my First Report I suggested that the Special Areas must develop production for local consumption. Such development would be encouraged by the creation of well situated trading estates where new businesses can be established on a small scale without a heavy capital outlay on purchase of land and buildings."

Sir Malcolm Stewart's view was fully supported by the Special Commissioner for Scotland. In pursuance of that view, Trading Estate Companies were formed in the North-East, Scotland and South Wales on the initiative of the Commissioners for the Special Areas. These Companies, which have no share capital and do not operate for profit, were empowered to select in their respective areas one or more sites to be laid out by them as Trading Estates. On these Estates they were authorised to build factories of modern design suitable to let to industrial undertakings mainly of the lighter type, and considerable progress in the building and letting of factories has been made. The Estates are provided with up-to-date facilities in regard to railways, roads, drainage, electricity, gas, recreation grounds, canteens, etc.

In order to assist firms with little capital who wish to start a small manufacturing concern with prospects of expansion, the Trading Estate Companies offer " nest factories," forming a quarter of a standard building fitted with electric light and power, office accommodation, road access and other facilities, at a very moderate rental covering rates, light and heat consumption and insurance. The floor area of such a " nest factory " is from 1,250 to 1,500 sq. ft. Space for expansion can be reserved for industries the area of whose factory exceeds 6,000 sq. ft., so that they are able to expand within their own ground if occasion demands.

In view of the large potential demand the Companies are in a position to obtain favourable terms for electricity supply, and are thereby enabled to secure advantages for their tenants which could probably not be obtained by individual negotiation. The Estates being placed near colliery districts are well situated for supplies of gas. Tenants can also obtain valuable services of a commercial nature. The Companies have their own professional advisers and staffs, who can advise about raw materials, markets, sales methods, etc. The Ministry of Labour have offices on the Estates and can give assistance in the supply of labour.

The Companies derive their capital, through the Commissioners for the Special Areas, from the Special Areas Fund and have agreed to pay the Commissioners, after an initial development period of about five years, 4 per cent. interest on all the monies provided, though there is a clause in the agreements between the Commissioners and the Trading Estates Companies which empowers the Commissioners to postpone payment of interest for a longer period if such postponement is justified and necessary. The Companies, however, have regulated their rental policy with a view to being able to pay 4 per cent. interest to the Commissioners after five years as well as cover their own administrative costs and provide a reasonable sum for depreciation. The decision as to the rent to be charged for each factory rests with the Trading Estate Companies, but the general level of rents regarded as necessary to produce the required interest is understood to be about 6 per cent. on the total cost of providing the factory.

The chief of the Estates being so developed are the Team Valley Trading Estate, near Gateshead, the Hillington Trading Estate, near Glasgow, and the Treforest Trading Estate, near Cardiff, separate notes on which are given below. Notes are also given on the similar development in the West Cumberland Area, and on the construction of groups of factories and individual factories in the other areas.

Team Valley.

The Team Valley Trading Estate, which is operated by the North Eastern Trading Estates Ltd. (formed in 1936), is situated on a site of 700 acres on the outskirts of Gateshead. It is close to the Great North Road and is bounded by the arterial road linking Sunderland to North Lancashire and Cumberland. It adjoins the main line of the London and North Eastern Railway with which its internal railways connect at exchange sidings at the neighbouring Low Fell station.

Standard factories in three sizes—12,000 sq. ft., 8,000 sq. ft., and 6,000 sq. ft.—are built by the Estate Company for leasing to tenants for a minimum period of one year. These factories, as let by the Company, are provided with office accommodation, if required; with a hot water system of heating; with access roads and drainage; and gas, water, and electricity are laid on to them. Arrangements are made also for a private railway siding to be provided where desired.

The capital commitment of the Estate Company in the purchase of the land and the first stage of development of the Estate amounted to £1,400,000 and later had increased to £2,300,000. At May, 1939, 106 factories had been completed, of which 98 were in production, employing approximately 2,520 workers. Nine factories were in course of construction.

Treforest.

The Treforest Trading Estate is operated by the South Wales and Monmouthshire Trading Estates Company, Limited (formed in 1936). It covers an area of about 250 acres, and is situated between Cardiff and Pontypridd on the main line of the Great Western Railway from Cardiff to Merthyr. It is adjacent to the Rhondda Valley coalfield. The Great Western main line (from which private sidings run into the Estate) bring it to within two and half hours journey from London, and main roads north, west and eastwards to London are within direct access.

Factories are built by the Estate Company for renting by tenants. The factories erected are mostly of standard types ranging in size from 6,300 sq. ft. to 18,000 sq. ft. floor space. The Estate Company have provided a high-pressure steam main from which their tenants can obtain a bulk

supply of steam for processing and heating purposes. Gas, water and electricity are laid on to factories, as at Team Valley and Hillington. The Estate maintains its own water pumping and filtration plant, which is believed to be the only one of its kind in Great Britain.

The Estate Company's capital commitments in respect of the purchase of the site and the first stage of its development amounted to £800,000. At May, 1939, 55 factories had been completed, of which 43 were in production employing approximately 1,870 workers. Seventeen factories were in course of construction.

West Cumberland.

In this area it was considered that on account of the configuration of the area and the fact that the population was spread out along a considerable length of coastline, a large central Trading Estate would not be suitable for dealing with the problems involved. Accordingly, a Company named the West Cumberland Industrial Development Company was formed, having similar powers and operating under similar conditions to those applying to the Trading Estate Companies but designed to develop small sites with one or more factories on each, existing buildings being used where these were available. Capital is provided from the Special Areas Fund on similar terms and conditions to those applying to the Trading Estate Companies, though the Company is in addition charged with the work of improving the amenities of the area by the clearance of the unsightly remains of previous industries. This part of the Company's functions is not subject to the same financial conditions as those relating to the development of factories.

At May, 1939, seven undertakings had been provided with factories by the Development Company, and five were in production employing about 290 workers. Two of these undertakings were in a large existing building which had been purchased and adapted for the purpose, and the remaining five were in new factories built for them. Two other factories had been completed for tenants, four were under construction, and negotiations were proceeding for a number of others.

Smaller Factory Developments.

After the establishment of the Trading Estate Companies, representations were made by the authorities in some other parts of the Areas as to the possible effect of the concentration of effort on one site in the Areas. Applications were also received from industrialists who for various reasons did not want their undertakings established on a Trading Estate. The Special Areas (Amendment) Act, 1937, empowered the Commissioners to build and let factories themselves apart from the establishment of the Trading Estate Companies. These powers were accordingly used for the purpose of meeting the circumstances above described. In the Durham and Tyneside Area, for example, two sites of some 17 acres each were purchased, one at Pallion in Sunderland, and the other at St. Helens near Bishop Auckland in south-west Durham. These were let on long leases to North Eastern Trading Estates Ltd. and prepared for the construction of factories. At May, 1939, four factories had been completed at Pallion, of which three were in production. At St. Helens, Bishop Auckland three factories were completed and in production and two were under construction. A single factory had been built at Tynemouth. The seven factories were employing about 590 workers.

In South Wales the gift to the Commissioner of a large part of the site of the former Dowlais Steel Works enabled suitable sites to be made available and at May, 1939, two factories had been completed and one was under construction. In addition, five other factories had been built on individual sites, two in Monmouthshire, one at Cyfarthfa near Merthyr Tydfil, and two in the Rhondda Valley, while another was under construction there. The employment provided by the seven factories in which work had been started was about 1,680 workers.

Hillington.

The Hillington Trading Estate is operated by the Scottish Industrial Estates, Ltd. (formed in 1937), and is the second largest of the Special Areas Trading Estates, its site extending to 320 acres. It is less than a mile from the boundaries of Glasgow, Paisley and Renfrew, and is in close proximity to the Glasgow Docks, main line railways, and trunk roads.

The Estate is being developed by the Company mainly with standard and nest factories in two sizes—5,000 sq. ft. and 1,200 sq. ft.—for leasing to tenant firms. Both standard and nest factories are built in blocks of two to ten units. The Company also leases ground to firms to erect their own factories, where desired, and is prepared to erect factories of special design to meet individual requirements. Gas, water and electricity are laid on to the factories, which are heated by steam from a central boiler house which also supplies process steam in the majority of cases. A central canteen has been provided.

The capital expenditure involved in the purchase of the land and the development of about one-quarter of its area was estimated at £932,500. At May, 1939, factories had been let to 87 undertakings, 78 of whom were under production employing approximately 1,500 workers. The number of factories, i.e., separate "units," completed was 128, and a further 23 were under construction. (Some individual undertakings occupy several "units": thus, the 78 undertakings under production were occupying 112 "units".)

Smaller Factory developments in Scotland.

It was felt that the Trading Estate at Hillington did not directly relieve the serious position in North Lanarkshire. Three subsidiary estates were, therefore, acquired in this area. They occupy areas of about 27 acres at Carfin, 18 acres at Chapelhall, and 11½ acres at Larkhall, and will provide, on full development, for 70-80 factories, 40 to 50 factories, and about 40 factories respectively.

These Estates are being developed on the Commissioner's behalf by Lanarkshire Industrial Estates Ltd.; a company formed in 1938 with the same directorate and personnel as Scottish Industrial Estates, Ltd.

At May, 1939, the following factories had been built: Carfin—six standard units, Chapelhall—four standard units, and Larkhall—three standard and five nest units. Two of the six factories at Carfin have been adapted as a Training Centre for the Ministry of Labour.

Arrangements have been made for the immediate construction of about 25 further factories on the three Estates.

In addition, one factory employing about 60 workers has been built on an individual site of about 5½ acres at Barrhead.

APPENDIX IV.

A MEMORANDUM ON PLANNING IN SOME OTHER COUNTRIES BY
Mr. G. L. PEPLER.

INTRODUCTION.

The following notes have been completed at the request of the Chairman of the Royal Commission and with the help of the International Federation for Housing and Town Planning. The aim has been to obtain information from abroad as to planning developments which, although not necessarily applicable to this country, seemed likely to be of importance in relation to the problems before the Royal Commission. Before dealing with these countries in detail, the following preliminary observations are made by way of conveying the chief impressions gained:—

United States of America.

The present Federal Government has decided to carry out a survey of the natural resources of the country, of which there has been an extravagant and wasteful use up to present times, and to evolve a nation-wide plan for their conservation and development.

The National Resources Committee, including the Secretaries of the Interior, War, Agriculture, Commerce, Labour, and the Administrator of Emergency Relief, was established to organise such a survey and to co-operate with planning agencies—all executive agencies of the Federal Government being required to notify the National Resources Committee of all proposed Federal projects involving the acquisition of land, as they develop and before major field activities are undertaken.

The Committee has developed a public works policy with the object of fitting the public construction programme to cycles of business depression and boom.

An Advisory Committee on Science comprising representatives of the National Academy of Sciences, the American Council on Education, and the Social Science Research Council, has been set up and is preparing a report on "Problems of a Changing Population," and is making a study of the impact of new inventions on social organisation.

The Federal Constitution and the division of the country into States creates difficulties in relation to national programmes but the use of Federal finance appears to be a powerful factor in overcoming such difficulties.

Experts are widely employed to make surveys and prepare plans. They are lent by the Federal Government to the States, the necessary co-ordination being secured through the National Resources Committee.

Homesteads are being established in areas where the former means of employment have ceased, such Homesteads combining improved housing with factory employment augmented by home food production.

Strong support is given by Chambers of Commerce to town planning, and great advances have been made in relation to National and State Parks.

Last but not least is to be mentioned the great experiment of the Tennessee Valley Authority covering a region equal to about 70 per cent. of the area of England and Wales, comprising portions of seven States and including 120 Counties. The significance of this experiment is that the region was selected on purely geographical and economic grounds and without any regard to boundaries of authorities, with a view to resuscitating a backward area of considerable potentialities and at the same time checking the flooding of the Mississippi.

Germany.

The general tidiness of the towns, the care that has been taken to blend old and new, and the freedom of the countryside from disfiguring advertisements, are all impressive features.

Planning control has been exercised for many years and has been greatly facilitated by the fact that anyone wanting to build must first get permission and, therefore, when permission was refused on planning grounds, no question of compensation arose. In addition, the developer may, as a normal practice, be required to surrender from 30 to 35 per cent. of his land, free of charge, for roads and open spaces. In general, questions of compensation do not appear to arise in respect to regulations of development which have as their object either the prevention of unneighbourliness or of anything regarded as being inconsistent with national interests.

Planning has been facilitated also by a method of pooling ownerships and re-allotting plots to fit into a co-ordinated plan.

It is the practice of the Government to grant loans free of interest in order to facilitate the building of garden villages for employees in factories at nearby towns.

The Regional Planning Federation of the Ruhr Coal Mining District was established in 1920, in order to secure the effective development of that great industrial region covering about 1,470 square miles. The principal executive organ of the Federation comprised representatives of local authorities and economic interests, in equal numbers, the latter being divided between employers and employees. The Federation planned railway routes as well as roads.

Redevelopment has been assisted by a method of payment in kind in lieu of cash compensation, e.g., by erecting new buildings in place of those demolished or by improving buildings allowed to remain.

The State has in hand comprehensive replanning and rebuilding projects for the four great cities of Berlin, Munich, Nurnberg and Hamburg. Rebuilding on this grand scale appears to be practicable only because, broadly speaking, compensation, in so far as it is not met in kind, is assessed by those in authority, apparently on the bases that (a) if the city and the buildings in it met the requirements of to-day, redevelopment would not be necessary, and (b) when the city has been remodelled to the requirements of to-day, values in it must be higher than they were before remodelling took place. There is also power to levy a betterment tax.

A National Planning Board (National Office for Space Distribution) directly responsible to the Fuehrer has been established.

A national system of motor roads, clear of crossings on the level and of ribbon development, has been planned and much of the plan has already been carried out.

A policy, backed by strong control exercised by the Government, has been formulated for the gradual dispersion of industry so as to reduce the size of great industrial agglomerations and prevent their creation in the future.

Italy.

The country has a long history of town planning, including powers for compulsory purchase of areas affected by proposed improvements, and care is taken, in the course of redevelopment, to protect ancient monuments and noteworthy architectural compositions.

The Government has undertaken the reclamation of the Pontine Marshes, involving the conversion of 300 square miles of malaria and mosquito-ridden country, into agricultural land. The scheme includes the colonisation of that country with up-to-date farm buildings and houses and with new country towns fully equipped with public and community buildings, markets, etc.

Health centres for working-class people on the coast and in the mountains have been established.

A policy has been adopted by the Government of limiting the excessive increase of town population. This policy appears to be implemented through the labour exchanges and by the encouragement of industry to settle in uncrowded areas through a system of benefits. In addition, the Government has moved surplus population from crowded towns to the country, e.g., to the colonies prepared for them in the Pontine Marshes and is carrying out a programme of improving rural housing conditions.

A scheme has been formulated for the replanning and rapid reconstruction of Rome with a view to improving communications and conditions and of bringing to light those glories of ancient Rome which later years of thoughtlessness had allowed to be covered with unimportant and out-of-place buildings.

France.

Many French towns present a sense of civic unity produced, in part, by the harmony of their street facades and focused in the town square.

The replanning of Paris by Baron Haussmann is striking, as also are the exceptional facilities which that city provides for the holding of great exhibitions at its centre. A comprehensive planning scheme has been adopted for the Greater Paris Region.

A policy of decentralisation has been adopted with reference to industries related to defence.

Other features are, the intense cultivation of the countryside, the care that is taken to preserve the ancient and historic monuments in which the country is so rich, and the long-established system of national roads.

Sweden.

Town planning is facilitated by the municipal ownership of land, and an important place is given in municipal administration to the Director of Town Planning. Municipal activities and private development are related to the Master Plan for which the Director is responsible.

Great care is taken in regard to the siting and design of public buildings and the consequent focusing of civic interest and pride. The quality of the towns and, in particular, of Stockholm reflects the beneficent results of a long history of town planning.

Holland.

A comprehensive planning scheme has been prepared for Amsterdam and its environs, based on thorough studies of all the factors involved, including trends of population related to industry. Much work has already been done in giving effect to the plan for Amsterdam.

The Government has formulated a scheme to reclaim the Zuyder Zee, a sea-covered area of 864 square miles, and to colonise it with farms and villages provided in accordance with a comprehensive plan.

A large amount of good quality municipal housing has been provided.

Japan.

After the destruction of a large part of the city of Tokyo by earthquake and fire, the opportunity was taken to replan its main communications and secure a park system and zoning plan.

A method of land pooling was adopted, with the requirement that, although the land had been fully built up prior to the earthquake, 10 per cent. of the original holdings could be taken, without compensation, for roads and open spaces provided for in the replanning scheme.

Poland.

A County Planning Research Office has been established, with a policy directed to the planned distribution of industrial activity and a limitation of the size of future industrial towns.

UNITED STATES OF AMERICA.

The re-birth of *town planning* in the United States has been said to have begun with the development of Central Park, New York City, in 1857, and to have been greatly stimulated by the World's Fair at Chicago, in 1893.

The collaborative effort of D. H. Burnham, F. L. Olmsted and other planners and artists in creating the "White City" set the precedent for the co-operation of the professions in producing order and amenity in city development. In 1909, D. H. Burnham and E. H. Bennett produced their great planning report for the City of Chicago.

For a number of years, "The City Beautiful" with park systems and imposing civic centres was the chief aim of those interested in planning. Many plans of this character were promoted, paid for, and admirably presented by local Chambers of Commerce or City Clubs with the object of stimulating local authorities and private developers to carry them out.

An important step in practical planning was the appointment, in 1913, by the Board of Estimate and Apportionment of the City of New York, of a Committee to report as to the desirability of regulating the height, size and arrangement of buildings thereafter to be erected or altered within the City limits. The resolution which led to the setting up of this Committee suggested that "the time has come when effort should be made to regulate the height, size and arrangement of buildings erected within the limits of the City of New York; in order to arrest the seriously increasing evil of the shutting off of light and air from other buildings and from the public streets, to prevent unwholesome and dangerous congestion both in living conditions and in street and transit traffic and to reduce the hazards of fire and peril to life."

As a result of the findings of this Committee, zoning laws were introduced for the whole of the City of New York and the practice of making zoning ordinances spread to many other cities.

Planning, other than on paper, lagged behind because, until quite recently, it was not backed by effective legal sanction.

Nevertheless some splendid plans were produced and special mention must be made of the Regional Plan of New York and its Environs, prepared between 1923 and 1929, under the direction of Thomas Adams at the expense of the Russell Sage Foundation.

In 1927 the Federal Department of Commerce issued a Standard City Planning Enabling Act, and this greatly facilitated the passing of necessary legislation.

The legal background to planning in the United States differs from that in this country. The law, in effect, only enables restrictions to be placed on private property, without compensation, if they can be shown to come within the ambit of "Police Power," i.e., they must be for the purpose of promoting health, safety, morals and the general welfare. Under this power regulations have been made regulating the uses of land and the volumes of buildings thereon, street layout, land subdivision and building lines. Special legislative sanction is required to sanction the imposition of restrictions not covered by "Police Power," and compensation must be paid. Also, special legal sanction is necessary, and has been obtained, for the purchase of property by a local authority, including the purchase of extra land for purposes of recoupment (in U.S.A. known as "excess condemnation").

In 1929, a writer describing planning progress in the United States referred to the establishment by President (then Secretary of Commerce) Hoover in the United States Department of Commerce of a Division of Building and Housing as "the most potent single recent influence on city planning in the United States."

Great developments followed in Town Planning, Country and Regional Planning and, later on, in advisory State Planning which has made notable strides, since 1933. In 1938, it was reported that advisory planning boards, which have been active in stimulating planning by counties and cities, were in existence in 45 of the States and in the District of Columbia (Washington), Hawaii, and Alaska.

National Planning began to take shape when the National Planning Board was appointed by the Administrator of Public Works, in 1933. This Board consisted of Frederic A. Delano, Charles E. Merriam and Wesley C. Mitchell. The functions of the Board were:—

"To advise and assist the Administration—through the preparation, development and maintenance of comprehensive plans—through survey and research, and through the analysis of projects, for co-ordination and correlation of effort among the agencies of Federal States and local Governments."

These early objectives have been steadily adhered to, namely:—

1. Advice and assistance to the Administration.
2. Comprehensive planning.
3. Survey and research.
4. Co-ordination and correlation of effort among various Government agencies.

This body was succeeded by the National Resources Board, established by Executive Order of President Roosevelt in 1934, to be in turn succeeded by the National Resources Committee, appointed by the President in 1935. This Committee consists of eight members, of whom six are administrative officials of the Government. The Secretary of the Interior was designated as chairman to serve with the Secretary of War, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Labour, the Administrator of Emergency Relief, Mr. Frederic A. Delano, and Dr. Charles E. Merriam. The last two were also members of the original National Planning Board in 1933.

In a Progress Report issued by the Committee in December, 1938, it is stated that the work of the Committee has followed four principal lines, encouragement of planning activities, research towards filling in planning gaps, acting as a clearing house and a correlation for overlapping planning activities, and exercising advisory functions by reporting to the President and Congress and making recommendations as to long term programmes for full development of the national resources. In addition the Committee is helping to interrelate the planning of the different State activities, and assisting State and other Authorities in similar work by advice and by lending them the services of skilled scientists, technicians and planners and by making grants towards planned projects. It is also carrying out a remarkable experiment in positive regional planning in Tennessee Valley.

The Tennessee Valley Authority was created by an Act passed by Congress in 1933. The objects of the Act are set out in the preamble: "To improve the navigability and to provide for the flood control of the Tennessee River; to provide for reforestation and the proper use of marginal lands in the Tennessee Valley; to provide for the agricultural and industrial development of said valley; to provide for the national defence by the creation of a corporation for the operation of Government properties at and near Muscle Shoals in the State of Alabama, and for other purposes." The Act also entitles the Authority to dispose of electricity generated by the hydro-electric power plants erected in connection with the dams (11 are contemplated) constructed by the Authority.

The main purposes of the Authority are: (a) to improve navigation by providing a water channel for ships of 9 ft. draught up to Knoxville (640 miles above the junction of the Tennessee River with the Ohio River); (b) to prevent flooding and check soil erosion (the Ohio River joins the Mississippi River shortly after it receives the water of the Tennessee River which in the past has aggravated the serious Mississippi floods); (c) to produce electric power. Originally the electric power was intended to be used for the manufacture of nitrate for war purposes and was first allocated to the production of fertilisers; but as more dams have been constructed a surplus has been generated and is being sold to municipalities and co-operative associations for redistribution to their customers at low rates. It is stated that this distribution is already proving an important factor in rural electrification and in the stimulation of new industrial enterprises using electric power in large quantities.

The Region covers an area of about 26,000,000 acres (about 70 per cent. of the area of England and Wales) comprising portions of seven States and including 120 counties. The Act authorises the Authority to buy land compulsorily, and already nearly 1,000,000 acres have been acquired. Much of this land comprises the area covered by the huge lakes which the dams are forming, plus marginal protective areas. Careful attention has been paid to the landscape surrounding these lakes and they form most attractive recreational areas.

Last summer, the writer had the good fortune to visit Tennessee Valley and to see the Norris Dam and Lake and the surrounding Park Reserve. Near the dam, a new town "Norris" has been built and is joined to Knoxville by a "Freeway" road, 250 ft. wide and about 23 miles long. The town owed its origin to the necessity for providing housing accommodation for the fifteen hundred men engaged in building the dam. Instead of merely erecting a construction camp, the long view was taken and a model town was planned, complete with community buildings and services. The plan provides for a town of from 1,000 to 1,500 families and up to last summer accommodation had been provided for 350 families.

National Parks.

No reference to National Planning in U.S.A. would be complete without a reference to the National and State Parks with which that country is so richly endowed.

The concept and purpose of them is described as follows in the Report of the Recreation Committee to the National Resources Board:—

"National Parks are areas of primeval nature, of superlative scenic quality, set aside and conserved unimpaired, for the benefit and enjoyment of the people. Their development should be conducive to the realisation of their recreational and scientific values, arising out of their natural characteristics, and should be consistent with these inherent qualities."

The first National Park was Yellowstone and in a report to the Conference on National Parks, held in Washington, in January, 1938, it was reported that the National Park Service (established in 1916) now administers nine types of land areas, aggregating a total of 26,697½ square miles. (This figure has now grown to 27,344 square miles.) There are, in addition 265,625 square miles of National Forests in Federal ownership, much of which land is available for recreational use.

At the same Conference it was reported that there had been a great expansion of State Parks during the past five years (present total about 900 together comprising 6,374 square miles) and it was suggested that the "State Park" should be to the State what the superb areas of primitive scenery, known as "National Parks," are to the Nation.

State Planning.

In a report on "The Future of State Planning" issued by the National Resources Committee, in March, 1938, it is stated that most of the energies of the 45 State Planning Boards, assisted by technical and advisory assistance from the National Resources Committee, have been devoted to the collection of basic data and to the establishment of working relations with other governmental agencies. These Boards are advisory and are intended to operate in the field of the State in much the same way as the National Resources Committee does in the field of the United States, and to stimulate planning by counties and cities within each State.

It may be of interest to note that under the Industrial Act of 1936, municipalities and counties in Mississippi are authorised to issue bonds for the construction of buildings to be used for industrial purposes and to own and operate manufacturing plants or to sell or lease them for operation

by private concerns. Only eight Mississippi municipalities have approved such plans to promote industries. Six of the cities have entered into contracts with private companies for the leasing of a city building built by the issuance of general obligation industrial bonds. Such leases usually require payment of nominal rent to the city and a guarantee of a minimum annual payroll by the private company.

Some of the States are faced with the problem of settlers or the descendants of original settlers trying to make a living out of land now barren, and scattered in a manner which makes education, roads and other public services expensive or difficult. This problem is acute in Wisconsin with reference to the land originally covered by forest which has now been felled, leaving the old lumbermen stranded. After careful studies, zoning is being applied to remedy the situation. In Oneida County, the zoning ordinance provides for only two kinds of use districts, the one being "forestry" and the other an "unrestricted district." In the "forestry" district many uses other than pure forestry are permitted. There is included in the permitted uses all forest-allied industries and such other uses as the gathering of wild crops, berries, moss and hay. Hunting, trapping and fishing may be conducted but the district is restricted against farming and all year residence. It is stated that the adoption of these zoning plans has resulted in the removal from agricultural use of about five million acres of marginal and sub-marginal land in northern Wisconsin. In addition the organization of state, county and national forests has removed from such use another million acres, making a total of six million acres of land now restricted against agriculture and which are producing a timber crop.

Replanning of Cities.

As already mentioned, advisory plans covering the whole of many cities and their outskirts have been prepared. In several cases numerous items of these plans have been carried out and notable examples are to be found at Washington, New York, St. Louis and Detroit.

Washington.

L'Enfant's original plan is world famous, but, unfortunately, after an inspired beginning, it suffered many years of neglect, and it was not until 1926 that a National Capital Park and Planning Commission was established. Since then many improvements have been carried out and, to-day, the Commission are preparing a Park and Parkway Plan covering an area within a radius of 20 miles from the centre of the city. In addition to resuscitating L'Enfant's plan, the Commission are linking it up, by riverside parkways, etc., with a splendid park system which will encircle the City and provide a setting worthy of the original.

New York.

In recent years the most remarkable achievement has been the work carried out by Robert Moses, the Park Commissioner. Owing to his work, based to a considerable extent on the New York Regional Plan, and backed by Federal funds via the Works Progress Administration, there is now in being, or in course of completion, a complete system of parks, playgrounds, pleasure beaches, swimming pools, parkways and bridges all tied together radially, circumferentially and comprehensively into a unified and linked pattern. The parkways form important traffic arteries for the private motorist and include many important bridges and major constructional works. On the parkways all crossings on the level are eliminated and the intricate developments of the clover leaf principle to link up radial and circumferential roads and to sort out the approaches to bridges are astounding in their ingenuity and one is staggered both at the engineering skill that is displayed and at the cost that must

have been incurred. The scale of operations appears gigantic, but it is said that in all cases the response of the public has been so great that the widest parkways and the largest of parks have been quickly used to capacity.

St. Louis.

The City Planning Commission of St. Louis was created by Ordinance in 1911. In 1938 it published a report which contained a summary of progress made in carrying out the plan during the 20 years, 1917-37. The list includes 35 miles of street widening and 22 miles of street extension and the construction of many bridges. It also includes the erection of a number of public buildings, some of which form part of the civic centre for which the City is famous, the construction of an airport, the making of a number of street squares, the laying out of several large parks and the erection of a municipal auditorium.

Detroit.

Detroit is the centre of the motor industry, and the chief achievement of its City Planning Commission has been in the planning and construction of main arteries within and outside the City. A number of these are as much as 204 ft. wide and several have a width of 150 ft. The population of the City has grown from 465,000 in 1910 to 1,568,000 in 1930 and the area from 79 square miles in 1920 to 139 square miles in 1930. It is stated that in carrying out the master plan there has been expended in the City for street openings and widenings recommended by the City Planning Commission more than sixty million dollars. Thousands of acres have also been added to the park system.

Homesteads.

One of the functions of the Farm Security Administration of the United States Department of Agriculture has been the development of homesteads. In a number of cases these have been established in areas where the former means of employment have ceased. The following are examples:—

Arthurdale, in Preston County, North West Virginia.

This homestead was planned to give a group of families, left without work when the nearby coal mines closed down, a chance to obtain an adequate income and a greater degree of security. More than 1,100 acres of land were purchased and 165 homesteads laid out, each unit comprising about three acres of land. The factories and co-operative farms lie on the outskirts of the community. The industries comprise wood-working and furniture making, a vacuum cleaner company, a factory for the assembling of farm equipment, etc.

Cumberland, in Cumberland County, East Central Tennessee.

This project was designed for the rehabilitation of three groups of families: timber workers, miners and farmers in poor land areas. Two hundred and fifty-one new homes have been completed and work has been found at a canning factory which employs 300 workers and in a coal mine on the project. Many of the families supplement their cash income by raising crops on individual tracts of 17 acres.

Jersey Homesteads, in Monmouth County, New Jersey, approximately 45 miles from New York City and Philadelphia.

The original objects of this industrial-agricultural community were to demonstrate the feasibility of decentralising the clothing industry which for years has been concentrated in congested areas or large cities amidst slum conditions and sweat shop working conditions; to demonstrate the merits of combined farming and work in a predominantly seasonal industry and one which is subject to the dictates of fashion; to conduct an experiment of co-operative working and living. The homesteads include a tract of 1,200 acres, 500 of which are used for farm land and the remainder for 200 homes on half-acre sites; community school, factory building, poultry yard, etc.

The Jersey Homesteads Industrial Co-operative Association holds a long term lease from the Government on the factory building, and in its turn has its business managed by the Consumers Wholesale Clothiers Incorporated.

Tygart Valley Homesteads, Randolph County, Central West Virginia.

This project was established to rehabilitate families who were formerly dependent on the lumbering operations in the area. The site comprises 2,883 acres and includes 195 family units with individual acreages ranging from one to three acres. In this, as in other homestead projects, social life is fully provided for.

Westmoreland Homesteads, Westmoreland County, South West Pennsylvania.

This project was established to rehabilitate former mining families who were stranded when mining operations in the vicinity were discontinued or seriously curtailed. Two hundred and fifty-four families are settled on the project which covers 1,353 acres of land. Co-operative farming is provided for but more than 50 per cent. of the family heads have found outside employment in the surrounding industrial area.

In a statement issued in August, 1938, by the Farm Security Administration, it was announced that arrangements had been made for a hosiery making company to operate plants on three homesteads. The operating companies will be owned jointly by the Homestead Association and the hosiery company and in order to participate in the plan the Homestead Associations have borrowed from the Government. The Government investments will be safeguarded by liens on the property of the Co-operative Association.

Green Belt Towns.

These towns are under the auspices of the Farm Security Administration. The writer had the good fortune last summer to visit two of them, namely Greenbelt and Greendale.

In 1935 the Resettlement Administration undertook construction of the three communities, located near badly crowded cities, to furnish decent homes for low-income families. The communities, however, were not primarily housing projects. They were intended to serve three purposes:

1. To provide useful employment for thousands of jobless workmen.
2. To demonstrate a new type of community planning, combining city conveniences with many advantages of rural life.
3. To demonstrate a better utilisation of land in suburban areas.

Locations were chosen after careful study of social and economic conditions in about a hundred cities. The three metropolitan areas selected had a long record of steady growth, a sound economic basis, good wage levels, and a pressing need for housing.

A large tract of inexpensive, undeveloped land was purchased in each of these areas. These sites were required to fit into the trends of the city's residential and industrial growth and to be within easy reach of local employment centres. They also possessed topography suitable for building, ready access to utilities, fertile soil, and rolling, wooded land suitable for use as recreational areas.

Greenbelt, the community on which construction was first started, is located seven miles north of Washington, D.C. Greenhills lies five miles north of Cincinnati, Ohio, while Greendale is three miles south-west of Milwaukee, Wisconsin.

Each site was studied carefully and every acre was assigned its logical function in an expertly designed community plan. A town common forms the centre of each community. Around it are grouped a community building designed to serve both as a school and a town meeting hall, stores, post office, bus terminal, and other offices.

The residential area surrounding the town common is laid out with comparatively few streets. Usually the blocks are five or six times the size of the average city square, and each of them resembles a small park with about 120 dwellings around its edges. This arrangement has many advantages. Houses face the lawn and trees on the interior of the block, rather than barren pavement. Although each house has its own yard, much of the block's interior serves as a playground for the entire neighbourhood. A network of paths running through this park eliminates the need for sidewalks along the streets. Paving, water-works, and sewer lines can be installed at a considerable saving under such a super-block system. The most distinctive feature of the three communities is the "greenbelt" from which they take their name. This is a broad girdle of open land intended to protect the community from overcrowding and undesirable building on nearby property. Part of the surrounding greenbelt is reserved for parks, forests, and playgrounds. Garden tracts also are set aside for families who wish to supplement their incomes by raising their own fruit and vegetables. The remainder is cultivated by full-time farmers, who may market their produce in the community stores.

The town plan has been especially designed to meet the problems created by modern motor traffic. Facing houses away from the street, with playgrounds and paths removed from the street's edge, reduces traffic dangers. All homes, moreover, are removed a considerable distance from arterial highways. Underpasses for pedestrians have been built at points where footpaths cross busy streets. Ample allowance has been made for future expansion. All three communities are designed to accommodate an expected growth to three or four times their present size. Greenbelt now has 1,000 homes, but its sewer mains, water-works, roads, and utilities can serve an ultimate population of 3,000 families. Greenhills, with 676 homes and Greendale, with 572 homes, are built to take care of similar expansion. Negotiations with private capital for construction of additional homes at Greenbelt under a limited dividends arrangement are already in progress.

In Greenbelt approximately 8,160 acres of land are being held in reserve for expansion and protection of the town.

Municipal government of the new towns will be like that of other American communities. The Maryland Legislature has granted a charter setting up a city-manager type of government for Greenbelt and councilmen have been elected.

The writer was much impressed with the lively and growing sense of community at Greenbelt and Greendale. In each case the community building is well placed and well equipped and in full use, and the manager of each town appears to encourage the community spirit in every possible way.

The Green Belt towns must be regarded as extremely interesting experiments in community housing rather than as garden cities inasmuch as no attempt appears to have been made to make them self-contained with regard to industry.

Housing.

Prior to 1934, housing in the United States was left almost entirely to private enterprise, although many interesting projects were carried out by housing reformers and far-sighted industrialists. Interesting examples of enlightened private enterprise are:—Kingsport, Tennessee, a new town planned about 1914 to house on model lines the employees in ten large industrial concerns brought to the spot by the building of a new railway Mariemont, a garden suburb to Cincinnati; Radburn, new Jersey, planned and built by the limited dividend City Housing Corporation, founded in 1924, as a new largely self-contained satellite town designed to accommodate about 25,000 inhabitants and, because of the care taken with its layout in relation to road traffic and safety, described as the "Town for the Motor Age".

Since 1934, all major housing projects have been constructed with the aid of the Federal Government. Large sums of money are being spent on slum clearance and housing through a system of loans and grants to local authorities and substantial assistance is being afforded to private enterprise and private homeowners by the improvement of credit facilities and by insuring mortgages.

The Federal Department in charge of housing is the United States Housing Authority which was set up following the United States Housing Act, 1937. Prior to this the Public Works Authority had planned, built, owned and operated 51 slum clearance and low-rent housing projects in 37 cities and in Porto Rico and the Virgin Islands. The United States Housing Authority does not carry out projects, it is purely a financial-assistance agency which makes loans and subsidies to local public housing authorities. It describes itself as existing "solely to rehouse the lowest income third". In a recent publication it has stated that about 16,000,000 new dwellings are required in the United States by 1950. An example is given of one city to which the Government agreed to lend 90 per cent. of the cost of the project at 3 per cent. interest (the loan to be repaid by instalments over a period of 60 years) and in addition to provide annual subsidies equal to $3\frac{1}{2}$ per cent. of the development cost of the project.

Most of this housing is in and around existing towns. Exceptions are the Green Belt Towns and Homesteads to which reference has already been made. In addition, the Federal Government, through the Farm Security Administration, have in hand a programme of low-cost rural housing comprising 119 projects designed to accommodate approximately 10,000 families.

GERMANY.

Anyone who visits Germany must be struck by the general neatness of the towns, the care that has been taken to blend old and new, and the freedom of the countryside from disfiguring advertisements.

There are two factors that have applied to Germany and not to this country that have had a considerable bearing on planning:—

One: Most of the towns were, until fairly recent times, enclosed by fortifications encircled by a protective belt of open space. This led to central overcrowding until it became safe to build outside, but did provide a space which both marked the transition from old to new and afforded a splendid opportunity for a ring boulevard and parkway. To-day such an inner ring road is of an inestimable value for minimising traffic pressure on the central core at the heart of the town, and as a pleasance.

Two: For more than sixty years (comprehensive Building Regulations were made for Wurtemberg in 1872 and for Prussia in 1875) anyone wishing to build has had, before doing so, to obtain the permission of the local authority. Consequently when an authority decided that it was not consonant with good planning that the proposed development should take place, or that it should only take place subject to severe restrictions as to height, set back, etc., they were not depriving an owner of a right and, therefore, the question of compensation did not arise. On the contrary, the accepted theory appears to have been that building value was created by the community—not by the owner.

Local authorities in Germany have been town planning for many years, and anyone wishing to develop has had to conform to their plans and, apparently, the question of compensation has only arisen when the authority required land for such things as public open spaces. In most cases State Acts required an owner to surrender free of charge for roads and open spaces a proportion (30 to 35 per cent.) of the land he was about to develop.

In many towns with beautiful mediaeval cores strong control was exercised in order to ensure that new buildings or alterations to old ones were in harmony with the spirit of the place.

There is a special law, referred to later, dealing with replanning by the National Government of the four great cities of Berlin, Munich, Nurnberg and Hamburg. It is stated that towns which do not have the advantage of the special law applying to the replanning of the four great cities suffer from a disability in regard to slum clearance through the absence of any national law which allows expropriation by zones enabling entire districts to be purchased compulsorily.

In the absence of any national legislation or standardised regulations on the subject of zoning, a series of temporary measures based upon legal foundations have been established which tend to prevent the appearance of undesirable conditions relating to town planning and the hygiene of dwellings. These are relied upon to serve the useful purpose of preparing the way for future building. Worthy of note in this connection is a regulation which established the Reichsstelle fur Raumordnung (National Office for Space Distribution) whose object is the assumption of responsibility for the collective and large-scale planning of German undeveloped areas throughout the Reich. The regulations now covering the subject of official planning are contained in the decisions of this governmental agency and deal primarily with the division of undeveloped land into regions. This National Office or Board was established in 1935 and is directly responsible to the Fuhrer. Its function is the planning and arrangement of German living space in accordance with the population of the Reich. It appears that in the exercise of this function it both prepares and supervises plans and criticises the plans prepared by local authorities and regional bodies, but it is not responsible for carrying out plans.

Local and regional planning authorities have complained of interference by the Board but, on the other hand, it is reported that the Reich Ministries of Food, Forestry, Defence and Economy have declared that the existence of the Board meets an urgent practical need.

According to one regulation, territories where there is a strong migratory tendency, or where such may be expected, can be declared "residential areas", if it can be assumed that without special direction of the migration, the general interest or the well-being of the inhabitants of the area would be prejudiced. A scheme of management must be drawn up for the regulation of the area which sets forth the general rules regarding the suitable use of the ground. This is said to be particularly important in connexion with forest lands and the needs of industry, traffic, buildings, air protection, recreation and the protection of the sites concerned. It appears that in residential areas, land cannot be disposed of without the permission of the responsible authorities. Permission may be granted under conditions which include the provision of adequate public streets, open spaces, etc. Permission may also be granted when the purpose of the division is the opening of new areas, the protection of existing residential areas, the preservation of the countryside or the aesthetics of buildings.

Pending legislation for the whole Reich, the National Labour Ministry has been empowered to make regulations dealing with the organisation of small housing estates. The present regulations make it necessary to notify the respective authorities when it is intended to erect large buildings, small house estates, important industrial concerns, as well as of the intention to purchase land for these or related purposes. Notification is also necessary when it is the intention of an owner to sub-divide a plot of ground into more than 25 lots if it is planned that the land

will be the site of non-agricultural buildings or for private dwellings. It is within the jurisdiction of the Labour Ministry to refuse permission if proposals are found to be inconsistent with the economic plans of the National Government.

Small house districts, residential areas and business or industrial areas can be designated as "building areas" by means of building byelaws issued by the responsible local department. In housing estates, residential districts, or business and industrial areas, the permission for erecting such buildings or installations may be withheld if it is believed that they will result in serious drawbacks or might become nuisances to the inhabitants of the community. Similar buildings, outside the building areas, can be prevented by the same authority without building decrees (which are otherwise required) by the refusal of a building permit. Resort is made to this regulatory device only in those cases where it is believed that such building is inconsistent with the orderly development of the municipal area, or not in keeping with proper building technique.

When a question arises wherein the general welfare of the public is impeded or improperly served by a proposed building project, it is within the jurisdiction of the appropriate authorities to prevent, during a period of two years, the execution of the project in question. By this device, undesirable building can be prevented without the payment of compensation for the duration of the moratorium. As a temporary device, this system is particularly useful in cases where existing regulations of a more permanent character cannot be brought into play in time.

It is stated that slum clearance has been one of the measures adopted for the purpose of promoting decentralisation of large towns. A programme of slum clearance has been carried through in a series of towns which include Kassel, Braunschweig, Frankfurt on Main, Köln, Hamburg and Breslau.

The following are interesting points with regard to the schemes for Braunschweig, Kassel and Frankfurt on Main:—

Braunschweig.

This scheme related to an area which included some magnificent mediaeval buildings and the work comprised clearing slums, opening up congested areas, replacements and reconditioning. A special feature of the scheme was that the owners of the demolished houses were not compensated for their losses. Compulsory purchase was not resorted to but by means of a series of conferences the owners and other interested persons were shown that the effect of the slum clearance procedure would be profitable.

Kassel.

The main objective here was improvement of communications. A new traffic artery was taken through the slum area to connect Martin Place and the Old Market. The mediaeval buildings were preserved and the new artery has become the main shopping street. The Government assisted the scheme by loans and subsidies and the town only purchased plots of ground in so far as they were necessary to provide street surface area. The ground fronting the new street remained in private hands and it was left to the owners to effect improvements and erect new buildings. It is stated that the improvement was so successful that the owners have erected new buildings much more rapidly than was expected. The scheme affected 7,500 dwellings of which approximately 1,500 have been demolished. Part of the cost of the project was charged to the owners in view of the increase in value of their remaining property. The actual clearance costs were borne by the authority and there was compensation for loss of rent, but in assessing this account was taken of the short life of the property dealt with. Very little cash compensation was paid but in lieu thereof the authority improved existing buildings and built new ones to replace the demolished property.

Frankfort on Main.

The programme in this city was of particular interest because Frankfort on Main is the oldest and biggest of the old towns in Germany. The primary reason for the project was to provide the necessary space for a new traffic artery. Two celebrated old houses which stood in the way of the artery were rebuilt in other parts of the old town.

Redistribution.

The re-arrangement of land ownerships is a process which has been adopted for Germany for various purposes and in various forms. It began with the Lex Adickes, a local Act passed by the Prussian Parliament in 1902, applying only to Frankfort on Main. The same principle was subsequently legalised in most parts of Germany. It is applied principally to compact areas of unbuilt-upon land so as to secure a rearrangement of ownerships to fit into a good plan of development. The plots of land which it is proposed to re-distribute, together with the existing public streets and "places", having been pooled together, the next step is to deduct from the pool all the land required for public streets and "places", whether existing or prospective, which is then vested in the commune or other highway authority. The remainder of the land pooled is then divided among the previous owners in the same proportions as those in which it was held prior to the pooling and in such way that the plots are usually at right angles to the streets or "places" and the plot of each owner is as nearly as possible in the same position as that which he previously held. Plots which are already built upon or which have a special value are to be, as far as possible, re-allocated to their previous owners before the re-distribution takes place.

Owners are entitled to money compensation in respect of land reserved for streets or "places", so far as this exceeds 35 per cent. of the pooled plots where the procedure has been initiated by the commune or 40 per cent. where it has been initiated by the owners.

In addition to the system of Lex Adickes, there were laws in Prussia which provided for the "coupling" of agricultural holdings with the consent of a majority of land owners and the principle has been applied to areas which were urban in character.

Regional Planning.

One of the most remarkable examples of positive regional planning, in any country, was that carried out by the Regional Planning Federation of the Ruhr Coal Mining District, under the able direction of the late Dr. Robert Schmidt. This region of 1,470 square miles was the most important industrial district of Germany, with Essen as its chief town. Old mines were being worked out and new ones opened and population had to be shifted accordingly and new lines of transport laid down. The many local authorities were planning individually, but it was decided that economic and sound development of land and industry and the welfare of the inhabitants required the preparation of a plan and its administration by one directing authority for the whole region.

Accordingly, an Act was passed in 1920 which set up the Federation. It was a self-governing corporate body with a three-fold organisation which provided for the participation of both local authorities and joint committees of employers and employees in the management of its tasks. The principal executive organ was called the Federation Assembly. It consisted of 176 members, of whom 88 were members of the county boroughs and rural circles and 88 were representatives of economic interests, one half being employers and the other half employees. This assembly exercised the budget right and determined the lines of guidance for the activities of the

Federation. The current business was in the hands of the Federation Executive consisting of 17 members distributed among industrial and administrative interests on similar lines as in the Federation Assembly, under the Federation Director who was appointed for 12 years.

The matters dealt with by the Federation were the problems of traffic, housing, the provision and maintenance of open spaces, etc. The Federation produced a unified system of roads and of light railways and co-operated with the State Railway Department in enlarging the State railway system, reserving necessary routes well in advance of construction. In co-operation with the local authorities it planned a housing programme relating homes and workplaces both present and future. It planned a co-ordinated system of open spaces reserving about 38 per cent. of the region to be kept free from building but making the actual siting adjustable to meet economic needs.

Autobahnen.

In recent years great advances have been made in national road planning and construction. The autobahnen comprise a national system of wide roads reserved for motor traffic, they facilitate transport between large towns and to the frontiers but are kept clear of the towns themselves. They have dual carriageways and cross roads are eliminated by flyover bridges or subways, so that high speeds can be safely enjoyed. Considerable care is taken with "landscaping" and no building is allowed along the frontages. It is stated that between the beginning of 1936 and the end of 1938, 3,000 kilometres (1,875 miles) have been constructed and that the backbone of the system, viz., the triangle Berlin-Munich-Cologne-Berlin, has now been completed. The complete programme now comprises 14,000 kilometres (8,750 miles) of motor road.

Housing.

A great deal of housing and slum clearance by and with the help of local authorities was carried out in Germany both before and after the War. Until recent times housing for the working classes largely took the form of tenements, but latterly smaller units have been preferred and, in particular, the Government have promoted many small settlements in rural areas, outside the towns, where each family can acquire a home of its own on a plot of land approximately a quarter of an acre in extent. Such settlements are being provided with community centres, playing fields, etc. In order to facilitate the completion of these settlements, the government have recently decided to grant loans free of interest until such times as the secured preferential loans granted for the building of the settlement have been repaid. It is stated that in reality this means that no interest of any kind will be paid for about 38 years. There is merely a moderate rate of amortisation of 1 per cent. (or 2 per cent. in the case of higher incomes) to be paid from the beginning. Supplementary loans will also be granted where there are three children, as against the former limit of four, whereby the four-compartment dwelling for the complete family is guaranteed.

In the report of the Minister of Labour for the year 1938, it is stated that the new government started the work of housing in the year 1933 with a large shortage of dwellings. Since then an average of 300,000 dwellings have been constructed each year; and yet no less than 1½ million new dwellings are still needed.

One method by which the Government assists the provision of small dwellings is to give guarantees which prove an effective means of obtaining second mortgages. It is said that this method has secured the building of roughly 378,000 dwellings, and it is to be further extended.

Replanning.

At the present time, a lot of consideration is being given to replanning, particularly with a view to the abolition of congested areas in large towns. It is stated that those in authority have in mind the clearance of slums, reconditioning buildings of artistic merit, securing open space, facilitating the circulation of traffic, shifting industry from the town centre to the suburbs and providing for the consequent migration of population.

The most spectacular replanning proposals embarked upon by the national government are those for the four great cities of Berlin, Munich, Nurnberg and Hamburg.

Berlin.

The plan for Berlin was prepared by Professor Albert Speer and the work of reconstruction, which is on a gigantic scale, is proceeding rapidly and is expected to be completed in 10 or 12 years. The following are some main items of the plan as it was described in January, 1938:—

The destruction of four of the existing railway stations, and the building of two new stations joined by a triumphal way from south to north through the middle of Berlin, along which new squares of immense area, new ministries, restaurants, cinemas and shops are to be grouped. The main southern station will be close to the new Tempelhof airport (which is now reaching completion) and will have an immense square in front of it for the building of hotels and offices; from this point the new Via Triumphalis will lead northwards, largely on land at present occupied by railway sidings, to a square over 200 yards in diameter, round which will be built, on a uniform plan, a new head office for the tourist trade (with a congress hall for 1,600 persons), an office for the Allianz Insurance Company, a huge cinema and other buildings. Slightly further to the north, where the new street enters the Tiergarten, will be built the new Ministry of War; the street will then cross the main east-to-west axis from Unter den Linden to the Reichs Sport Field (the breadth of this street is at present being doubled and it apparently will pass under the new triumphal way through a tunnel) and reach its climax at the Königsplatz, in front of the Reichstag, where there is to be a great space for demonstrations and a gigantic assembly hall. Behind this assembly hall, and separated from it by the Spree (which is to be deflected) and an artificial basin measuring 1,200 yards by 500 yards, will be the new Northern Station. It will be surrounded by further new buildings, including a new police headquarters, and the headquarters of the National Socialist Relief organisation.

This central nucleus is, however, only part of the plan. It is intended at the same time to proceed with construction in more outlying districts of the town. The central cross formed by the north-south axis and east-west axis, which will be prolonged to reach the Autobahn-ring round the outer periphery of Greater Berlin and which will thus have a length of 38 and 50 kilometers (23½ and 31¼ miles) respectively, will also form the centre of four concentric circular roads through the outer town and inner and outer suburbs. A fifth Autobahn will lead from the ring inwards to the Exhibition grounds along the line of the "Avus" racing track. There will also be two new underground railways parallel to the two traffic axes (the Zoo and Friedrichstrasse stations will also deal exclusively with the suburban service of the District Railway), and in the west of Berlin will be built a new complex of University and Technical High School institutes, situated in the Grunewald and adjacent to the Reichs Sport Field.

The outer suburbs, opened up by the new roads and underground railways, will be the scene of the planned buildings of flats and houses for 20,000 or more families annually, and the effect of taking over so much space in Central Berlin for new Government and party buildings, assembly halls, and triumphal ways for marching mass formations to and

from the scene of demonstrations appears likely to be to force the population more than ever to migrate to residential areas outside; it is intended that the density of population in Central Berlin, at present 400 persons per hectare (162 per acre) in certain areas, should be reduced to 150 per hectare (60 per acre).

While considerations of traffic circulation play an important part in this plan, its main objective appears to be to convert the capital of the Reich into a city of great magnificence.

Munich.

The re-planning of Munich appears to have as its main objective making the city a worthy centre of teutonic art and culture and the Mecca of the tourist trade both national and foreign. At the same time, great care is to be taken to preserve the charm of the old town. As in Berlin, the plan includes the moving of the main railway station, linking stations by underground railways, an outer ring road with clover-leaf crossings at the junction of the four Autobahnen, and the erection of many new houses to replace those to be cleared away to make room for the new station, new roads, squares, and public buildings and to provide extra dwelling accommodation.

Herr Hitler has described the object of the four great re-planning projects as follows: Berlin is to be rebuilt, as the metropolis of the Reich, Hamburg as the metropolis of trade, Nurnberg as the festival town of the Movement, and Munich as the great city of German art and the capital of the Party.

A new law styled "Re-Planning of German Towns" was issued on October 4, 1937, and was intended to form the legal basis for the frictionless and unimpeded improvement of the cities of Berlin, Munich, Nurnberg and Hamburg. The law is only applicable to large town-planning measures ordered by the Chancellor, and for other projects previous regulations will still remain in force, in so far as they are not contradictory to the new Law. Former regulations regarding expropriation of property have been considerably extended, though fair compensation will be paid. Any compensation paid to owners of expropriated property containing dwellings must be used for the erection of new dwellings. What is considered more important is that the municipalities acquire priority rights to buy any real property considered necessary for town-building measures. Also, private building and structural alterations, etc., may be prohibited when such projects are considered prejudicial to town building arrangements. Further, the division and sale of real property can be subjected to official permission. Last, but not least, the law provides the necessary authority to tax any appreciation in the value of any properties caused by the fulfilment of these town building projects, the revenue from which will be devoted to the financing of same.

Decentralisation.

A German report has stated that there is no problem of removing industries out of big towns to other small or middle sized towns at the present time in Germany. This kind of transplanting is, however, being carried out with great zeal for reasons of political and economic protection. According to the latest inquiries conducted by the "Institut für Konjunkturforschung" for the period from 1935 to 1937, it is seen that apart from Berlin and Munich, the hitherto growing density of the industrial localities in the big towns has come to a standstill and that there are indications of even lessening developments in this direction. For example, it has been noted that in the areas which are close to the German frontiers, migration has taken place toward the inner parts of the Reich, particularly toward Middle Germany. The frontier regions of Saxony and Silesia show the greatest losses through migration. Migration out of Upper Silesian coal

mining districts has been particularly great. It is impossible, however, to say whether the migratory movement during the coming years will continue in the same manner.

In connection with the studies which have been made on the subject of decentralisation and the transplanting of industries, it has been observed that those industries which have moved usually remain in the same district but that they have moved from the inside outward which has resulted in improved town buildings and economic improvements from the standpoint of the industry. Coupled with these factors, the workers employed in the industries have been induced to move their dwellings to the outer districts also.

It is observed that the separation of industrial districts and workers' dwelling districts raises economic problems such as the creation of community facilities for common utility and the arrangement of special compensation, to cover new costs, etc. Apparently in Germany public money is only available for the opening up of new areas for settlement to cover the cost of such matters as provision of churches, schools, welfare centres and public services such as water, gas and electricity supplies. In addition, there is the necessity to provide transport facilities between homes and workplaces but it is indicated that these should be self-supporting.

Undoubtedly, at the present time in Germany military considerations are being taken into account with respect to the location of industry. On the other hand, the speed of the re-armament programme has made it necessary to utilise existing industrial establishments to the full and it appears that, generally speaking, no displacement of industry has taken place in spite of the fact that much of the armament industry is, strategically, badly situated. With regard to new factory construction, considerations of strategy have been taken into account and the general objective appears to be dispersion so as to avoid great industrial agglomerations. This will obviously take a number of years to work out, but the Government control is so strong that no private interests are likely to be allowed to stand in the way of the general realisation of the policy.

ITALY.

Italy was probably the first country in Europe to pass town planning legislation. A law of 1865 empowered communal towns with a total population of at least 10,000 to prepare plans covering both new development and reconstruction. Such plans required approval either by royal decree or special Act of Parliament. The Act also permitted compulsory purchase not only of land required for public works but also of such adjacent properties within the affected zone as are contributory to the main object of such works. The preamble of the Act contains the following words: "The extended powers conceded to the expropriator by the present Act were felt to be urgently needed, and it is believed that the cities of Italy will reap the very greatest benefit from it, especially with regard to works involving the construction of new roads within the limits of the inhabited area, the object of which is to improve the hygienic conditions, simplify the means of intercommunication, and add to the impressiveness of the said cities."

This Act provided that compensation was to be assessed by properly qualified persons. In 1885 an Act relating to Naples (afterwards copied for other towns) fixed that the indemnity to be paid to the owners of property should be determined on the basis of the mean between the saleable value and the sum total of the rentals during the previous ten years, provided that the necessary data referring to the said period be forthcoming. In default of such ascertained rental values the indemnity is to be assessed on the basis of the net rateable value as assessed in the schedules of taxation on lands and buildings.

In a paper delivered to a Congress in London in 1910, Signor Cattaneo stated that planning legislation in Italy had changed little since 1865.

Milan.

After the War a number of towns prepared fresh plans and that prepared for the greatly enlarged City of Milan, about 1923, is of particular interest because it took into account questions of industry and population and envisaged extension by means of satellite towns at the circumference, surrounded by open spaces and connected with the centre by a few good arterial roads.

Turin.

A large central improvement carried out by the City of Turin to form the Via Roma, is of considerable interest. The project was first conceived in 1914, but a much bolder programme was prepared in 1926 and has since been carried out. The result is a fine wide street, in the heart of the city, flanked by arcaded footways and the whole carried out as a single architectural conception. In connection with the scheme buildings were demolished over a considerable area and replaced by modern buildings worthy of the situation.

In a royal decree, dated 3rd July, 1930, authority was given for the expropriation of areas adjoining the proposed improvement and compensation was fixed on the average saleable value and the net taxable value capitalised at a rate of interest of from 4 per cent. to 5 per cent. according to the general conditions of the locality. The length of time allowed for carrying out the plan was eight years. The regulations provided that the corner buildings at the outlets from squares should preserve their present architectural aspect for a depth of 46 ft. and that the height of new buildings to Via Roma should not be less than 59 ft. There was also a provision that the right of building on the individual blocks marked on the plan should belong by preference to the owners of the property comprised in the block, as a syndicate, or if a syndicate cannot be formed, to the owner of the largest area, on condition that an undertaking is given to complete the block as provided for and that proper guarantees are furnished.

A subsequent royal decree amended the terms of compensation as follows:—"Taking into consideration that under the aforesaid measure it was laid down that the compensation for expropriation in regard to the zones involved in the widening of the said thoroughfare and the clearance of adjacent areas should be determined on the average of the saleable value and the net taxable value capitalised at a rate of interest of 4 to 5 per cent. according to the general conditions of the locality.

"That from what has been ascertained as to the condition of the properties in question it has been found that the taxable incomes from the properties to be expropriated are very high.

"Considering, therefore, that to keep the compensation within reasonable limits it is desirable that the maximum rate of interest for the capitalisation of the taxable value should be suitably raised, that is to 7 per cent."

In an article in the Journal "Torino", 1936, No. 12, tribute is paid to syndicates who built blocks and to "the bodies, companies, or persons, who have assumed the responsibility of rebuilding the other blocks, which will be under divided ownership, but built to one plan and with similar materials so that the new buildings will be in keeping with the very refined zone which will be formed in the heart of the city and be in harmony with the type of architecture created by His Excellency Marcello Piacentini for the second stretch of Via Roma."

Rome.

The replanning of Rome was envisaged by Signor Mussolini in a speech at the inauguration of the First Governor of Rome, in 1925. Two alternative sets of plans were prepared by groups of Italian town planners and, in 1931, the Italian Government approved a final plan. Since then work has proceeded with extraordinary rapidity. The plan of 1931 is concerned with

a region the size of which can be represented by a circle drawn with centre at the central station and radius of six kilometres ($3\frac{1}{2}$ miles). The main feature of that plan can be summarised in the following way:—

In the centre of Rome provision is made for two main processes. The first is the cutting of new streets and the widening of existing ones, to improve through routes of communication, to open up vistas, and to facilitate the setting up of imposing façades. The second, which is much bound up with the first, is concerned with the bringing to light of those glories of ancient Rome which later years of thoughtlessness had allowed to be covered with unimportant and out-of-place buildings.

Mention must also be made of the proposal to place the central station underground and to extend the lines of railway under the city in a north-westerly direction to emerge again by the Ponte Milvio, and thus provide a through route. This was in the plan, but the final solution of the railway problem was deferred until a later date by the Regio Decreto-Legge of the 6th July, 1931.

Outside the fortifications, and on the Aventine Hill within, the new plan exhibits a comprehensive arrangement of zoning held together by an extensive system of roads. In this zoning there are certain obvious features. Thus, to the north, the east and the south-east, provision is made for blocks of intensive development, focussing on spacious piazzas and set on or near the great radial and circumferential roads, in general continuing without the walls the characteristics of the region within. In certain cases existing buildings will have to be demolished to bring them into conformity with the plan.

Between these blocks are areas zoned for houses, and breathing space is provided in the shape of wedges of public park and sports ground. Surrounding the whole there will be groups of cottages, and outside these again a wide belt will be devoted to allotments. All this is surrounded by a ring road.

In the west in the Janiculum Hills, and on the Aventine Hill to the south, the treatment is different. The configuration of the ground has favoured the reservation of areas for houses of a more country type, with the provision of building lines to set them back both from the road and from adjoining properties, and with the added restriction of the proportion of the site that each house may occupy. The hill tops are generally to be kept as open spaces. To the south-west, along the banks of the Tiber, an area is zoned for industrial development.

Finally, and this is perhaps the most interesting feature of all, a belt of land a kilometre or more wide, cutting into the city from the south-east and extending right up to the Capitol, has been reserved and is to be saved for ever from spoliation. This zone leads out from the Foro Romano over the Palatine Hill, past the baths of Caracalla and the Catacombs, to the tombs of the Via Appia. It widens as it leaves the city, and will preserve for ever that most magnificent of views from the Via Appia Antica across the great aqueduct and away to the Alban mountains. This reserved belt is appropriately referred to in the plan as *Zona di Rispetto*.

Autostrade.

Italy was a pioneer country in providing roads for the sole use of motor traffic, but subject to payment for use by the motor user. The first, $53\frac{1}{2}$ miles long, from Milan to the Lakes, was constructed in 1924 by a private company with a guarantee of five per cent. debentures by the Italian Government. Since then a number of such roads have been constructed, including the magnificent road from Rome to Ostia which, however, is free from toll.

Reclamation of the Pontine Marshes.

The reclamation, during the past ten years, of more than 300 square miles of malaria and mosquito-ridden country, and its conversion to agricultural land with up-to-date farm buildings and houses and with new country towns, is a remarkable achievement.

Four towns, "Littoria", "Sabaudia", "Pontinia" and "Aprilia", have already been built and a fifth town "Pomezia", is under construction. These towns have been planned by a small group of Italian town planners and are fully equipped with public and community buildings, recreation centres, etc. The whole effect is most striking and presents an admirable sense of unity. The towns will form the main communal centres and administrative headquarters of the region, Littoria (present population over 21,000) being the capital of the Province of Littorio. In addition, smaller village centres have been created.

Marine Colonies.

Another recent achievement has been the establishment of health centres on the coast and in the mountains. Along the Adriatic seaboard new resorts have been established at intervals of some 4 or 5 miles, and between these have been established children's homes, known as "Marine Colonies", the funds for which had been raised by various organisations such as those of railway workmen, building craftsmen, clerks, etc. In some of the new resorts land has been made available without payment provided that building operations are commenced within a certain period. The buildings generally are original both in design and colouring, the Marine Colonies in some cases taking the form of land-ships, towers and so forth, and housing as many as 600 or 800 children. There have been created also Mountain Colonies with ample provision for games, in particular swimming pools.

Decentralisation.

With a view to limiting the excessive increase of town population, a rule has been established, in Rome as well as in other big towns, to prevent people belonging to special categories of workers from being registered in the register of population of the town in which they want to reside. The rule provides that they cannot be so registered if they cannot prove by means of a certificate provided by their employer that they already have a permanent job in the town. If such workers are not so registered they cannot obtain their inscription at the office providing jobs in their special category. Persons moving from one commune to another must reside in the new commune, for a period varying from 3 to 12 months, according to the commune, before they can register at the new labour exchange and during that period, therefore, they cannot, if unskilled, obtain employment.

When there is a shortage of labour in a district, workers may be brought in from other districts only through the medium of the labour exchanges.

The Government, in furtherance of their agricultural policy, move surplus population from the towns to the country; whole families are transferred from overcrowded districts to reclaimed areas such as the Pontine Marshes.

The Government is also helping indirectly to check the movement from country to town by its policy of improving rural housing conditions. This is done in two parallel ways: (1) Direct intervention for the construction of rural houses through the action of the autonomous institutes for popular houses (houses of the people); and (2) Financial contributions to private individuals on a percentage basis on the value of construction (30 to 40 per cent.) in addition to tax concessions. The supply of water to rural communities is also subsidised.

It appears that from time to time areas are singled out for industrial development, and the setting up of factories in those areas is encouraged by such measures as reduced taxation, duty-free import of foreign machinery and materials, preferential freight charges, and other benefits, for a specified number of years. The usual purpose of the creation of these industrial zones appears to be to alleviate unemployment and the consequent unrest in the districts.

As a further measure of control over industrial development, it is forbidden, in the majority of the important industries, to open new factories or extend existing ones without a permit from the Ministry of Corporations, the main object being to prevent excessive development, leading to over-production, in any section of industry.

In the case of Rome, consisting predominantly of black-coated workers, the object seems to be to expand it by the addition of a more marked industrial element. Press commentaries speak of it as a town of 3½ millions by the end of the century: its present population is 1¼ millions. "Here there is no evidence of preoccupation with problems created by large centres of population, but rather the reverse, and the reasons are purely political."

FRANCE.

One impression made upon the visitor to France is that the old towns possess character and not infrequently this impression is focussed in the town hall square. The care taken with the preservation of ancient monuments is also noticeable.

With regard to new towns, a notable achievement was that of the Chemin de Fer du Nord, in the region devastated by the War. This Railway Company built for its employees a number of model garden suburbs and villages equipped with schools, community centres, playing fields, etc., and in addition provided a seaside holiday colony.

For many years, Paris has been a Mecca for planners because of the great work planned and carried out by Baron Haussmann, from 1854 to 1871.

Studies for the regional planning of Paris were begun in 1911, but the War caused an interruption. In 1919, the first French Town Planning Act was passed and the "Direction de l'Extension de Paris" was constituted.

In 1928, Mr. Raymond Poincaré, the Président du Conseil, wrote: "Paris regional planning more than ever needs a general plan, strictly limited to the present population. If the Parisian agglomeration goes on growing more, the evil may become irretrievable." According to the wish of Mr. Poincaré, there was constituted at the Home Department an advisory Greater Paris Regional Planning Committee and, in 1932, there was passed the Paris Regional Planning Act which applies to the area within a radius of 35 kilometres (22 miles) from Notre Dame. The plan for the Paris Region is based on careful studies and provides for industrial zones and for grouped communities surrounded by open land. It also provides for a highway system of main radials joined by a circular road, and includes a system of open spaces, etc.

An interesting planning region constituted by the law of 1935, is one involving the Departments of the Nord and the Pas de Calais and including the coal mining area extending from Lille, Arras and Bethune to the Belgian frontier.

National Roads.

For many years the country has been served by a planned system of national roads.

Decentralisation.

Up to the present, this question appears to have been looked at principally from the point of view of defence. In 1931 the Minister for Air instituted a fund to facilitate the decentralisation of the aircraft industry;

it was formed by a contribution from the State, and contributions from manufacturers in proportion to orders received by them. The object of the fund was to facilitate the displacement of factories and plant of the aircraft industry when the displacement was at the request of the Air Ministry. A zone was selected for the establishment of the new factories. It is understood that some aircraft works have been transferred, wholly or in part, under this scheme, but that difficulties have arisen owing to the reluctance of workers to migrate.

In 1934 an order was issued by the three Ministers for the National Defence Departments whereby, in order to check further industrial concentration in the Paris district, works and factories thereafter established in the district were to be excluded, as a general rule, from the official list of suppliers to those Departments. In June, 1938, the Government, with a view to ensuring the decentralisation of industries likely to be requisitioned for the production of munitions in the event of war, laid down that establishments engaged in such industries must obtain precedent official approval in respect of the site of the establishment of new works or the enlargement of existing ones.

In May, 1938, the Government confirmed the functions of the aircraft decentralisation fund and extended its scope. The main provisions of the Government decree are:—

(1) The fund is authorised (a) to cover expense incurred in decentralising the industry, and industries supplying it with raw materials and semi-manufactured and finished articles, (b) to create new plant, etc., for the industry to be placed at the disposal of the State or of manufacturers working on State account.

(2) Temporarily unused balances may be used to advance short-term loans to suppliers.

(3) The resources of the fund to be constituted by (a) a percentage levied on contracts for aviation material supplied to the Air Ministry, (b) the proceeds of sales, and leases of new installations and plant, (c) the proceeds of financial operations and investments.

SWEDEN.

Sweden has the distinction of being the first country to have a planning law applicable to the whole country. The law was passed in 1874, but since the beginning of the seventeenth century towns in Sweden had been built according to plans, often prepared by order of the Sovereign who not uncommonly presented the town with the land necessary for its development. This has been said to be the beginning of the great landed properties usually owned by Swedish towns and which have so greatly facilitated subsequent planning.

The law of 1874 provided that for every town there should be prepared a plan for its general arrangements and of the building within it, including the streets, the markets, and other public places. The law also required that the town plan must be so prepared as to ensure, as far as possible, that the requirements of traffic, in respect of ample space and convenience, shall be supplied; that the light and air needed for health shall be provided; that danger from fire shall be guarded against; and that there shall be the open spaces, the variety of construction and the beauty necessary for aesthetic reasons. For this purpose care must be taken, amongst other things:—

That streets shall be wide (59 ft. the normal minimum) and shall run in the directions most suitable for traffic;

That large and suitable sites shall be provided for markets, harbours, and other places where there will be much traffic;

JAPAN.

On 1st September, 1923, an earthquake, followed by a fire, destroyed the greater part of Tokyo. On 12th September, 1923, an Imperial Edict authorised the establishment of a special institution for the reconstruction of the capital. A Board for the Reconstruction of the Capital was immediately constituted under the presidency of the Prime Minister, and within a short time set up a Town Planning Committee under the control of the Minister for Home Affairs.

A special law was passed and the opportunity was taken to replan the City on modern lines, with adequate lines of communication, enlarged parks and additional small parks, etc. It was at once realised that realisation of the new plan must not be frustrated by previous land ownerships and, consequently, the law provided for the exchange of lands and that an owner could be required to surrender, free of charge, up to 10 per cent. of the area of his holding, for public purposes such as streets and parks.

Land-ownership re-adjustment was required over an area of about 7,515 acres comprising the main part of the City and a Land Re-adjustment Department was set up. For the purpose of re-adjustment, the residential land comprising about 5,801 acres was cut up into 65 sections. Compensation was paid when the area of residential land taken for public purposes exceeded 10 per cent. For each of the land sectors there was established an advisory "Committee for Land Re-adjustment" comprising persons freely and separately elected from among the land owners and lessors in the sector. These committees advised both with regard to exchange of land and distribution of compensation. After a short period of misunderstanding, adjustments appear to have been agreed to readily and it is reported that only 50 civil actions were brought to court. It is stated that in every case the amount of land required for public purposes exceeded 10 per cent. and consequently compensation had to be paid for the balance. In order to facilitate exchange as an alternative to compensation, the authorities bought certain areas of land.

Expenditure in relation to trunk roads (72 ft. or more in width) and canals was borne by the State, and in relation to auxiliary roads and small parks by the municipality. The street area was increased from 11.6 per cent. to 13 per cent. of the total area of the City.

The main part of reconstruction was carried out in seven years and particulars of this great achievement are to be found in an admirably illustrated volume "The Reconstruction of Tokyo," published by the Tokyo Municipal Office, in 1933.

POLAND.

It is stated that sixty per cent. of the population of Poland is engaged in the industry of agriculture, but that the Government is desirous of increasing manufacturing industries and has recently established a Country Planning Research Office at the Ministry of Finance which has outlined main principles for the gradual industrialisation of the country.

The problem of the large city is not acute as there are, in Poland, only five cities with populations exceeding 200,000.

The location and geographical distribution of existing manufacturing industries is said to be unsatisfactory, primarily because, except for the mining area in Silesia, it was influenced in the past by the previous division of the country between Austria, Germany and Russia.

Town and regional planning appears to be actively engaged in and the policy of the Country Planning Research Office seems to be directed to planned distribution of industrial activity including the industrial development of the central portion of the country, to be followed by industrial development to the east and the re-location of industrial centres in the west.

The general method of planning in the central area is to establish industrial strips along lines of communication with new towns at points of intersection. In general, the size of future industrial towns is being limited to about 60,000 inhabitants.

ADDENDUM BY MR. PEPLER TO THE MEMORANDUM ON
"PLANNING IN SOME OTHER COUNTRIES."

The foregoing memorandum dealt only with examples in countries not members of the British Empire, as it was understood that information was desired primarily from countries with a different constitutional background from our own. Otherwise, attention would have been drawn to such achievements as the National Parks of Canada and the Montreal Metropolitan Commission; Canberra, the newly planned Capital of Australia; Adelaide, the first garden city, planned by Colonel Light one hundred years ago; the comprehensive Planning Report for Melbourne; the National Parks of South Africa and the comprehensive regional planning scheme for Witwatersrand, embracing Johannesburg and Pretoria; New Delhi, the planned Capital of the Indian Empire; the planning work now in hand in New Zealand, etc., etc.

There are, however, in the eastern parts of the Empire agencies for positive planning, namely Improvement Trusts, the operations of which may be of particular interest to the members of the Royal Commission. The best known is the Calcutta Improvement Trust.

CALCUTTA IMPROVEMENT TRUST.

This Trust was established by the Calcutta Improvement Act, 1911. It is governed by a Board of Trustees comprising a Chairman appointed by the Government, the Chief Executive Officer of the Calcutta Corporation, a representative elected by the Calcutta Corporation and two representatives elected by councillors of the Corporation, one representative elected by the Bengal Chamber of Commerce and another by the Bengal National Chamber of Commerce and five representatives appointed by the Local Government.

The principal officer of the Board is the Chief Engineer, and the staff includes a Chief Valuer Estates Manager, Secretary and Chief Accountant.

The income of the Trust is derived from the proceeds of the following special taxes:—Duty on transfer of property, terminal tax, duty on jute, the total proceeds of which amounted to 21,26,266 Rupees (£159,470) in the year 1937-8 (as compared with 4,74,522 Rupees (£35,590 in the year 1912-3). The Municipality of Calcutta also makes an annual contribution, which in 1937-8 amounted to 19,46,898 Rupees (£146,017) (as compared with 7,37,000 Rupees (£55,275) in 1912-3).

In the early years of the Trust a comprehensive plan was prepared for the City and this, although subsequently modified in several particulars, has been the basis of its operations.

The Trust buys areas of land both built upon and vacant, widens existing roads, lays out and constructs roads, bridges, boulevards and parks, and then sells the developed or re-developed land for building by private persons, and usually makes a profit.

Before commencing operations on a proposed scheme the Trust obtains the approval of the Calcutta Corporation. While a scheme is in process of execution the public streets in the area of the scheme are vested temporarily in the Trust and maintained by the Trust. When the scheme is completed the streets are handed back to the Corporation in their improved form. It is stated that this means in effect that in many cases the Trust has taken over from the Corporation a network of narrow lanes with all their sewers, water mains, gas mains, etc., and two or three years later has handed back to the Corporation a fine modern street equipped with improved services and flanked by well laid out building plots or reconstructed buildings.

The Trust has constructed miles of wide roads, many through closely built-up areas and in its Annual Report for the year 1936-37 it was stated that during the course of its operations the Trust had endowed Calcutta with open spaces laid out as parks and recreation grounds of the total area of approximately 320 acres. Mr. M. R. Atkins, C.B.E., M.T.P.I., who was for several years Chief Engineer to the Trust, stated in 1936 that for many years they had been driving roads through the central area at

the rate of a quarter of a mile a year, through land worth £10 to £15 per square yard and having buildings upon it from three to five storeys high, which buildings they demolished. At first there was great opposition to the schemes, but that had disappeared when people saw the increased values that resulted and the great improvements which were effected.

In the year 1937-38 Rs.88 lakhs (£660,000) were spent on land acquisition and Rs.56.93 lakhs (£426,975) were received from sales. Any dispute as to the price of land which the Trust wishes to buy is referred to a tribunal of which the President is a barrister appointed by the Government, presiding over two assessors, one appointed by the Government and one by the Calcutta Corporation.

Since its incorporation the Board has acquired 1,658 acres of land at a cost of 24,88,10,502 Rupees (£18,660,790), reduced by sales to a net cost to the Trust of 6,76,90,500 Rupees (£5,076,787), and engineering works have cost 3,78,19,466 Rupees (£2,836,459).

Other somewhat similar Trusts or Boards operate in Hyderabad, Cawnpore, Rangoon, Lucknow, Singapore, and elsewhere. Detailed particulars are not to hand but the following are a few characteristics:—

The Hyderabad City Improvement Board has carried out extensive improvements in the central area of the City and has been responsible for a great deal of rehusing.

The Rangoon Development Trust is said to be in the fortunate position of dealing with a city the whole of which was originally, and a great part of which is still, Government land. It became State land in 1852 and shortly afterwards a lay-out plan for the central area was prepared. In recent years air survey has been used for planning purposes.

The Cawnpore Improvement Trust is said to specialise in the development of industrial areas to accommodate the rapid increase of industries in Cawnpore, and of residential areas partly for general purposes and partly in connection with these industries.

SINGAPORE IMPROVEMENT TRUST.

Singapore was first town planned by Sir Stamford Raffles in 1819. He laid down wide streets, secured open spaces and reserved lands for public purposes years before they were required. Later generations failed to continue his work with the same vision and foresight. Many extensions to the original plan occurred haphazardly with little or no regard for the future requirements of a growing city.

In 1927 a Town Planning Ordinance was passed which provided that the Singapore Improvement Trust should prepare plans for the whole of the town and island of Singapore. It also provided for the amalgamation and redistribution of holdings for the purpose of carrying out the plan. This applied to all holdings whether belonging to private owners or to public bodies, and to all Crown land, together with all roads, streets, back lanes and open spaces public or private, within the scheme area.

It was provided that upon notification of approval of a scheme providing for a redistribution of holdings, the whole of the area subject to redistribution should vest in the Crown and every Crown grant should in respect of any land comprised within such area be deemed to be surrendered to the Crown, and every estate or interest in the land comprised in such area derived under any such Crown grant should be extinguished. The Crown should then make in favour of each person entitled by the scheme to a final holding a fresh grant of the area comprised in such holding. Every such grant to be made so far as practicable on the terms and subject to the conditions on which the person to whom it is made held his original holding.

Compensation was provided to any individual owner for any special disadvantage in the final holding assigned to him under the scheme, and conversely any individual owner was to pay betterment for any special advantage in the final holding assigned to him under the scheme.

Many important improvements have been carried out by the Trust.

APPENDIX V.

COMPARISON OF DECENNIAL INCREASES OF POPULATION IN GREATER LONDON,
WITH DECENNIAL INCREASES IN GREAT BRITAIN.

(a) *Actual Increases of Population.*

Period.	Inner London.	Outer London.	Total Greater London.	Great Britain.
	Persons.	Persons.	Persons.	Persons.
1801-1811	180,045	29,210	209,255	1,469,164
1811-1821	240,188	32,254	272,442	2,121,637
1821-1831	276,039	31,372	307,411	2,169,426
1831-1841	293,695	37,897	331,592	2,273,149
1841-1851	414,064	31,327	445,391	2,282,019
1851-1861	445,153	96,832	541,985	2,312,167
1861-1871	452,902	210,019	662,921	2,943,766
1871-1881	568,901	312,119	881,020	3,637,728
1881-1891	397,657	469,488	867,145	3,318,160
1891-1901	308,313	639,283	947,596	3,971,774
1901-1911	- 14,582	684,538	669,956	3,831,450
1911-1921	- 37,162	266,005	228,843	1,936,343
1921-1931	- 87,520	811,261	723,741	2,063,241
1931-1937	- 311,000	728,000	417,000	1,176,630

(b) *Percentage Increases of Population.*

Period.	Inner London.	Outer London.	Total Greater London.	Great Britain.
	Per cent.	Per cent.	Per cent.	Per cent.
1801-1811	18·8	18·8	18·8	14·0
1811-1821	21·1	17·5	20·6	17·7
1821-1831	20·0	14·5	19·3	15·4
1831-1841	17·7	15·3	17·4	14·0
1841-1851	21·2	11·0	19·9	12·3
1851-1861	18·8	30·5	20·2	11·1
1861-1871	16·1	50·7	20·6	12·7
1871-1881	17·4	50·0	22·7	14·0
1881-1891	10·4	50·1	18·2	11·2
1891-1901	7·3	45·5	16·8	12·0
1901-1911	- 0·3	33·5	10·2	10·4
1911-1921	- 0·8	9·7	3·2	4·7
1921-1931	- 2·0	27·1	9·7	4·8
1931-1937	- 7·1	19·0	5·1	2·6

APPENDIX VI.

MIGRATION OF PERSONS AGED 21-64 INSURED UNDER THE UNEMPLOYMENT INSURANCE GENERAL SCHEME AT JULY, 1937.

Analysis according to Division in which unemployment books were originally issued combined with Division of Exchange in 1937.

MEN.

NUMBERS (with percentages in brackets).

Division of Issue.	Books Issued.	Division of Exchange in 1937.							
		London and South Eastern.	South Western.	Midlands.	North Eastern.	North Western.	Northern.	Scotland.	Wales.
London and South Eastern	2,186,820	2,117,380 (96·9)	25,910 (1·2)	17,900 (0·8)	8,270 (0·4)	6,910 (0·3)	2,880 (0·1)	3,990 (0·2)	3,580 (0·1)
South Western	622,510	42,680 (6·9)	563,440 (90·5)	7,420 (1·2)	1,920 (0·3)	3,190 (0·5)	550 (0·1)	950 (0·1)	2,360 (0·4)
Midlands	1,216,690	29,700 (2·4)	7,280 (0·6)	1,151,470 (94·7)	13,970 (1·1)	9,330 (0·8)	1,340 (0·1)	1,240 (0·1)	2,360 (0·2)
North Eastern	911,290	27,070 (3·0)	3,330 (0·4)	20,180 (2·2)	839,050 (92·1)	12,420 (1·3)	6,450 (0·7)	1,380 (0·1)	1,410 (0·2)
North Western	1,265,250	38,820 (3·1)	5,510 (0·4)	20,570 (1·6)	14,960 (1·2)	1,174,740 (92·9)	3,030 (0·2)	2,950 (0·2)	4,670 (0·4)
Northern	631,410	41,940 (6·7)	4,320 (0·7)	8,920 (1·4)	15,050 (2·4)	7,830 (1·2)	549,500 (87·0)	2,950 (0·5)	900 (0·1)
Scotland	898,410	25,850 (2·9)	3,380 (0·4)	8,100 (0·9)	4,110 (0·5)	4,300 (0·5)	4,460 (0·5)	846,890 (94·2)	1,320 (0·1)
Wales	537,160	40,380 (7·5)	15,870 (2·9)	17,800 (3·3)	3,080 (0·6)	6,330 (1·2)	1,190 (0·2)	810 (0·2)	451,700 (84·1)
Northern Ireland* ...	1,460	680	160	240	90	50	—	240	—
Total	8,271,000	2,364,500	629,200	1,252,600	900,500	1,225,100	569,400	861,400	468,300

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WOMEN.

London and South Eastern	780,110	764,630 (98.0)	6,310 (0.8)	3,310 (0.4)	1,510 (0.2)	1,880 (0.2)	740 (0.1)	1,130 (0.2)	600 (0.1)
South Western	130,720	6,950 (5.3)	121,330 (92.9)	670 (0.5)	410 (0.3)	570 (0.5)	50 (0.0)	40 (0.0)	700 (0.5)
Midlands	397,250	4,430 (1.1)	1,440 (0.4)	387,950 (97.6)	1,280 (0.3)	1,270 (0.3)	320 (0.1)	260 (0.1)	300 (0.1)
North Eastern	269,670	4,200 (1.6)	560 (0.2)	1,650 (0.6)	259,850 (96.4)	2,260 (0.8)	740 (0.3)	310 (0.1)	100 (0.0)
North Western	531,840	9,090 (1.7)	770 (0.1)	3,000 (0.6)	3,290 (0.6)	512,830 (96.4)	830 (0.2)	390 (0.1)	1,640 (0.3)
Northern	70,750	3,150 (4.4)	260 (0.4)	670 (0.9)	1,600 (2.3)	890 (1.3)	63,660 (90.0)	520 (0.7)	—
Scotland	262,400	3,520 (1.3)	100 (0.0)	720 (0.3)	590 (0.2)	850 (0.3)	460 (0.2)	255,960 (97.6)	200 (0.1)
Wales	44,260	2,830 (6.4)	1,130 (2.6)	930 (2.1)	270 (0.6)	850 (1.9)	—	90 (0.2)	38,160 (86.2)
Northern Ireland	—	—	—	—	—	—	—	—	—
Total	2,487,000	798,800 (32.1)	131,900 (5.3)	398,900 (16.0)	268,800 (10.8)	521,400 (21.0)	66,800 (2.7)	258,700 (10.4)	41,700

* The figures do not purport to represent the total movement of insured men from Northern Ireland to Great Britain, relate only to men discharged from H.M. Forces who had addresses in Northern Ireland at the time of discharge but unemployment books for the year 1936-7 were exchanged in Great Britain.

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APPENDIX VII.

RATES OF WAGES RECOGNISED IN CERTAIN INDUSTRIES AND OCCUPATIONS IN SOME LARGER TOWNS IN GREAT BRITAIN AT 31ST MAY, 1939.

	London.	Provincial Towns and
Engineering.		
Fitters and Turners ...	72s. 11d. per week	66s. od.—77s. od. per week
Iron Moulders (Sand) ...	72s. 11d. " "	66s. od.—77s. od. " "
Engine Shop Labourers ...	55s. 3½d. " "	49s. od.—57s. 9d. " "
Electrical Installation.		
Wiremen, etc. ...	22½d. per hour	17½d.—20½d. per hour
Vehicle Building.		
Skilled men ...	19d. " "	18½d.—20½d. " "
Ship Repairing.		
Shipwrights ...	75s. 4d. per week*	68s. od.—76s. 6d. per week
Ship Joiners ...	75s. 4d. " "	68s. od.—78s. od. " "
Labourers ...	60s. 4d. " "	50s. od.—62s. od. " "
Flour Milling.		
First Rollermen ...	73s. od. " "	64s. 6d.—73s. od. " "
Labourers ...	57s. od. " "	48s. 6d.—57s. od. " "
Baking.		
Fore Hands ...	68s. od.—78s. od. per week	61s. od.—77s. od. " "
Table Hands ...	60s. od.—62s. od. " "	55s. od.—77s. od. " "
Furniture.		
Cabinet Makers ...	21d. per hour	17d.—20d. per hour
Upholsterers ...	21d. " "	17d.—20d. " "
Printing and Bookbinding.		
Hand Compositors (Book and Jobbing Work).	89s. od. per week	65s. 6d.—77s. 6d. per week
Linotype and Monotype Operators (Jobbing Work).	96s. od. " "	72s. od.—86s. od. " "
Bookbinders and Machine Rulers.	80s. od. " "	65s. 6d.—77s. 6d. " "
Civil Engineering Construction.		
Navvies and Labourers ...	15½d. per hour	13½d.—15d. per hour
Building.		
Craftsmen ...	21d. " "	17½d.—22d. " "
Labourers ...	15½d. " "	13½d.—16d. " "
Tramways.		
Drivers ...	73s. od.—82s. od. per week	55s. 6d.—71s. od. per week
Conductors ...	73s. od.—82s. od. " "	51s. od.—70s. 6d. " "
Local Authority Services.		
General Yard Labourers (Non-trading Departments).	58s. 8d. per week	47s. 11½d.—63s. od. " "

* In London the hours of labour in a full week are 3 hours less than in the provincial centres.

The wage rates of porters, checkers, carters, permanent way gangers and langstaffs in the railway service are higher in London than in the provinces.

The Minutes of Evidence taken before the Royal Commission were published by H.M. Stationery Office. Full details will be found on page ii of the cover.

The key provided on this page and continued on page iv of the cover is included as a guide to the evidence which each part contains.

First Day.

Sir John Maude, K.B.E., C.B., Deputy Secretary, Ministry of Health, and Mr. T. H. Sheepshanks, An Assistant Secretary, Ministry of Health.

Second Day

Mr. W.
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Royal Commission on
the Distribution of the
Industrial Population.

Third and

Mr. W.

Fifth Day.

Sir J.

Sixth Day

Sir J.

Seventh Day

Sir J.

Eighth Day

Mr. I.

Ninth Day

The A.

Tenth and

Mr. I.

Twelfth Day

Mr. I.

Thirteenth

The

Fourteenth Day.

Mr. Frank Pick, Vice-Chairman, London Passenger Transport Board; and the Rt. Hon. Herbert Morrison, M.P., Leader of the London County Council.

Name of borrower	Lent on	Received on
Gokhale 22/4/57		
3 MAY 1957		

SERVANTS OF INDIA SOCIETY'S LIBRARY
POONA 4.

- Books drawn from the library may not be retained for longer than a fortnight.
- Borrowers will be held strictly responsible for any damage done to books while they are in their possession.

Continued from page iii of cover

Fifteenth Day.

The Convention of the Royal Burghs of Scotland; and of the Scottish Economic Committee.

Sixteenth Day.

The National Industrial Development Council of Wales and Monmouthshire; and the Cumberland Development Council.

Seventeenth Day.

Mr. Peter F. Bennett, O.B.E., President Elect of the Federation of British Industries.

Eighteenth Day.

Mr. Harold Macmillan, M.P., and Mr. J. R. H. Cartland, M.P., the Port of London Authority; and the North-East Development Board.

Nineteenth Day.

The Council for the Preservation of Rural England; the Town Planning Institute; and the Hundred New Towns Association.

Twentieth Day.

The Garden Cities and Town Planning Association; First Garden City, Ltd.; and Welwyn Garden City, Ltd.

Twenty-first Day.

The Railway Companies Association and the Associated Road Operators.

Twenty-second Day.

The Corporations of the Cities of Birmingham and Leeds.

Twenty-third Day.

The Garden Cities and Town Planning Association; The Town Planning Institute; and Dr. W. A. Robson.

Twenty-fourth Day.

The Corporations of the Cities of Manchester and Liverpool; and the Association of Municipal Corporations.

Twenty-fifth and twenty-sixth Days.

Sir Raymond Unwin; Sir Gwilym Gibbon; and Mr. W. L. Hichens.

Twenty-seventh Day.

The Trades Union Congress.

Twenty-eighth Day.

Sir Sylvanus Vivian, C.B., Registrar-General for England and Wales; and Dr. T. Carnwath, D.S.Q., Senior Medical Officer, Ministry of Health.

Twenty-ninth Day.

Mr. J. G. Kyd, Registrar-General for Scotland, and Mr. P. Taylor, O.B.E., of the Department of Health for Scotland.