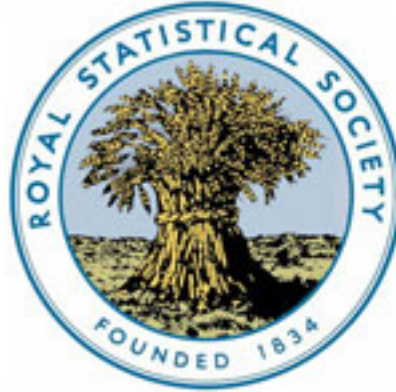




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JOURNAL
OF THE ROYAL STATISTICAL SOCIETY.

DECEMBER, 1902.

The INAUGURAL ADDRESS of MAJOR PATRICK GEORGE CRAIGIE, C.B.,
PRESIDENT of the ROYAL STATISTICAL SOCIETY, SESSION 1902-03.
DELIVERED 18th November, 1902.

THE Presidency of the Royal Statistical Society is an office alike of dignity and responsibility. On entering therefore on the duties of this Chair, a twofold obligation impresses itself upon me as the humble successor of the very distinguished line of Presidents who have swayed the destinies of the Society for nearly threescore years and ten. I have, in the first place, to express my profound sense of the honour done me by my colleagues, and next I have to ask their special forbearance in the discharge of such functions as may fall to my lot, a forbearance which I think I am entitled to claim, when the case is one of virtual promotion from the ranks. It would not be easy for anyone to follow such a President as our last. Lord Avebury's devotion to the Society has long been proved and recognised, and his multiple qualifications in the world of business, the world of science, and the world of literature place any successor at no little disadvantage. Difficult too is it for one who was yesterday your servant—proud though he has felt of the trust you so long reposed in him in a secretarial capacity—to be called to handle reins of authority which have been again and again preferably entrusted to some of the most distinguished statesmen of the Empire. Most difficult of all, perhaps, is it for one who is moreover still a servant of the Crown, in the strictest sense of the word, and who has certain restrictions incident to that honourable position always before his eyes, to feel sure that he can be equally at home in the current business of the Chair, or equally free in the choice of a topic for address, as if he were, like most of our past Presidents, one to whom the field of politics was open on every side, or who could claim the indulgence due to an official who has served his time and earned his freedom.

In a former case in which one of your Honorary Secretaries was honoured with a call to the Chair, he claimed it, as the result

of his experience in the minor office, that the delivery of an Address was not the sole, or even the major part, of what a President may be expected to do for the Society. I desire to associate myself with that opinion, and in bargaining to do my best during my year of office to help forward your general interests, I will ask for some indulgence if the remarks I propose to offer on this occasion partake more of the nature of suggestions of the lines which statistical inquiry and research may usefully take, than of any full and reasoned exposition of particular theories and conclusions, for the deliberate preparation of which the opportunities left to me by my multifarious duties at the Board of Agriculture are not extensive.

In choosing a subject I have endeavoured to remember that an opening Address is not necessarily a paper; and although, to our great advantage, we have nevertheless from time to time secured on these occasions illuminating lectures on particular subjects of current political interest, yet the general practice of my predecessors—and particularly those of them who were most conversant with the business of the Society—has inclined more to the employment of the opportunity for either reminiscent comments on the past, or hortatory encouragements to future statistical effort.

Looking back, as I am naturally led to do from this Chair, to the changes in our Society's *personnel*, I cannot begin the business of a new Session without notice of the losses of the past, and, most recent of these, to the death, scarce a month ago, of our colleague Sir Juland Danvers, whose services to the Society, on the Council and otherwise, and to the Indian Empire in his honourable official career, will be long remembered. Among other gaps in the ranks of our personal friends and colleagues, I would desire also here to deplore the sad and premature loss of our distinguished Honorary Fellow, Professor Mayo-Smith. Of the early Presidents of this Society we have now no survival amongst us; the senior Hon. Vice-President on our list dates only from 1877. Of the original promoters of the Society in 1834 no survivor at all remains, and to the younger generation of statisticians the names of Henry Hallam, our first Treasurer, of Charles Babbage, Lord Overstone, Lord Harrowby, Colonel Sykes, Thomas Tooke, the Rev. T. R. Malthus, G. R. Porter, and others, who made up the first Council, are familiar only by their works. Even of the second group of statistical leaders with whom many of us well remember to have worked, and from whom as juniors we had such kind encouragement, Mr. Newmarch, Mr. Dudley Baxter, Professor Leone Levi, Dr. Guy, Dr. Farr, Dr. Mouat, and Sir Rawson Rawson, have all passed away, leaving a record

which the Society will not fail to cherish, and an example which commends itself to all.

It is not my object now to trace the history of our own Society since its birth on the 15th March, 1834, on the suggestion of the famous mathematician, astronomer, and statistician, Quetelet. Nor do I offer any advertisement to the world, in a time when advertisement is very much the order of the day, of the utility of its services to the country, the advantages which its *Journal* and its Library offer to the searcher after general truth, the renown it has achieved by the solidity of the labours and qualifications of its founders, beyond recalling to public notice a verdict passed upon us not by one of our own nation, but by a potent figure in the European hierarchy of statistics, the present President of the International Statistical Institute—Dr. von Inama Sternegg—who told our Jubilee meeting in 1885 that the unceasing labours of the first fifty years of our corporate existence, then celebrated, had earned for the Statistical Society of London “the undisputed right to the title of the first and most important society in the world for promoting the growth of statistical knowledge and stimulating the development of statistical operations and research.”

I should esteem it, however, the most welcome incident of my own tenure of this Chair, could I see, before I give place to another President, an important new departure effected by a promise of that better and more worthy housing for its work and its unique library, which a Society like ours deserves to give full scope to its accumulated teachings. The value of the services which an organisation like our own can render to the State has been repeatedly acknowledged. We can appeal to men of every class and race for support in our efforts to promote close reasoning and accurate thinking respecting the great factors of political life, and to examine with the arithmetical searchlight of figures the projects and the aspirations of social reformers.

Our Society has now a record stretching into three successive reigns, and embracing the whole lifetime of what will hereafter be known as the Victorian epoch of our national history. National recognition has been accorded to us in various forms. We enjoyed the patronage of the Prince Consort as early as 1840. Our official jubilee was followed by a Royal Charter of Incorporation, and we have had recent evidence of Royal favour in the acceptance by the Sovereign of these Realms of the post of Patron, and the enrolment of the Heir Apparent to the Throne as Honorary President. Tendering as we have just done our loyal congratulations to King Edward, on the auspicious occasion of his Coronation, we are inevitably reminded to look backward to the historic meaning of

that ceremony, linked with century after century of English national life, and forward to new obligations imposed on us by the possession of extended power and imperial dominion which the last half century has brought to the Monarch of all the Britains.

As the first of your members to accept the baton of President in a new century—for to Lord Avebury belonged the distinction of bridging two centuries in his two years of presidential life—I may be pardoned taking for the theme of my remarks to-day a search, more or less discursive, into the nature of the statistical evidence, to which we have access, of the nation's position—relative and absolute—at the present day, contrasted with the position it occupied when this Society was founded.

The early discussions of the Society reflected the stirring topics, political and economic, which filled men's minds in the third decade of last century, prominent among which were parliamentary reform, municipal reform, poor law reform, registration reform, educational extension, and that industrial revolution which we owe to the developed use of steam for transport by land and sea. To the legislation of 1832, 1834, and 1835 the historian will always look back to find a starting point for many of the changed conditions which differentiate the Britain of the last two-thirds of the nineteenth century from the period which lay before.

The manifold development in every sphere of national life, the extending scope and dimensions of governmental action within the State itself, the growth of the country's trade, its colonial possessions, and its international position is notable since 1834.

I propose then, with your permission, to invite renewed attention to some of the several directions of inquiry to which we statistical inquirers may with advantage address ourselves in the hope of unveiling the true nature, sometimes obscured, of the changes which make the British people of 1902 a different community in its internal composition, in its external relations, and in its political activities, from its immediate predecessors of seventy years ago. The process I suggest is the simple one of measurement and comparison, and it is hardly needful to-day to assert that in measurement and in comparison lie the essence of all statistical research.

It is not needful, and it would be tedious, to recount the precise definitions which one or another of our more philosophically minded fellow workers have attached to the term "statistics"—whether the word had a German or a Grecian origin, whether the scope of statistical research is to be limited to the skilful collection and methodical presentation of numerical facts, thereafter to be handled by the economist and politician, or whether the orderly and scientific building up of a sound superstructure on the

basis of the tested and grouped material of comparable facts may claim to be included in the task which is open to us. The history of our Society has been a record of development in this matter. I have the right good statistical authority of the late Dr. Engel, in declining the task of strict definition of this our science, art, or mystery, if I recall the statement which he made to the International Statistical Congress at the Hague, three-and-thirty years ago, that he had himself discovered in the writings of different authors 180 different definitions. Unless I am mistaken, the energy of some of our recent and younger writers has even since that time multiplied the suggested interpretations of our subject.

On one point I think, however, we must all, or nearly all agree—statistical work of value, in whatever direction we may extend it, includes and presupposes measurement and comparison. Measurement and comparison are, I take it as admitted, indeed, on the scientific authority of Lord Kelvin, to be essential conditions of any form of significant discoveries in the domain of science, and I think I am safe too in claiming that the accepted laws and theories of the political economist have virtue and reliability for the guidance of the statesman just so far and no farther than they can be shown to be founded on the recorded experience of the past and on the measured facts and factors of life as they stand revealed to the statistical investigator.

But the facts have first to be accumulated, then to be marshalled and numerically grouped, and then, and then only, to be built upon. Nor can any statistician rate too highly the obligation that lies upon him to see that the elementary units accumulated are individually sound and durable material, that their strength has been tested, their capacity measured rightly, and their comparative significance accurately determined, before he either ventures himself to announce the solution of the problem sought, or hands over for the use of the urgent and bustling politician, or of the speculative economist, the conclusions to which the data seem to point.

So much only by way of advice to my younger colleagues—advice which I know is concurred in by those of us who have found not a few occasions, in the current discussions of the last quarter of a century, for enforcing these cautions. The advice is none the less necessary because statistical forms, tabular or graphic, have been in far more frequent and, perhaps, less guarded, popular use than in the days when our own Society began its solid and persevering labours. The statistician of the twentieth century—quite as much as the modern man either of science or of politics—stands to-day in more danger of subordinating safety to speed in announcing his conclusions, than in times when the pace of current politics and journalistic enterprise was less forced.

Now the foremost topic to which the rule and plummet of the statistician is to be applied is that of the numbers and distribution of the population. This is after all the governing figure which dominates any statistical inquiry into the "conditions and prospects of society." The economic relations of the individual to the group or society of which for one purpose or another he forms part, cannot be discussed without measuring the dimensions of that group—be it a family, a district, a State, or a collection of States.

Again and again my predecessors in office have enforced the lessons, political and economic, of recent changes in the relative numbers of the persons with whom, either as fellow citizens in our own country, or as rivals in war or as competitors in trade abroad, we have to deal.

The moment of completing our own census, coinciding as it practically does with the independent enumerations of other civilised States, will furnish to those of our fellows, whose expert knowledge and whose intimate connections, present or past, with demographic statistics, equip them for the task, a rich field of exploration and research. I do not attempt to anticipate the detailed papers, for which we have still reason to look, from several of our colleagues at no distant dates. Mr. Baines and Mr. Welton, who have prescriptive rights to enlighten us yet again on different aspects of this subject, have already whetted our appetites by the notes they have supplied on the data available since the preliminary figures appeared, and the complete story of the English census, which is now coming out from Somerset House in geographical instalments, wherein we recognise the skilful hand of our good colleague, Mr. Noel Humphreys, will give a new starting point of invaluable importance to the statistician.

But, beyond these national countings on our own shores, and beyond the Colonial and Indian figures, the publication by the International Statistical Institute of the first, or European instalment of the World's aggregate population record—which that body at its Norwegian meeting of 1899 entrusted to its distinguished Vice-President, Levasseur, and its veteran General Secretary, Bodio—reminds us of the very general numbering of the peoples of the world which heralded the approach, or marked the opening of the twentieth century.

Read with the similar efforts in the past, this latest publication tempts me to ask you to consider what are the new facts to be learned as to the relative position of this our own country to its European and more distant neighbours at the present time, and how that position compares with the conditions which held good when our own Society had begun its scientific labours, after the nineteenth

century had surmounted the troubles and turmoil of its opening years.

When our Society was born, the English census of 1831 had just been taken, and showed the inhabitants of the predominant partner of the United Kingdom to be represented by the figure of 14,000,000 souls. The first census of the twentieth century makes the English total 32,500,000. This is a growth of 132 per cent. in the seventy years 1831-1901 in this section of the United Kingdom alone. But England—even England and Wales—is not the whole of Britain. The predominant partner of the United Kingdom was much less predominant in the days to which we are looking back. It mustered then 58 per cent. of the nation's inhabitants. It claims to-day more than 78 per cent. The other partners have moved in opposite directions. The addition which Scotland shows to her resident total in this interval is largely outweighed numerically by the diminution which Ireland has to report, and if the United Kingdom total of 1831 be contrasted with that of 1901, it is a nation collectively numbering 24,400,000 at the earlier period which we have to contrast with 41,500,000 now. This is a growth of 70 per cent. in seventy years.

What then were the dimensions of the neighbouring peoples upon whom those 24 millions of Britons looked out seventy years ago across the English Channel or the North Sea, and what are the changes we have to note in the magnitude of the more distant trans-oceanic possessions of the English Crown and the non-European States of the globe with whom our fathers had to deal in the third decade of the last century?

The last volume of the International Statistical Institute makes the population of continental Europe about 1830 to have been some 192 millions to our 24, or exactly in the ratio of 8 to 1. But Europe, although a very potent and interesting corner of the globe, is not the world. On rather more than one-thirteenth part of the total land surface it contains about a quarter of the world's inhabitants. Making use therefore of such extra-European enumerations as have been made, and supplementing these by the current rough estimates, which unfortunately must still pass for statistics in regions where the census taker has not accomplished the task of enumeration, the world's population seventy years ago was apparently about 847 millions.¹

For the guesses of demographic experts we are anxious to substitute the results of that projected inquiry into unenumerated

¹ See "International Statistical Institute" (Levasseur), tome ii, 1887, p. 238, and "Almanach de Gotha."

peoples on which the International Institute has been urged to enter by our colleague, Mr. Kiær, and for which the Statistical Bureau of Denmark is understood to be willing to formulate the preliminary arrangements. But pending the achievement of this ambitious enterprise, we may, with the latest estimates, not err very widely if we put the aggregate population of the Twentieth Century World at not less than 1,600 millions of inhabitants, white, black, red, or yellow, as the case may be.

Half of the whole aggregate of the peoples of the earth are still unenumerated, according to the estimate which our able colleague Mr. Baines put before us at Budapest—States as vast as China and as small as Montenegro being in the list of non-census taking governments—while the available data for the protectorates and dependencies of our own and other European administrations are equally defective.

Admitting the consequent weakness in the statistical basis of the comparison, the figure just quoted as the world's total may nevertheless help for the moment to exhibit roughly the commonly received impression of the present magnitude of the human race in the five conventional geographical divisions of the world's surface. A great intermingling of interests has however arisen both as regards territory and as regards men. The European nations have not only by emigration in the past largely recruited the resident populations of other regions, but they have likewise assumed dominion and incurred responsibilities which have tended largely to increase in recent times, and which make the points of possible friction in the political questions of the day world-wide. Foremost among all European States is the action of our own country in this direction, and no measurements of relative international position, now and seventy years ago, can be valid which omit to take such account as we may of this material factor.

On the faith therefore, as regards the earlier period, of an estimate, made with care and with official help and encouragement, by Mr. Montgomery Martin,² of our own over-sea possessions and colonies in the third decade of last century, I have ventured to place alongside the *guesses* of the world's totals of population the probable share of the British commitments of seventy years ago roundly in millions of persons.

Contrasting these estimates with the assumed totals of the British commitments of to-day, as we have them in our official and semi-official publications, and relying for the African data on the well considered estimates furnished by the "Stateman's Year Book," which Dr. Scott Keltie so ably conducts, it would seem that the British total now includes very nearly a fourth part

² "Statistics of Colonies of British Empire, 1839."

of the estimated population of the globe, as against one-seventh part at the earlier date. The British subjects of European extraction were believed to form a fifth of the empire's total population in 1830: they can hardly form much over a seventh now. The greater uncertainty and very probable defects of the earlier estimates in numerous cases may no doubt contribute to the apparently rapid advance of the subject peoples, but, with whatever qualifications we introduce, the figures leave no doubt of the vastly augmented magnitude of the empire's responsibilities and the empire's subjects.

Very roughly the populations I have just contrasted divide somewhat as under:—

	About 1830.		About 1900.	
	Millions.	Of which British.	Millions.	Of which British.
Europe	216	24·7	400	42·0
Asia.....	480	97·4	868	300·0
Africa	109	0·3	178	41·9
America	40	2·3	148	7·5
Oceania, &c.	2	0·3	6	5·0
	847	125·0	1,600	396·4

Were an equally rough comparison to be ventured upon as regards the areas of the world's surface then and now under British rule or British protection, the older estimates, defective no doubt as regards unoccupied regions, do not exceed $2\frac{1}{4}$ million square miles, while the later surfaces reach $12\frac{1}{4}$ square miles. This advance is relatively much greater than that of the estimated populations on the areas concerned. If the estimate be accepted, it means the exchange of a responsibility, reaching seventy years ago to some 4 per cent. of the land of the world, for one which embraces well nigh 24 per cent. of that area—and this without including the existing British commitments on the Nile, for the good government and control of no insignificant population and no unimportant area in Egypt and the Soudan.

Whether it be an advantage or not to the conduct of diplomacy—and the question may be left to be answered by some of our Foreign Office friends, whose co-operation I fear we do not often secure in the Royal Statistical Society—the world, as it grows older, it would seem inclines to concentrate power on a smaller number of political centres. Six States, and six only, appear at the present day to govern or protect some three-fourths of the world's population, and when ten States have been named,

something like six-sevenths of the peoples of the globe have been grouped and classified.

Two great empires now alone, we are told, account for something like half the population of the world—Great Britain and China—adding a comparatively known to a comparatively unknown statistical factor, hypothetically absorbing between them a multitude as great as all the world held a century ago, and one which presses close upon, if it does not exceed, 800 million souls. The direct subjects and protected races falling under the widely-stretched sway of King Edward in distant corners of the earth, are believed to somewhat slightly exceed the compacter masses which crowd the series of contiguous territories owning more or less allegiance to the Imperial Court of Peking. A long way after, and about one-third as great in men as either of these world powers, comes the Empire of the Czar, with its 9 million square miles in a ring fence. If we may credit the figures of the latest African and Asiatic extensions of the influence spheres of our great neighbour France, it is, perhaps, the populations for which Paris speaks that stand next only to the Russian quota, and, like it, exceed 100 millions, of whom but two-fifths are native Frenchmen. Only after this can we rank the youthful, very differently constituted, and yet mighty nation of the United States of America, even if her new Philippine subjects are added. The German, the Japanese, and the Austro-Hungarian empires follow next in their “all world” rank, leaving Holland with an over-sea population seven times as great as the Dutchmen at home, and—a good way behind—Italy, as the tenth in magnitude of persons to complete the account for six-sevenths of the peoples of the globe, civilised or barbarian, numbered or guessed at.

No mere re-count or grouping of more or less probable conjectures of the so-called world's population would suffice to bring out, as a geographical examination of the centres of development will do, the essential differences between the relative strength of the peoples of 1834 and those of 1900. Europe, as it appears in the estimates of the various authorities, may have a little less than doubled its population, but, according to these figures, if credence is to be given to them, even the much greater population of Asia has increased in nearly equal ratio—a result which, I confess, rather suggests to me the insufficiency of the earlier guesses, than the exact numerical progress indicated in the table. Meanwhile, of course, the new world's development, and the share of it which is due to the European overflow, is common knowledge.

The latest contrast of the International Statistical Institute places opposite to the 400 millions accounted for at the present time as the population of the conventional Europe, a figure of

some 216 millions in 1830. Roughly, this would mean a growth of 85 per cent. in seventy years. But it occurs to me that the factors in this aggregate should be dissected. There are two, at least, which need further examination and inquiry.

The Russian increment alone is close upon 70 millions of the whole. This suggests a hypothetical growth of population equal to more than 150 per cent. in seventy years, or more than 2 per cent. per annum, and leaves to the rest of Europe a general growth at less than half this rate, or only 67 per cent.—less than 1 per cent. per annum.

But the earlier Russian figures I cannot but regard as, at best, of doubtful authority. There has been no real census taken in that great empire until the last in 1897, and those of us who visited that empire on that occasion, and who most admire the vast labour of our energetic colleague M. Troïnitsky, are the readiest to find a need for caution in comparisons with earlier data. The figures on which the Russian estimate of 1830 were based, although not now in use for the first time in international comparisons, are, I imagine, of even less accuracy than the police or fiscal data of 1851 and 1858, with which alone the Russian serial statement itself makes a start, and I hesitate to found upon them a conclusion as to a rate of increase so very much beyond that met with elsewhere in Europe.

Although less disturbing to the total, the increase attributed to the Turkish, Danubian, and Grecian communities of the south-east must rest on figures which at the earlier date in all cases, and even in the last year in others, are not much more than guesses.

On the whole, therefore, I think, without any disparagement to our Eastern European neighbours, we shall get a more trustworthy means of comparing and of realising what has been going on in the last seventy years, if we confine the present inquiry to the regions where there are longer census records to fall back upon, and employ, if only for a single object, a map in which the western half of Europe is treated apart from the territories of the States whose rule reaches eastward far beyond the conventional limits of the Europe of the atlas.

If I were to spread out before you a map of the World—of the Old World in this instance—the impression which it gives is that not of several continents, but of one continuous stretch of land half-way round the globe, whereof the natural centre will be a meridian drawn from the North Pole southwards through the ancient capital of Delhi.

To right and to left of this reaches the land surface of the hemisphere ending, reluctantly as it would seem, in the circum-

ambient ocean on the east, and the south-east, south, south-west, and north-west in one or more lacerated or serrated peninsulas, with, as a rule, their outlying pickets of detached islands in continuation, on one of which we stand.

On the extreme east—the land ends in the East Cape and the small peninsulas of Kamtshatka and Korea, with the Japanese and other islands running out into the farther Pacific. On the south we have the great double projections of Indo-China and of Hindustan. On the south-west the entire continent of Africa is in a sense one great peninsula, while in the far north-west corner the European States, other than Russia, really take the shape of a large deeply sub-divided peninsula, with the British Isles at its farther extremity.

That and no more is the apparent geographical section or group of countries to which I am tempted to restrict the scope of my present survey. This most interesting section of the world to us covers much less than half what we are accustomed to call Europe on the map, although it holds three-fourths of the population. The omission on the ground of the weakness of the earlier demographic data of so much of Russia (2 million square miles out of nearly 9) as comes within the conventional Europe, and the omission of Turkey, with its changeful and shrinking area, and the territories now known as Servia, Bulgaria, Roumania, Greece, Montenegro, Herzegovina, and Bosnia, for the moment from our statistical survey, will eliminate from the computation an unsatisfactory element of relatively weak conjecture.

On somewhat different grounds, when it is a general statistical view that is alone desired, I pass over any movement which may have happened in those microscopic sovereignties which are still studded on the map of Europe, and form insignificant splinters of the European political block, leaving out from the tabulated growth of populations four at least of these minor States, which do not boast collectively, even now, among them all 50,000 persons.

The changes of the fortunes of Monaco, Liechtenstein, Andorra, and even San Marino, do not concern us much, although the latter, proud of its boast to be really quite the oldest State in Europe, only five years ago concluded a solemn treaty of unity and friendship with the adjacent Kingdom of Italy. Again, perhaps, the 230,000 inhabitants of the Grand Duchy of Luxemburg may not require to be individually noticed for such purposes as the present, and if these five omissions be allowed to me, the States of Europe can be readily reduced to a baker's dozen of separate governments.

And if I have incurred the wrath of orthodox map makers in thus setting up a little Europe of my own, I would point out that geographers are not in absolute agreement as to what Europe

in the continental sense really is. The careful selector of statistical material, even if he were not courageous enough to restrict himself to the Western countries, runs very soon against another difficulty when he comes to reckon the density of the European peoples; for where is the boundary of Europe to be drawn? What adjacent islands are or are not to be brought within the pale? The British Isles and Sicily no one suggests can be left out of reckoning. Malta, I believe, is now an unquestioned European station. The Colonial Office List includes Cyprus. But the editors of the "*Bevolkerung der Erde*," Drs. Wagner and Supan, appear to refuse to the islands in the sea of Marmora—as well as to the Canaries, Madeira, and the Azores—a right to a place within the natural boundaries of Europe, while there is a difference of over half a million of square miles in the measurement of the aggregate surface, according as we draw one or another boundary between the conventional Europe and the conventional Asia of the geography books, and according as we do or do not include the Polar Islands, Iceland, Nova Zembla, and Spitzbergen, which, whatever be the paucity of the enumerated population, are themselves credited with an area of more than 100,000 square miles.

The Ural Mountains are crossed by Russian administrative circles which embrace Asiatic populations in the scope even of the fifty Governments of "Russia in Europe." Important Caucasian provinces stride across the range of the Caucasus, and only a sign-post on the road hints where Asia actually begins.

The limited and reduced Europe I have now arrived at is not however, whatever the map may suggest, to be docked still further at the north for sake of symmetry by the exclusion of the special Scandinavian sub-peninsula, which has more than twice the area, with about one-sixth of the people, of the British Isles, but which is in so prominent a sense the home of accurate census taking, that it must enter our seventy years' statistical survey.

In the thirteen States left for comparison, I find a recorded population of 167 millions has become one of 263 millions in the lapse of seventy years. This is a growth of something under 58 per cent.

The comparative rates of increase vary and the consequent relative position of these States has altered somewhat nearly as under, adjusting as far as may be the figures shown to the present area of each State in which territorial changes have occurred. The comparison is made between our own country, our nearest neighbour, France—which has demographic peculiarities that entitle its slow growth to separate and careful diagnosis—the German Empire, which on other grounds commands special attention at this moment, and the somewhat unequal groups which

remain—Italy with Switzerland, and Austria-Hungary on the south, the Iberian Peninsula on the south-west, and the minor powers of the north, the three Scandinavian kingdoms, with Holland and Belgium.

Population in Millions.

	About 1830.	About 1900.	Increase per Cent. in Seventy Years.
United Kingdom	24·4	41·6	70·5
France	32·5	38·9	19·7
Germany	30·0	56·4	88·0
Austria-Hungary	30·0	45·4	57·3
Italy and Switzerland	23·2	35·8	54·3
Spain* and Portugal	14·2	23·1	62·7
Sweden, Norway, Denmark, } Belgium, and Holland }	12·4	21·7	75·0
Total	166·7	262·9	57·7

* The figures accepted as the Spanish population of 1830 are those quoted in the last International Statistical Institute volume as furnished by the Spanish authorities, but a larger total by quite 2 millions has been in use, and may, in view of the census of 1887, be preferred. This would largely reduce the increase shown for the Peninsula.

The United Kingdom growth has been thus 17,200,000 persons, or a matter of 70·5 *per cent.*, in the whole seventy years. France, in the same interval, has added only 6,400,000 to a population which was 33 *per cent.* greater than our own in 1830—a growth of less than 20 *per cent.*, which leaves her total inferior to the British. But Germany—meaning at the earlier date all that congeries of kingdoms, duchies, and free cities which make up the German Empire of to-day—has, to a population very little inferior to the French of 1830, added 26,400,000, a growth of 88 *per cent.*

For the rest, the smallest group—made up of the Scandinavian and Low Countries, all of which border on the North Sea or the Baltic—displays a growth of population coming between the British and the German ratios of exactly 75 *per cent.*, the other advances falling short of this.

There was thus just one-seventh of the whole 167 millions British in 1830, while our relative position with our immediate neighbours is improved to nearer one-sixth in 1900.

It must be remembered in this connection that while the United Kingdom has added 17 million persons to its resident population in seventy years, in these years also there has left its shores a continual current of emigration to the United States and to our several oversea possessions. To the great American

Republic I gather that³ there went within a fraction of 8 million persons between 1831 and 1901, and rather more than half that number to British Colonies and elsewhere. Of the latter group, 1,773,000 went to Canada—half of the whole quota going there in the first twenty-five years of the seventy—and very nearly as many, or 1,730,000 persons, to Australasia, the current in this case being more equally distributed, but the smallest decennial quota emigrating in the latest decade.

‡ Put otherwise, in the lifetime of this Society, very nearly 5 persons for every 10 ultimately added to our home stock have gone to build up the closely related State which dominates, so far as population is concerned, the continent of America. About 1 person for every 10 of the nation's increase in our own islands has in the same interval gone to Canada, and another 1 for every 10 to Australasia.

The subject of emigration, both from our own country and from other European nations, deserves, however, once again attentive study by itself on a scale which cannot be attempted in a general address of this type. I commend, however, both the fluctuations of the numbers, and the meaning of the recent changes which have marked its current, to your consideration, as matter bearing very directly on the relations of the older to the newer countries of the world. A significant mass of statistical data lies ready in the annual volumes which the Board of Trade now provide, and the reports which are issued under the care of our trusty colleague, Sir Alfred Bateman.

But the development which has added 96 millions to the population of central and western Europe on its 1,700,000 square miles has been a development of a very distinctive type, and one which, but for the comparative annihilation of distance and reduction of the cost of transport in the last seventy years, could hardly have taken place, for it is the massing of persons together in urban areas which has occurred, fed from outside, either from the distant rural districts of their own territory, or from the wider fields of other and newer lands.

There is indeed a double movement which statistical research reveals, as stamping its feature more firmly than any other on the present relation of man to society, whether within the limits of the State or the limits of the globe. At one and the same time there proceeds a movement of expansion and a movement of concentration—expansion by the occupation of new lands in nearly empty territories, and concentration by the gathering together of the people in a more rapid ratio than in former epochs in vast

³ "Emigration and Immigration Returns of the Board of Trade," H.C. 183 (1902).

urban masses and industrial agglomerations of population, whose food and clothing and means of labour are supplied by more or less distant producers.

Much has been written on this topic, but more remains to be gleaned respecting the underlying facts by the careful student. The movement from old centres to new fields of labour, great as it has been in the past seventy years, is not perhaps so large an aggregate movement as that which in civilised States absorbs into cities the overflow of the country, and in several countries, and not by any means in England only, draws away from the fields to more attractive urban centres the population they formerly held.

Seven cities of the Europe of to-day hold over a million souls apiece. Three of these lie however in that eastern European region which we have found to be defective in comparable statistical data. At the present time it is believed that St. Petersburg, Moscow, and Constantinople are million-peopled cities, and they may be credited with having among them 3,400,000 inhabitants to-day. Western and Central Europe, the thirteen States I have been referring to in detail, have the other four and much the greatest of these agglomerations. London, Paris, Berlin, and Vienna boast an aggregate of very nearly 11 million persons, while in the early days of this Society their total could but little have exceeded 3 million persons.

Of cities of half a million and upwards, Europe as ordinarily enumerated has now twenty—and there are sixteen cities of this magnitude in Western and Central Europe. Of these five are in the British Isles, three in Germany.

At the 100,000 limit, so often taken for the index of a city, the twentieth century recognises in Europe a total of 149 such places, with an aggregate population of no less than 47,700,000. In thirty-nine separate places of this type in the United Kingdom and thirty-three in Germany, not much under half of these persons were concentrated. The modern growth of the fascination or the fatality which compels the scattered peoples of older times to crowd together in such aggregations is worth noting, when we look backward to see ten years ago there were one hundred and twenty-one such cities with 37 million residents, thirty years ago seventy with 20 millions, fifty years ago forty-two with only 9 million inhabitants. When last century opened these 100,000-person cities were but twenty-one, and their aggregate residential population did not reach 5 millions. In 1800 barely 1·6 per cent. of the European population enjoyed the advantage or suffered the misfortune of residing in a city of this size. In 1900 nearly 12 per cent. of the inhabitants of Europe were thus housed.

Turning to a recent work, the statistics of which I have made

use of, by M. Paul Meuriot, Professor of History at Amiens, students of the phenomenon of the "urban agglomerations" throughout contemporary Europe, will be, I think, rewarded for the labour, and will find corroboration of the townward drift in the tables of this industrious student of M. Levasseur's demographic work.

Supplementing some of his figures by still more recent data, a picture of the growth of that section of the inhabitants of France, Germany, and the United Kingdom resident in 100,000-person cities at the quoted dates, may be gathered from the table which I have thus constructed, and which will afford striking indication of where the new populations are to be found:—

Year.	France.		Germany.		United Kingdom.	
	Cities.	Population.	Cities.	Population.	Cities.	Population.
1801....	3	766,000	2	272,000	2	1,100,000
'51....	5	1,716,000	6	998,000	11	4,620,000
'71....	9	3,280,000	10	2,200,000	18	7,120,000
1901....	15	5,466,000	33	9,129,000	39	13,522,000

There are, however, "cities and cities," even of equal dimensions, and remembering that statistics always involve comparison, it is hardly possible to read a dry list of 100,000-person towns ranged side by side in order of magnitude, without calling up the vast difference of character, of density and environment, of history and pace of growth, which separates these arithmetically equal units of population.

Our own metropolis is a thing apart from all comparison. It has furnished us in the past, and will assuredly do so again in the future, matter for instructive statistical inquiries on which I cannot enter to-day. It must, however, be remembered that the London of the official area included in the foregoing calculation as a single city, is but the kernel of a vaster urban province—spread over the annexed territories of the juxta-metropolitan counties. With its 6,600,000 inhabitants, thus counted, the greater London boasts a population almost equal to that of Belgium, greater than that which is left to the Sultan in Europe—than Portugal or than Sweden, and twice that of all Switzerland; and, to look nearer home, about half as large again as either Scotland on her 19,000,000 acres, or Ireland on her 20,000,000, can show.

But as for census purposes, so too for international comparisons, London has been taken in its smaller sense to mean the 75,000 acres of the older metropolitan unit, and, even thus restricted, I must pause at this point in the comparison of 100,000-person

cities, to point out that whereas the international contrast counted London as one city, albeit with $4\frac{1}{2}$ millions inhabitants, she is not, in any proper sense, municipal or other, a unit at all, but is rather a federation for certain purposes of twenty-nine great self-governing boroughs, whereof no fewer than twenty-three might each in their own right with justice claim to be cities in the international list, as places over 100,000 persons each, whereof Islington, with 335,000, would rank before Antwerp; Lambeth be all but the equal of Palermo, and Stepney of Stockholm; while Camberwell exceeds Bordeaux in population, and St. Pancras, Genoa.

Reckoning these metropolitan boroughs as separate places, would give our own country many more 100,000-person cities than were credited to her above, and thus furnish the most remarkable of all types of the congested populations of the twentieth century, since, within the limits even of the narrower London of our day alone, there exists, and there are ruled by mayor, aldermen, and council, more separate aggregates of 100,000 souls than could be counted in all Europe when the preceding century dawned.

Violent, however, are the contrasts which strike the imagination when we group as statistical comrades these new and almost mushroom creations, the urban agglomerations of the last few decades, with the cities of ancient history. Within the immediate sphere of influence of the British metropolis there have sprung up the borough of West Ham with its 267,000 people, which takes its stand just above Nuremberg with her 261,000; Croydon with 134,000, overshadows Kazan by 2,000 head; Willesden steps in before Astrakan, and Tottenham before Utrecht, while away to the north, Sunderland towers over Seville, and Dundee takes numerical precedence of Venice.

In a very opportune publication of the Board of Trade,⁴ dealing with comparative international statistics of population and commerce, we were lately reminded what a new character and direction all this urban concentration gives to the industrial conditions of the peoples of other lands as well as our own. For it is not alone in great cities of 100,000 men and upwards, but in much smaller yet densely peopled communities, which are in every way truly urban, that the new additions [to our European populations are to be found.

Germany, the most rapidly growing of our immediate continental neighbours, has, [in round numbers, increased her inhabitants by

⁴ Memorandum on Comparative Statistics of Population, Industry, and Commerce. [Cd-1199.]

15 million persons during the last thirty years alone, but the additions to the people living in towns of over 2,000 persons in Germany have been 16 millions. This is actually more than the whole growth of the German people. Without an actual reference to the figures, few of us realise that the rural districts of Germany hold fewer persons to-day than they did when the sword was sheathed after the great struggle of 1870, which saw the present German Empire formed, while the absolute reduction in the rural population of France is even greater than that of Germany. A comparison of the changes in the relative bulk of the urban and rural populations of these countries and of our own within the past thirty years is appended in Table I. Much may be said as to the difficulty of uniform definitions of "urban" and "rural" residents respectively, but so far as France and Germany are concerned the dividing line is identical.

It is not, however, in the old nations of Western Europe alone that these agglomerations proceed as by a law of nature: Russia, which I have left outside some of the comparisons I have suggested, apparently boasts now sixteen cities of over 100,000 within her European area, against twelve only five years ago, and six in 1870. Altogether, 5,274,000 persons out of the Russian 114 millions are concentrated now in cities of the type I have been mentioning, and from the tables which M. Troïtsky laid before us last year at Buda Pest, she could show some forty-five separate places of over 50,000 inhabitants each, with an aggregate population of over 7 million persons.

Even in Sweden, where the population has so vast an area at its disposal, the urban population seems to be growing apace. Before 1840 it was gaining only in the same ratio as the rural, but the rate of advance was 24.4 per cent. between 1871 and 1880, against 6.5 per cent. in the country districts, and 26.22 per cent. in 1881-90, with a rural growth of no more than 0.26 per cent. Stockholm, which to-day holds 300,000 persons, held only 93,000 fifty years ago, and Gothenburg, which returned 131,000 in 1900, had only 26,000 in 1850. The Norwegian growth of towns is comparatively recent, but even there it is now to be remarked that Christiania, which, with its suburbs, contained little over 12,000 persons when last century opened, figures to-day among the European capitals with more than 200,000 inhabitants.

Denmark is to us generally here regarded as a little country, which has solved the problem of agricultural prosperity, but there too we learn that, with all her activity to promote and stimulate agricultural production, it is her urban population which has increased. The towns held only 22 per cent. of her people in 1860. It would appear that they now hold 39 per cent. The urban

increase had been 30 per cent. in the decade following 1880, and 44 per cent. in the last ten years, while the rural population, though still increasing, moved upwards by only 3 per cent. in the first of these periods, and, as will be seen from a note to the table appended, it has actually declined in absolute numbers in the very latest record.

It might be thought the case would be far otherwise where new and fertile territories lie open to the farmer; but the new census of the United States tells us a different tale, and with growing wealth and growing numbers, the great population of the States concentrates itself more and more around the urban centres, where industries which promise a quicker road to riches than agriculture are paramount.

When our transatlantic cousins were but 5 million persons, or just so many as we count in our own Canada to-day, as was the case when the nineteenth century began its course, not 4 per cent. of these grouped themselves in places where 8,000 inhabitants or more lived together. It took the first thirty years of the century before a million of the enumerated subjects of the American Republic ranked themselves as townsmen. To-day that million has become 25 millions, out of an aggregate of 76 millions, or just one-third of the total.

Out of the whole increase of 37 millions accounted for since 1870, it is in the towns of the Union, and not on the wheatlands, the prairies, or the ranches that nearly half the increase is to be found, and 17 million additional mouths have gone to swell the urban population of the States in the last thirty years alone. The absolute increase in the urban population of the United States and of Germany is beginning to be greater than our own.

Look where we will, even in our own Colonies, where the broad acreage of Canada or Australia so proudly impresses our admiration, the immigration seems more and more to concentrate itself on setting up as soon as possible an urban community. The latest census figures at least suggest that urbification is going on even there apace, and that it is not wholly, or even mainly, the filling up of the interior with sturdy agriculturists, prepared to wring a livelihood from the soil by the most primitive of arts, that marks the situation of to-day. Concurrently at least with this, growing numbers of the immigrant population are being assigned to the secondary businesses which new cities may afford under the sometimes artificially stimulated industrial activity of these new self-governing States within the Imperial fold.

Canada has a nominal surface nearly equal to that assigned to the conventional Europe of the Old World, with a population somewhat over 5 million persons, which is not much larger, in fact,

than the population of the counties of Cheshire and Lancashire in England, and practically identical with that of Holland or of Sweden, and rather over that of Portugal, at the present time. Canada has only added to her population one million persons in the twenty years 1881-1901, and the decennial growth of the Dominion is no more than 11 per cent. in the latest intercensal period, against 12 per cent. in England herself. The largest province of this Colony—Ontario—has indeed risen only by 3·25 per cent. in the last ten years. It would not therefore seem that the local conditions have attracted the immigration once hoped for. But how has the increase, such as it is, been distributed?

The "Year-Book of Canada" takes a place of 4,000 as dividing town from country life, and makes the urban population now 26·12 per cent., against 22·67 in 1891. The rural element in this largely unpeopled region has actually declined from 77·33 per cent. to 73·88. In Ontario the absolute numbers of the country residents are fewer in the decade, and the townsmen 100,000 more numerous. The townsmen of Quebec are likewise more than they were, and the rural element drops from 75 to 71 per cent. Even in Manitoba the rural ratio is lower than it was, and British Columbia has two-fifths of her population aggregated in what are described as towns—a larger proportion than obtains in France. In the Dominion as a whole there are 538,000 more persons enumerated than at the last census, and more than 300,000 of this increase seem located in the towns, the growth of urban citizens being 28 per cent., against only 6 per cent. in the open country. Moreover, it is not encouraging to learn that the declared settlers of the last three years have averaged only 46,000 per annum, whereof not so much as one in four came from the United Kingdom.

In Australia the increase of population has been relatively greater in recent years. There is nominally not much under 3 million square miles of territory within the lately formed Commonwealth. It has a population only slightly under 3,800,000 persons, of whom two-thirds or nearly so—2,560,000 inhabitants—are found to cling to the 400,000 square miles of the smaller areas of the older Colonies, New South Wales and Victoria, where, whatever may be the test of townsmen as distinct from country settlers which our antipodean fellow subjects adopt, I find the "urban" element is already half as great again as the "rural" quota—or 59 per cent. of the whole, a ratio higher than obtains in so old a country as Germany itself, and largely in excess of either the American or the Canadian proportion. The cry of a wage difficulty and unemployed labour in Melbourne and other towns merits attention in commenting on this matter.

Even as regards the smaller communities which are settled on the wider areas of Queensland and South and West Australia, the population enumerated as housed in "municipalities, excluding "shires," in "corporate towns," and so on, make up not much under half-a-million persons, or over 38 per cent. of the total.

Unless there is a fallacy here in the terms of classification employed, I submit that the problem of the growing devotion of new settlers in a new country to the building up of new urban agglomerations, with urban wants and urban corporate life, as the easier way to win wealth, is worth statistical investigation, to see whether, if the facts be as the figures suggest, our best service to the Colonies of the Empire would not be to foster land settlement rather than town planting, and to export to them a hardier race to subdue the soil and replenish the earth.

Thus far I have sketched the changes which seventy years have brought in the position of the United Kingdom in respect of its home population, its colonial environment, and its oversea responsibilities, with the parallel growth of other nations; and I have commended to your further study that emphatic characteristic of our times, whereby State after State, as it grows richer, more than ever tends to concentrate its population in purely urban centres. But no outline, even of a suggested inquiry into the statistics of national well-being, would be complete if it stopped at the numbering of our units of population, or the significance of their concentration in industrial masses.

The ability and the strength of this nucleus of the British Empire to play its part will depend on the growth displayed in the material possessions of its individual subjects as well as in the development of their number. Estimates of national wealth have been at all times fascinating study for the statistician. I do not need to do more than remind you of figures which a long line of eminent students have supplied in the records of our own Society.

Nothing, of course, is easier than to question, in one detail or another, the huge aggregate of millions sterling in which such estimates of the growth of aggregate capital or aggregate income must be expressed. I have not been able always to accept every line even of our good friend Sir Robert Giffen's famous valuations. But, whatever reservations may be hazarded in matters of detail, there is no dispute that these and earlier valuations do constitute a continuous picture of advancing accumulations through good times and ill, which has built up for us a national position far stronger than of yore, and endowed us with an ability which grows beyond the population's growth. From the estimate of 1833, quoted in Sir Robert Giffen's paper of 1889, which put the nation's property at 3,600 million £, these valuations have risen

to 6,000 million £ in 1865, and to 10,000 million £ in 1885, or from 144*l.* to 270*l.* per head in that interval. I am unwilling to forestall the figure of Sir Robert's promised later guess, but as these guesses rest on the substantial basis of the published data of our Inland Revenue Department, and as the statistics of that office are yearly becoming fuller and more interesting, it is certain no one will be surprised to find a much higher total quoted for the accumulated property of the British nation at the opening of the twentieth century, even if the large further increase on the total of 1885, which the other day he suggested to the Bankers' Institute, be not quite realised.

But the bare figures of the Income Tax Assessments tell the same tale in another form, the yearly revenue coming under the notice of the authorities having risen from much under 300 million £, fifty years ago, even including an estimate for Ireland, to 833 million £ in 1901. There are others here who can tell better than I can what a study of the wages records of the country reveals as to the aggregate growth of the earnings of the masses, who form the non income tax paying section of the community, while our good colleague, Mr. Brabrook, has thrown a striking light on the history of the accumulation stored by savings banks and thrift societies, in his last report, which gave these funds a total of 340 million £.

Familiar to us all are the figures which mark the growth of our foreign trade, issued with a promptitude which surprises many critics abroad, by the departments concerned, but watched, I am tempted to think, with almost exaggerated anxiety in the monthly fluctuations which they show. Great as their importance is, it falls very far short of that continuous but badly-measured current of internal trade and home production and exchange which finds no official chronicler, although the swelling volume of the daily business and augmenting needs of forty millions of people yields so solid a section of the aggregate profits of the nation, and almost leads one to echo Mr. Andrew Carnegie's recent dictum that "foreign commerce was a braggart always in evidence, home "commerce the true king."

But I am anxious to-day not to enter on these large discussions of the best signs of national progress, nor to contest the practicability of adopting a scientific formula for determining the measure of our growth, as we were lately invited to do by one of our younger fellows. I propose to rest for the moment on one material proof of national well-being, the development in the numbers and the value of the houses of our people.

However imperfect and rough may be the measure, I do not know if a much better one could be found than that which shows

how the families of a nation are housed at one time and another. If we know this, we will know something at least of how the population as a whole were faring at any contrasted dates.

From the moment when the nomadic life of the hunter and the shepherd is abandoned for settled industry, of whatever type, the dwelling a man lives in usually at least furnishes a concrete objective fact which cannot altogether escape observation, exhibiting roughly capacity to spend on one of the most pressing needs of humanity—that of shelter. We must, no doubt, make some exceptions here, as in so many other statistical problems. A primitive cave-dweller may have a roomy tenement the dimensions of which we cannot very well value or measure. A river-inhabiting Chinaman's "house" may scarcely be accessible for the purpose desired. In many forms of agriculture also it is recognised that the house which shelters the peasant and his family is itself an essential appendage of the land he cultivates. Even in our own country, at this day, farm houses are merged in and form part of the value of the land for property-tax assessments. Similarly, though perhaps in a lesser degree in our times than formerly, the dwelling is at the same time either the workshop or the office alike of the minor manufacturing classes and of certain grades of the professional class.

But none the less, with all their imperfections, in the dwellings of a people, in their number, in their dimensions, and in their value—as it catches the impartial eye of the tax gatherer—lies a consistent and consecutive story such as the statistician loves to find. I am inclined to think that in this direction good scope for further statistical inquiry stands temptingly open.

Just as the recent publications of the International Statistical Institute, and the figures of Mr. Jacques Bertillon, have suggested to me comparisons in the relative growth of populations, so the lately issued forty-fifth report of the Commissioners of Inland Revenue for the United Kingdom offers, in the wonderful mass of statistical detail which Sir Henry Primrose and his colleagues now give us, an answer, if an approximate answer, to the question: "How are the growing millions of British citizens housed now "and in former times?" Assuredly the tale thus told is one of progress, not of retrogression, whether this aspect of the nation's present condition be compared with parallel data of seventy or twenty years ago, or even ten years ago.

In thus appealing to the experience of the revenue statistics to give their picture of the national resources at any particular date, I am entering no novel path. Twice in the last twenty years, at all events, have the records of the British Inhabited House Duty been appealed to in this Society for evidence as to the greater

or less diffusion of wealth, and the later and fuller facts now available under this head, in the largely extended statistical tables of the Inland Revenue Department, are, I think, increasingly significant, and deserve fuller and closer survey than I can give to-day. Solid official material is there collected, it is to be remembered, not with a view to establish one or other theory of national growth, but simply as an incident of official administrative work.

It is a huge material fact which must strike any candid inquirer into our internal national condition, that in the "house property" of the Kingdom stands an incontestable and visible form of that accumulation and investment of individual capital, which we have often discussed here in its general aspect.

In the estimates of Dr. Beeke, in the income tax discussions at the commencement of the century, a valuation of the "houses" of Great Britain found a place at no more than 200 million £. The detailed estimates of Mr. Colquhoun and Mr. John Lowe in 1812 and 1823 put the total at no more than double this figure, although their figures were for the whole United Kingdom. If to the annual values disclosed by the renewed income tax of 1843 be applied the scale of capitalisation used in subsequent estimates, the capital invested in houses may be similarly computed. The valuations of houses in 1865-75-85, which appear in our *Journal*, and the probable growth of house property in the United Kingdom—for Ireland is included in the later data—may be shown as under:—

Earlier Estimates.			Later Calculations.		
Year.	Authority.	Capital Value.	Year.	Authority.	Capital Value.
		Million £.			Million £.
1800....	Beeke	200*	1865	Giffen	1,031
'12....	Colquhoun	400	'75		1,420
'23....	Lowe	400	'85		1,927
'43 {	Income Tax Assessment.....	} 585*	'95....	Milner	2,244
'53....			Do.	660*	'99....
			1901 {	Income Tax Assessment	2,685

* Great Britain only.

These figures tell something of one direction where national capital has accumulated year by year, whatever be the fluctuations of external trade; but it is impossible not to compare it with the opposite shrinking of values which the land of this country, where

not utilised for the "planting of houses," has undergone of recent years—a shrinkage which, but for the very largely over-balancing growth, alike in house property, and in almost all other forms of wealth, must have left as severe a mark on the nation's prosperity as it has on that relatively small but unlucky section which owns agricultural land.

Earlier Estimates.			Later Calculations.		
Year.	Authority.	Capital Value.	Year.	Authority.	Capital Value.
		Million £.			Million £.
1800....	Beeke	825*	1865....	Giffen	1,864
'12....	Colquhoun	1,280	'75....	Do.	2,007
'23....	Lowe	1,200	'85....	Do.	1,691
'43 } '53 }	Income Tax Assessment	{ 1,370* 1,390*	'95....	Milner	1,012
			'99....	Inland Revenue† ...	971
			1901....	Income Tax	947

* Great Britain only.

† Memorandum presented to Royal Commission on Local Taxation. [Cd-201, p. 213.]

The greatly lower totals of the last three calculations are due not alone to the drop in rental, but to the number of years' purchase adopted by the inland revenue authorities. Sir R. Giffen took 30 years' purchase in 1865 and 1875, and 26 years in 1885. The later official estimates of the capital value of land in the death duty tables are made on only 18 years' purchase of the gross and the 20 $\frac{1}{4}$ th years' purchase of the net income tax assessment. Had the 26 years' figure of the unofficial calculation of 1885 been again applied to the latest assessment, the capital value would not have sunk so low, but still to little over 1,300 million £, while on the inland revenue scale the capital value shown is 947 million £ only.

The gross annual value of the buildings or "messages" of the country, to adopt the phrase which our Inland Revenue authorities prefer to use, leaving out non-taxable structures such as government property occupied by the Crown, cathedrals and churches, and omitting, as valued under other categories, buildings forming part of particular businesses, such as railway stations and farm houses, now reaches a total of 179 million £. How does this figure compare with the parallel valuation of earlier years? We cannot, it is true, take the third decade of the past century, co-eval with our Society's birth, for our guide as a starting point here, for these Property Tax valuations in their present form date only from 1843, and we can,

therefore, go back only to that period to see what the rental of houses and trade premises then were. But in round millions the annual valuations under this head have grown by the strides which the following statement sets out:—

Year.	England and Wales.	Scotland.	Ireland.	United Kingdom.
1848.....	35·5	3·0	} Not assessed	{ 38·5†
'51.....	40·6	3·8		
'61.....	49·5	5·1	—	54·6†
'71.....	75·3	7·3	3·7*	86·3
'81.....	102·4	11·8	3·2	117·4
'91.....	123·7	13·2	3·6	140·5
1901.....	157·2	17·2	4·6	179·0

* The Irish assessment included farmhouses in this year.

† Great Britain only.

But it is not the absolute growth of house property so much, as a consideration of certain elements of that growth, that is wanted now, and with the aid of the Inhabited House Duty figures now available, it seems not impossible to get behind the total Property Tax Valuation at least so far as Great Britain is concerned. Ireland, among its other incidents of differential financial treatment, has what is not perhaps exactly a grievance, an exemption from house duty altogether. But the Irish share of the aggregate valuation of messuages of all sorts appears to have been only $4\frac{1}{2}$ millions of the total.

Deducting this quota from the total valuation of 179 millions value, leaves 174,375,000*l.* for house rental in Great Britain. This compares so nearly with the 175,238,000*l.* of the House Duty Valuation of both charged and exempted premises, that there can be no very great error—after allowing for such differences as the inclusion of 811,000*l.* of farm house rental in the house tax and its exclusion from the income tax assessment—in treating the two as practically identical, and using the divisions of the house duty valuation as illustrative of the several sections of which the rental of the messuages and premises of all sorts appearing in the income tax valuations is made up.

The aggregate assessment, it may be noted, is made up in not very unequal proportions of the rental of two distinct classes of premises, properties exempt from, and properties subject to, house duty, these classes dividing themselves as under:—

House Property in Great Britain in 1901.	Number.	Value.
		£
(a.) Premises exempt as hospitals, schools, &c., or as royal and diplomatic residences	29,000	2,899,000
(b.) Premises exempt as used only for trade....	562,000	38,826,000
(c.) „ „ under 20 <i>l.</i> rental . . .	5,613,000	52,131,000
Total premises exempt from house duty	6,204,000	93,856,000
There are thus left subject to the tax—		
(d.) Premises charged to house duty	1,630,000	81,381,000
Total premises accounted for	7,834,000	175,237,000

Now it is only the two large sections (c) and (d) of this total that furnish precise material for comparing the dwellings of the people at different dates. Putting these together, I take it as a starting point that there are in Great Britain at the present day 7,243,000 premises, great and small, recognised as “houses” by our Inland Revenue officials.

The figure is not far removed from that arrived at by a wholly different set of investigators in the same year 1901, viz., the census enumerators, who, for England and Scotland together, make the “inhabited houses” 7,193,000. None of us who have followed the frequent misunderstandings as to what constitutes a house for census purposes, will be surprised to find some little difference in the totals, but the comparative closeness of the figures above quoted suggests that, for such a general comparison as the present, we may take, without risk of serious error, a round figure of 7,200,000 as sufficiently representing the enumerated units of the dwellings of the people of Great Britain at the present time. If this figure be placed in conjunction with the census total of population, which, without Ireland, was just 37 millions, all told, it gives a proportion of 5·14 persons to every house. The calculation of the census estimates of England gave 5·19 persons for each dwelling. The Scottish rate, which of course obtained on about one-eighth of the houses in my total (for about that number are found north of the Tweed), stood only apparently at 4·83 per house.

Having got a figure for 1901, we may ask how it compares with earlier data? and it becomes a question how far back are we to look in this matter? There are “hearth tax” figures as far away as the end of the seventeenth century, on which Gregory

King founded his estimate of the people of England and Wales in 1696. They will not help us much, however, as neither values nor dimensions are given. For practical purposes we need not go back to these pre-statistical times, but keeping to the date I have already made a starting point, the "houses" enumerated in 1833, for the duty, which then fell on premises down to 10*l.* annual value, were given as 442,000 in the Revenue Returns of the day. Applying this figure to the 1831 census record of inhabited houses, it was concluded that the total of 2,850,000 houses in Great Britain seventy years ago must have contained 2,408,000 dwellings below the 10*l.* valuation limit.⁵ The proportion was therefore over 84 per cent. of the census total. If the present scale of assessment be comparable with the old, the last Inland Revenue report tells of just 3,273,000 enumerated dwellings valued at a less rent than 10*l.* in Great Britain at the present day. This is little over 45 per cent. of the 1901 census total of 7,200,000 dwellings.

Less than half the dwellings of the people of Great Britain are in this twentieth century under the rental of 10*l.* per annum, whereas in 1833 the under 10*l.* houses were between five and six times as numerous as those above this figure. The enormous shifting of the balance from the lower to the higher grade of dwellings, which has characterised the period under review, is best brought out by sharply dividing the enumerated houses of Great Britain at and above a 10*l.* rental from those below that figure, when the comparison stands thus at the contrasted dates:—

Classes of Houses.	1833.	1901.	Increase per Cent.
	Number.	Number.	
Under 10 <i>l.</i> rental	2,408,000	3,273,000	36
Of 10 <i>l.</i> rental and above	442,000	3,970,000	798
Total.....	2,850,000	7,243,000	154

There are not only more houses of all grades available now than of yore, in proportion to the population—for the aggregate rate of increase is materially greater than that credited to the inhabitants of Great Britain—but, what is more significant for my present purpose, the houses of the higher grade, from little exceeding 15 per cent. of the whole supply seventy years ago, have to-day approached 55 per cent. of the total. Even if all the houses now recorded which are of a special class, and, although dwelt in, were used also as trading premises, hotels, &c., and

⁵ MacCulloch's "Account of the British Empire" (1854), vol. ii, p. 523.

therefore taxed in a different category and at a lower rate, to be excluded from the 1901 total, that aggregate of over 10*l.* premises would but little diminish the impression which the growth of better class houses gives of solid national advancement.

Thus reduced in the later years, the number of houses over 10*l.* rental in Great Britain may be analysed more closely thus at three contrasted dates:—

Classes of Inhabited Houses.	1833.	1875.	1901.
	Number.	Number.	Number.
Houses of 10 <i>l.</i> —20 <i>l.</i> rental	227,604	921,709	2,340,066
„ 20 <i>l.</i> —40 <i>l.</i> „	180,405	322,960	834,843
„ over 40 <i>l.</i> „	84,433	246,366	352,915
Total number.....	442,442	1,491,035	3,527,824

Again, placing the definition of a better class house a little higher in the scale, at a rental of 20*l.* and over, the data of 1833 make it plain that the 215,000 occupiers of 20*l.* and over premises were at that time only 1·3 per cent. of the 16,200,000 inhabitants of Great Britain, whereas, even omitting from the later calculation all residential shops, hotels, lodging-houses, and farmhouses, the occupiers of the 1,188,000 purely private dwellings of this rental must now form 3·3 per cent. of the entire population of 37 millions. Put in another way, seventy years ago 8 per cent. of the enumerated dwellings of Great Britain were of 20*l.* and upwards rental; to-day 16 per cent., and rather more, attain this scale of rental.

There is yet another seventy years' comparison possible here, for the official figures of 1833 distinguish the aggregate values at which the “inhabited houses” of that period were assessed, both in the class between 10*l.* and 20*l.* and over the 20*l.* limit. Compared with later years the contrast here also is remarkable:—

Classes of Inhabited Houses.	1833.	1875.	1901.
	£	£	£
Houses of 10 <i>l.</i> —20 <i>l.</i> rental	2,998,000	12,354,000	31,499,000
„ 20 <i>l.</i> —40 <i>l.</i> „	3,446,000	8,716,000	23,390,000
„ over 40 <i>l.</i> „	6,160,000	21,741,000	32,349,000
Total annual value	12,604,000	42,811,000	87,238,000

If these data are accepted as really comparable, the lowest class shown in the table has grown in aggregate value by more than *ten* times, the second class by *seven* times, and the higher class by somewhat more than *five* times in a period wherein the

inhabitants of Great Britain have not much more than doubled. How much is due to the higher rents of later days in these results is, I think, a fair subject for inquiry; but even if the change is thus accounted for, it will have to be remembered that the ability to pay the higher figures indicates solid national growth.

When Lord Goschen, in his presidential address of 1887, and Sir Robert Giffen, in his paper of 1885, drew attention to the rise in the standard of living denoted by more and better class house accommodation, neither had quite so full an analysis of the house duty grades of dwellings as the Board of Inland Revenue have now published.

Sir Robert Giffen, founding on the same 1833 figures I have already noticed, pointed to an increase of all houses of between 85 and 90 per cent. in the forty-seven years' period 1833-80, compared to a population growth of 80 per cent. only. While he took the increase of houses under 10*l.* rent to be less than 40 per cent., the smaller section of houses between 10*l.* and 20*l.* value rose in number over 300 per cent., houses over 20*l.* showing likewise a great but not quite so great an increase, or 230 per cent.

Lord Goschen, taking a more limited field of survey, compared the rate of growth of the period 1875 to 1880 with that of 1880 to 1886. In the first he found a development of private dwellings in every grade above the 20*l.* house duty limit which was fairly equal, and an altered and slower increase, reflecting a check to national prosperity, in the later period. He found that it was mainly in the houses of higher rental that the rate of increase had been checked; and he claimed the house duty records to prove that the houses occupied by the lower middle classes, the owners of "moderate incomes," had so steadily increased, as to demonstrate a wider distribution of comfort and ability for expense in the solid centre of society. When he passed in review the grades of houses under the house duty limit, he found the increase varied in the opposite direction—the houses nearer 20*l.* rental increasing rapidly, and the increase being small or non-existent at the lowest point of the scale.

What then is the picture which the revenue tables now reveal, both as regards enumerated houses below and charged houses above the duty limit, and in the several grades of dwellings which are now discriminated?

To avoid all risk of error in the older figures, it may be well to go back only to Lord Goschen's earlier year, 1875, and his second starting point, 1880, and confining the examination to the private dwellings as distinct from residential shops, hotels, &c., specially set out in the returns, the course of the more recent changes may be then shown thus:—

Dwelling Houses in Great Britain.	1874-75.	1879-80.	1890-91.	1900-01.
	Number.	Number.	Number.	Number.
Annual value under 10 <i>l.</i>	3,000,000	3,091,000	3,275,000	3,273,000*
„ 10 <i>l.</i> —20 <i>l.</i>	922,000	1,180,000	1,675,000	2,340,000
„ 20 <i>l.</i> —40 <i>l.</i>	323,000	411,000	572,000	835,000
„ 40 <i>l.</i> and upwards	246,000	302,000	306,000	353,000
Total	4,491,000	4,984,000	5,828,000	6,801,000

* Including 43,000 artizans' tenements.

There is, it will be seen, in the last quarter of a century no material increase in the under 10*l.* houses, which are only 9 per cent. now in excess of what they were in Great Britain in 1875. Indeed, had the year 1899-1900 had a place in my table, the latest total would have revealed an actual diminution in numbers of 55,000 in this category. The material lifting up of houses begins at the 10*l.* to the 20*l.* level, since the 922,000 houses of that grade in 1875 have become 2,340,000 to-day, and in the last twenty years, since 1880, their total has actually doubled. Over the tax limit of 20*l.* the same growth is apparent in the 20*l.* to 40*l.* houses; while, as on the last occasion, when these data were examined, although there is still growth, there is much less growth in the relatively small class of the higher rented houses.

The increasing rate at which houses of one type or another are now being provided in Great Britain, is a patent fact that meets the eye of each of us day by day. It stands out forcibly in the Preliminary Census Report, where we are told that whereas the population of England has increased by just 12·17 per cent. in the last intercensal period, and the recorded inhabited houses increased 15 per cent., those which were actually building were more numerous by 62·28 per cent. The census of Scotland, although the report is silent on the significant figures, records a somewhat similar advance.

Round, perhaps, rather than actually in, the great urban centres of England, the new census points most significantly to the activity of the house builder, and that in more ways than one. Not only have we large increases in the numbers of inhabited houses in the counties surrounding the Metropolis, but compared with 1891 the number of persons distinguished as employed in house building seems to have advanced out of all proportion to the increase of male population over 10 years of age, the rate being 91 per cent. in Essex, 86 per cent. in Middlesex, 72 per cent. in Surrey, and 62 per cent. in Kent. The houses reported also as in process of erection in these four counties alone are, it may be noted, respectively 172,

144, 192 and 144 per cent. in 1901 over those accounted for in 1891. But as there seems reason to regard the position of house-building in 1891 as exceptionally checked, it may be well to compare the growth of population and of inhabited and other houses since 1880 in Great Britain as a whole as under :—

[In thousands.]

Years.	Enumerated Population.	Houses in Census.			Houses in House Duty Tables.		
		Inhabited.	Uninhabited.	Building.	Private Dwelling Houses Charged.	Residential Shops, &c., Charged.	Exempt from Charge as under 20% Rental.
1881..	29,710,	5,571,	446,	51,	734,	347,	4,332,
'91..	33,028,	6,269,	423,	44,	878,	379,	4,946,
1901..	36,998,	7,193,	508,	71,	1,188,	442,	5,613,

These remarkable statistics emphasise the development I have indicated. The over 20% private dwellings are 60 per cent. greater in twenty years, while the increase in residential shops is less than that of the population generally, or 21 per cent. only.

An examination of the places where the greatest growth in number of houses and greatest growth in persons engaged in building appear, would itself form an interesting subject for further and much closer study, but it is obvious that the movement *out* from the centre of London to that surrounding province, now being daily covered with houses at an accelerating rate, is the most distinctive feature of all.

The following table shows that the principal increases in the numbers and annual values of private dwelling houses during the period 1891-92 to 1900-01, compared with the percentage increase of population in the nearly identical period 1891-1901, were to be found in the following districts :—

Population Increase.	Areas.	Number.	Per Cent.	Amount.	Per Cent.
Per cent.	Metropolis—			£	
23·3	Kent	14,556	64·9	390,000	41·7
3·1	Middlesex	10,894	5·0	726,000	5·1
12·4	Surrey	18,410	18·5	611,000	16·3
7·3	Total metropolis	43,860	13·0	1,727,000	9·1
45·6	Middlesex (outside metropolis)	32,798	75·3	1,208,000	63·9
38·2	Essex	33,900	132·0	929,000	104·7
24·0	Surrey (outside metropolis) ...	17,817	57·3	780,000	40·3
9·9	Sussex	12,787	50·7	512,000	34·3
12·2	Lancashire	19,843	32·9	443,000	16·1
11·7	Yorkshire	12,675	33·7	425,000	25·0
16·3	Kent (outside metropolis)	10,896	45·4	421,000	30·5
11·6	Cheshire	8,732	58·1	303,000	39·8
15·7	Hampshire	7,445	42·5	297,000	30·1
25·1	Glamorgan	7,961	67·7	264,000	62·6
12·1	England and Wales	270,055	33·0	9,621,000	23·0
11·1	Scotland	28,068	38·6	998,000	29·8
12·0	Great Britain.....	298,123	33·5	10,619,000	23·5

The case of Essex, where there has been a rapid manufacture of complete new "towns," like West Ham, Ilford, &c., overtops the others. The population, fed by London's overflow very largely, has grown by 38 per cent. since 1891, but the increase of houses of 20l. rental and over has been 132 per cent. in this short interval. The aggregate value has risen, not quite so rapidly, by nearly 105 per cent. The table bears incidentally witness also to what the census tells of the relative thinning of central London, since the section of the Metropolis shown above as belonging to the old geographical county of Middlesex rises only 5 per cent. in the number and value of its houses and 3 per cent. in population, while ex-Metropolitan Middlesex has 75 per cent. more houses than before, and an aggregate addition to her house valuation of 64 per cent.—both figures largely in excess of her population growth of 46 per cent.

There has thus been on the whole in less than ten years a 33½ per cent. increase in Great Britain in the dwellings of the people lying over the 20l. limit—an increase considerably above the increase in value, which reaches 23½ per cent. only. These particulars are disclosed by adding, as I am permitted by the kindness of Sir Henry Primrose to do, the data as regards number to that shown in the Report under value.

Moreover, the Inland Revenue Report before quoted affords plentiful evidence of the greater increase of 20l. to 40l. dwelling houses than those of higher grades. I give below the original table,

omitting only—as the item possesses an exceptional character—the Artizans' Dwellings Tenements (which, under a recent amendment of the law, are charged to duty separately when over 20*l.* value)—which are stated to have increased in number by 602·7 per cent., and in value by 538·7, between 1892 and 1901.

Class of Private Dwelling House.	Increases between 1891-92 and 1900-01.			
	In Number.	Per Cent.	In Annual Value.	Per Cent.
			£	
20 <i>l.</i> and under 25 <i>l.</i>	101,000	53·4	2,202,000	53·7
25 <i>l.</i> „ 30 <i>l.</i>	64,000	44·1	1,694,000	44·4
30 <i>l.</i> „ 41 <i>l.</i>	83,000	33·0	2,907,000	33·7
41 <i>l.</i> „ 50 <i>l.</i>	18,000	29·4	778,000	28·5
50 <i>l.</i> „ 61 <i>l.</i>	16,000	17·8	876,000	18·0
61 <i>l.</i> „ 80 <i>l.</i>	6,870	15·1	466,000	14·8
80 <i>l.</i> „ 100 <i>l.</i>	3,103	9·8	275,000	10·1
100 <i>l.</i> „ 200 <i>l.</i>	3,222	5·8	459,000	6·4
200 <i>l.</i> „ 500 <i>l.</i>	1,418	7·6	438,000	8·5
500 <i>l.</i> and upwards	387	12·7	469,000	16·0

Had I not carried to much too great a length the latest of these topics on which I have been led to touch, I could have pointed to much interesting further material for your consideration, in the relative movements of different grades of private dwellings, and on the other section of the house duty statistics—the residential shops, the hotels, public houses, coffee houses, and lodging houses of the country, both as a whole, and in particular divisions.

But I refer you to the Report itself which has suggested these remarks, and commend to the framers of new papers among our Fellows the wealth of material there awaiting intelligent analysis, and bearing on the housing of the units of our home population, and on other of the economic problems of the day.

I think, however imperfectly, I have now said enough to show you to-night that we have good reasons to conclude that our common country is a vastly bigger, and a vastly more complicated, machine, as regards its external relations or its internal development, than our fathers had to deal with when the Royal Statistical Society was founded; that it has grown in numbers, in wealth, and in power; grown, too, as I indicated at the outset, enormously in proportion in territorial responsibilities—responsibilities which may yet entail sacrifices that will test the national spirit, courage, and perseverance. If the land of “All the Britains” is to be occupied, held, and developed, we must more seriously resume that “export” of brave and courageous men, ready to fill the waste places of the earth, and where government falls on the shoulders

of our race, to take up the burden with a stout heart and confidence in our national future. We can make our Empire strong by expansions of this type, rather than by the mere planting of colonial towns on the fringe of unoccupied regions.

The most casual survey of the dimensions to which, after seventy years, the political fabric of the British Empire has attained, enforces the lesson that fully to hold our own with other growing nations, and rightly to discharge the world-wide responsibilities which Providence has entrusted to us over subject races, there must be no slackening of our capacity for serious duty and serious work at home, no resting on the bye-gone reputation of our fathers for industrial enterprise abroad, no hesitation in facing the newer political problems of these altered times.

Under the British flag are gathered many races and many territories; loyal and hardy, if not numerically numerous, colonial forces; native armies and devoted princes place their swords at the disposal of the Empire. But perhaps I shall not greatly err in claiming that after all, the living brain and centre of this mighty State rests here at home, and neither the colonist nor the Indian can fight our battle for us, welcome as their co-operation is. The heirs of an historic tradition which is all their own, each unit of the still growing millions of our own island of Great Britain must remember the part he has to play to make his country strong. If largely growing urban conditions and augmenting dependence on distant lands for much of the raw material of our home industries and for a considerable share of our food supply are, as it would seem, imposed upon us by the economic conditions of the present, the obligation is all the more enforced to maintain that mastership of the sea which in the past has served to unite rather than to sever the scattered factors which made up the British Empire, and which has kept open to our teeming population unrestricted highways for trade with all the regions of the globe.

That the home nation still grows and strengthens in material wealth I think my figures show. The statistician records this much for your satisfaction and encouragement. He finds, however, that the great empire resting on the fulcrum of these islands is still building and still expanding, and he points to the obligations its future maintenance must entail. Let none of us be content, therefore, to sit down and admire the proportions of the edifice, but one and all determine by personal effort where we may, and by a readier tolerance, in all cases, to any claims of the nation on the private purse, to face with courage and with perseverance the task of holding what the Empire builders of the past have won, remembering—as we may so fitly do on this the 50th anniversary of the funeral of the Great Duke, who preached above all things

the claims of "duty," alike on the citizen and the soldier—that "not once or twice in our rough island story the path of duty "proved the way to glory."

APPENDIX.

TABLE I.—*Population Distinguished as Urban and Rural in the undermentioned Countries.*

Country.	About 1870.			About 1900.		
	Urban.	Rural.	Per-centage classed as Urban.	Urban.	Rural.	Per-centage classed as Urban.
United Kingdom } Germany	15,697,000*	15,787,000	50	29,559,000*	11,898,000	71
France	14,791,000†	26,268,000	36	30,633,000†	25,736,000	54
United States	11,235,000†	24,868,000	31	15,030,000†	23,687,000	39
	8,072,000‡	29,486,000	21	24,992,000‡	50,485,000	33

* Population resident in "urban districts."
† " towns of 2,000 inhabitants and upwards.
‡ " " 8,000 " "

TABLE II.—*Urban and Rural Population of Denmark in 1880, 1890, and 1901, with the Area in Square Miles.*

[From the "Statistisk Aarbog, 1901."]

	Urban Population.			Rural Population.*			Area. Square miles.
	1880.	1890.	1901.	1880.	1890.	1901.	
Seeland	320,904	428,957	539,366	400,799	405,166	420,687	2,860
Bornholm	13,057	15,998	18,256	22,307	22,763	22,633	225
Laaland-Falster	18,469	21,647	25,805	78,538	78,905	79,216	672
Fionie	54,314	68,240	85,664	192,140	188,584	194,121	1,325
Jutland	145,224	187,402	267,474	723,287	754,718	796,318	9,762
Total.....	551,968	722,244	936,565	1,417,071	1,450,136	1,512,975	14,844

* Population of rural communes.

Note.—In 1902 the rural population was reduced to 1,490,635 persons, in consequence of the inclusion of part of a rural commune in the town of Copenhagen.

TABLE III.—*Urban and Rural Population of Canada in 1891 and 1901, with Area in Square Miles.*

[From the "Statistical Year-Book of Canada for 1901."]

Provinces.	Urban Population.		Rural Population.		Area. Square Miles.
	1891.	1901.	1891.	1901.	
Ontario	532,016	635,180	1,582,305	1,547,767	222,000
Quebec	367,544	477,687	1,120,991	1,171,211	347,350
Nova Scotia	58,306	84,540	392,090	375,034	20,600
New Brunswick	58,643	61,722	262,620	269,398	28,200
Prince Edward Island	11,373	12,080	97,705	91,179	2,000
British Columbia.....	41,823	71,010	56,350	107,647	383,300
Manitoba	25,639	47,720	126,867	207,227	73,956
N.-W. Territories* ...	—	13,294	66,799	172,865	2,529,140
Total of the Dominion	1,095,344	1,403,233	3,737,895†	3,967,818†	3,653,946‡

* Including Yukon.

† Including 32,168 persons in 1891 and 25,490 persons in 1901 not separately distinguished.

‡ Not including Franklin, but inclusive of 47,400 square miles, the area of the "Great Lakes and Rivers."

TABLE IV.—*Urban and Rural Population of Australasia in 1891 and 1901, with Area in Square Miles.*

Colony.	Urban Population.		Rural Population.		Area. Square Miles.
	1891. ^a	1901. ^b	1891. ^a	1901. ^b	
New South Wales ^c	730,019	859,601	402,215	499,532	310,700
Victoria.....	619,581	635,981	520,824	565,525	87,884
Queensland ^d	142,659 ^d	175,279 ^d	251,059	327,987	668,497
South Australia ...	123,167 ^f	152,529 ^f	197,264	210,075	903,690
West Australia.....	23,701 ^g	96,807 ^g	26,081	87,317	975,920
Tasmania	42,113 ^h	42,676 ^h	104,554	129,799	26,215
Total Australia....	1,681,240	1,962,873	1,501,997	1,820,235	2,972,906
New Zealand	270,343 ⁱ	350,202 ⁱ	356,315	422,517	104,471
Total Australasia	1,951,583	2,313,075	1,858,312	2,242,752	3,077,377

Note.—Aborigines and Maoris are excluded except where mentioned.^a From Census Returns for 1891.^b From Preliminary Returns of Census of 1901.^c Population including about 4,000 Aborigines.^d "Population in Municipalities" (excluding "Shires").^e Population including about 6,500 Aborigines.^f Population of "Corporate Towns" only.^g Population "In Municipalities."^h Population of Hobart and Launceston (being the only cities of 5,000 inhabitants).ⁱ Population of "Boroughs."

TABLE V.—Houses in Great Britain. Number of Premises Exempt from and Charged to the Inhabited House Duty.

Houses.	1874-75.	1879-80.	1890-91.	1900-01.
	Number.	Number.	Number.	Number.
(a.) Premises exempt as hospitals, schools, workhouses, and royal and diplomatic residences	7,523	15,638	24,351	28,747
(b.) Do. as used solely for trade	350,623	370,703	427,380	561,585
(c.) Do. as dwellings under 20 <i>l.</i> rental—				
(1) Under 10 <i>l.</i> rental	3,000,370	3,090,650	3,274,963	3,273,162
(2.) 10 <i>l.</i> —15 <i>l.</i> „	590,383	754,965	1,088,329	1,568,678
(3.) 15 <i>l.</i> —20 <i>l.</i> „	331,320	424,700	586,511	771,388
Total: Houses not charged to duty	4,280,219	4,656,656	5,401,534	6,203,560
(d.) Premises of 20 <i>l.</i> rental and over, charged to duty as private dwelling houses—				
(1) 20 <i>l.</i> —40 <i>l.</i> rental	322,960	411,370	572,506	834,843
(2.) 40 <i>l.</i> —60 <i>l.</i> „	115,630	141,903	150,093	184,280
(3.) Above 60 <i>l.</i>	130,736	159,895	155,570	168,635
(e.) Do. as residential shops	193,046	227,709	249,944	293,821
(f.) Do. as hotels, public houses, coffee houses, and lodging houses	70,014	81,382	98,177	116,186
(g.) Do. as farmhouses	32,162	33,693	31,185	32,450
Total: Houses charged to duty	864,548	1,055,952	1,257,475	1,630,215
Total: All premises.....	5,144,767	5,712,608	6,659,009	7,833,775