THE CENSUS

And Some of its Uses

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THE CENSUS

AND SOME OF ITS USES

OUTLINING A PLAIN

PHILOSOPHY OF POPULATION

"There is no Wealth but Life"

The Census Act, 1920, for Great Britain

AND

"The Census (Ireland) Act, 1920"

BY

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INTRODUCTION

In a previous work with the comprehensive title of "Vital Registration," first published in 1902, there was (Chapter V.) given a very brief sketch of "The Census; and Some of its Uses."

Since that outline was penned nearly two decades have elapsed, and Census-taking has evolved very considerably.

The Census Act of 1920 has inaugurated a new era of Enumeration, as is appropriate and necessary in the novel circumstances of an after-war age.

No longer need the Census and its authority be decennial. For a permanent measure and a quinquennial Census there has for half a century been a strong cry from statisticians. Both these *desiderata* have now been granted. The Census Act is permanent. By the statute of 1920, His Majesty may authorise, by Order in Council, a Census to be taken five years after the Enumeration of 1921.

A better and fuller Census is in view with the achievement, mainly owing to the efforts of the Royal Statistical Society, of the two main fresh points in Census-taking—permanency and power to carry out an Enumeration every five years.

A more frequent Census will render more practicable the co-ordination of Census results with the returns of other Government Departments, such as reports relating to Food and Industry, Imports and Exports, and, of course, with the figures published by the Registrar-General regarding Births, Deaths, and Marriages. It may be mentioned here that the

Second Edition of "VITAL REGISTRATION" (Chapter VII.) deals, in a practical fashion, with the valuable information furnished by the various Statistical Reports of the Registration Department, partly linking up indirectly such Reports with the Population Census, and pointing to the lessons of Mortality Statistics.

Allusion to "VITAL REGISTRATION" is relevant. The present book is on the same lines. Though complete in itself, it is, indeed, a companion and complementary publication. From many authoritative quarters—Sheriffs, Registrars, Advocates, Clergymen, Doctors, Medical Officers of Health, and many others—expressions of approbation were received as to the interest and value of "*Vital Registration.*" And it is hoped that an even wider circle may welcome this work; for the Census Act, 1920, is applicable to Great Britain, and, accordingly, there will be found herein an outline of the evolution of the Census in England.

Also, the Census Act for Ireland appears in the Appendix.

Consisting of three Parts and an Appendix, the book, owing to the increased expense of publishing to-day, has been kept within very moderate limits.

Much encouragement has been given the writer recently to put forth, in permanent form, articles upon various aspects of the Census which he had contributed to the Press, from time to time, in his limited leisure; and some part of such contributions are embodied in this publication. Possibly he may, later, have an opportunity of issuing a larger and completer work on this great and many-sided subject. Meantime, to meet the present and immediate demand, this rapid and general sketch is submitted in the hope that it may, at least in some measure, justify the opinion of the supreme Head of the Census in Scotland, who kindly wrote as follows:—"I have no doubt that it will be very helpful to those who are concerned with the administration of the Act, or are otherwise interested in

Census questions, to have available a work of this nature," and he (the Secretary of State for Scotland) added, in a later note, " I hope the book may have a wide circulation."

It would take a syndicate to deal completely and exhaustively with the Census in all its aspects. The writer is aware of the limits of this work. But it has a certain unity and gradation, resulting from its limitations as the outcome of one mind; for there is truth in the observation by Descartes: " Souvent il n'y a pas tant de perfection dans les ouvrages composès de plusieurs pièces, et fait de la main de divers maîtres, qu'en ceux auxquels un seul a travaillè."

Especially in the earlier part of the book, the use of many figures and statistical tables has been carefully avoided; as masses of figures are repellent to the general reader, although attractive to the statistician.

It was partly owing to the fact that this work was being written while the Census Bill was under discussion that such points as the exclusion of the Infirmities inquiry and the expediency of having an inquiry into Religion in Great Britain are treated at some length. The question of a Religious Census will, no doubt, reappear as usual at the next Enumeration, and some other matters alluded to will also fall to be reconsidered. Evolution in Census-taking promises to be rapid in future.

To those whose interest is meantime centred chiefly on the Census of 1921 in its actual form as approved by Parliament, probably Part III. of the book will contain the greatest proportion of matter of practical interest and immediate application. It will be observed, however, that the treatment throughout is general: the two main purposes being to indicate the value of the Census results, and to excite interest in the great national stocktaking, which has now, for the first time, been made a permanent British institution by Act of Parliament.

First attempt to give a general conspectus of the Census in all its bearings, the book is put forth in the hope that it may be received with forbearance by fellow-experts, who will know best the difficulties of the subject, and forgive its shortcomings, some of which may be remedied in a second edition, for which suggestions will be very cordially welcomed and considered.

G. T. B.-S.

11 Carlton Terrace,
Edinburgh, 11*th March*, 1921.

CONTENTS

PART II.

PART III.

THE CENSUS

And Some of Its Uses

PART I.

CHAPTER I.

A PHILOSOPHY OF POPULATION

It is appropriate to offer some observations upon the Population Census and Social Progress at a time when the world is asking—Is there a Philosophy of Population? And, What are the uses of the Census?

Also, the great question, Whether a State should encourage the increase of its numbers. Our Government since 1909 has answered the last question in the affirmative by special allowance of income-tax abatement for children. As natural results of the marriage boom and of demobilisation, the number of births at present promises to make 1920 an *annus mirabilis*. All over the country the birth rate at the moment of writing is unparalleled since 1886; the melancholy wail of the National Birth Rate Commission must become a shout of joy at such an unprecedented torrent of babies being born in Britain.

Infantile Mortality: A Black Spot.—Just here I may interpose the remark that I have not been one of those who have deplored unreservedly the decline in the birth rate. What I have always mourned is the black spot in our social system shown in the mortality of infants; and I have frequently had to draw attention to the fact that the important matter in

Vital Statistics is the difference between the total number of births and the total number of deaths, which constitutes the actual natural increase. Great plans exist for improving public health and lowering the death rate.

Such action as is set forth in Sir Leslie Mackenzie's classic report on Scottish mothers and children; the establishment of child welfare centres; the educating and care of expectant mothers, with much antenatal precautions; all the massed intelligence of the medical officers of health working in the direction of securing births in the best health conditions, led by such able, enthusiastic, and painstaking experts as Professor Matthew Hay; all the schemes—too numerous to detail—for assisting mothers, married and unmarried, to bear children who may live; all the communal efforts of civilisation, in short, for the preservation of children, now realised to be the real wealth of nations—tend in the direction of diminishing the infantile death rate; and, upon the whole, such universal measures must, in time, lower the death rate until it reaches an even lower figure than that now common in cities, such as Edinburgh and Glasgow, Aberdeen and Dundee; in the last of which industrial work by married women is deleterious to the vitality of the race. For the atmosphere and the conditions of employment in jute mills are not favourable to maternity; and in Dundee more married women work than in any other city in Scotland. Hence, alas! the puny, pale children one may see on the streets of Juteopolis and similar centres of industry.

It may here be noted that between 1906 and 1913 the birth rate declined—

Germany, 17 per cent.	England and Wales, 11 per cent.
Denmark, 11 „	Norway, 5 „
Sweden, 10 „	

Between 1906 and 1913 the infant mortality rate declined—

Germany, 18 per cent.	England and Wales, 18 per cent.
Denmark, 14 „	Norway, 6 „
Sweden, 13 „	

The Census has been Decennial.—The last population Census was taken in 1911. Since then we had the excellent record under the National Registration Act, which, however, has not been maintained. Of partial records there have been several, such as the food register, electoral register, and the unemployment register. But we are without a single master register, including every man, woman, and child. The national register could readily have been converted into such a complete record of the country's population. A short and simple Act could have made a general register: towards that ideal statisticians are striving. And it is here worthy of remark that the first proposal in Great Britain was for an *annual* Census, at the discussion of the measure which authorised our first British Census in 1801.

Additions and subtractions, births and deaths, are registered daily; but the complete numbering of the people has been only decennial. It certainly should be at least quinquennial, as in ancient Rome. To-day there is considerable dubiety as to the approximate population of the United Kingdom. In cities such as Aberdeen the medical officer of health makes his own estimate in his own way, generally going upon the number of inhabited houses. Greater movement of population than in pre-war times renders the problem of accurate ascertainment one solvable with precision only by the Census.

Census Does Not Include Possessions.—The population Census is the most important of all statistical operations. It is the detailed enumeration of all the people present within a given area at a particular time. In a crude form, the Census is very ancient, when it was used, as in Old Testament times, mainly for military purposes.

THE ROMAN CENSUS.—In ancient Rome there was a Registration Department for taking the Census. The Census at Rome was a numbering of the Roman people and also a valuation of their property. It was held in the Campus Martius after the year B.C. 432. Every Roman citizen was obliged,

upon oath, to give in a statement of his own name and age, and of the name and age of his wife, children, slaves, and freedmen, if he had any. The punishment for a false return was, that the individual's property should be confiscated, and he himself scourged and sold for a slave. Taxation depended on the results of the Census, and was, in fact, its main object; many kinds of property were excepted, while, on the other hand, some sorts of property were assessed at several times their value. Constant changes were made by successive Censors in the valuation of taxable property. It appears from a passage in Livy (vi. 27) that the Census also showed the amount of a man's debts and the names of his creditors.

The Census was held at first by the Kings, afterwards by the Consuls, and from B C. 442 by two magistrates called Censors (Censores), who were appointed every five years. The Census was not taken with strict regularity. The usual interval, commonly called a lustre (lustrum), was five years.

When a person was duly entered on the books of the Censors, this was taken as a proof of his citizenship, even if he were a slave, provided he had been registered with his master's consent. As the Census was held at Rome, citizens who were in the provinces, and wished to be registered, were obliged to repair there on that occasion; but this was sometimes evaded. The Census, accompanied with the ceremony of the lustrum, a purificatory sacrifice, seems to have fallen into disuse after the time of Vespasian; but the numbering of the population and the registration of property continued throughout the period of the empire.

The nature of the Roman Census may be collected from various particulars. One object was to ascertain the number of men capable of bearing arms; and another, to ascertain the amount of each person's property and the various heads of which it consisted. Cicero's treatise on "Laws," though it contains a picture of an ideal republic, appears in one passage (iii. 3, 4) to describe what the Roman Census was as it existed in his time. He says: "Let the Censors take a Census of the ages of the people, the children, the slaves, the property; let them look after the temples of the city, the roads, waters, treasury, the taxes; let them distribute into tribes the parts of which the people consist; then let them distribute the population according to property, ages, classes; let them register the children of the cavalry and the infantry; let them forbid celibacy; let them regulate the morals of the people; let them leave no infamous man in the senate; let there be two Censors; let them hold their office for five years; and let the censorial authority be always continued. Let the Censors faithfully guard the law; and let private persons bring to them their acta" (probably their vouchers or evidences).

The Romans must accordingly have had an immense mass of statistical documents collected every five years, from which the population and the wealth of the community at each quinquennial period could be accurately known. Florus (i. 6) observes that, "by the great wisdom of King Servius, the state was so ordered that all the differences of property, rank, age, occupations, and professions were registered, and thus a large state was administered with the same exactness as the smallest family."

The two Censors were Magistrates of the highest importance. Assessment of taxes, punishment of offences against morality and convention, bad cultivation of the land, disgraceful occupations, celibacy and luxuriousness, and the construction of public buildings were among their manifold powers. Originally only patricians were eligible, but later plebeians were admitted to the highly honourable position of Censor.

From the foregoing it will be seen that the Census was a regular Roman institution, one of the principal duties of the Censor being to enumerate the citizens (not including the proletariat) every five years (Cicero, "De Leg.," book iii. c. 3). The Roman enumeration was not of persons only, but also of property. In this way, the Census of Rome was a quinquennial register prepared partly for purposes of assessment, and classification graded accordingly. The British Census has never yet attempted anything in the direction of a record of possessions or what a man "may be worth"; although the more enterprising officials of Australia and the United States, as examples, endeavour to obtain information in detail as to the property and possessions of the persons enumerated.

Rather has the British Census evolved in the important head of "Occupation," with the object of compiling a sort of industrial Census concurrently with the counting of the people, and their ages, &c. Figures as to employment are most valuable. Like the data as to age-constitution, such information gives us light upon the quality of our numbers, while most other statistics show only quantity. Population is strength. That statement, however, implies activity, courage, training, fitness, and working power in an occupation or profession.

The Census Schedule.—The schedule is the yard measure of our population and progress. Tabulated information reveals our advance in numbers and civilisation; for the records of our occupations and industries are indexes of national amelioration; and, by comparison with previous Census figures, indicate our industrial lines of development and the rate of progress.

Every decade sees an altered and expanded form of questionnaire. Much valuable data was recorded in the last forms, which were much more elaborate in the questions to be answered than any previous schedules. Chartered accountants and others think a man should be asked what he is worth—in wealth or worldly goods of all kinds.

Fertility of Marriage.—Very suggestive and sinister was the decline in the rate of increase shown in our population in recent decennia. This steady falling off in the birth rate affected the whole British Empire. It was, therefore, deemed desirable to include a consideration of the Fertility of Marriages in the Census of 1911. The Census (Ireland) Act, 1910 (10 Edw. VII. and 1 Geo. V.), was passed on 26th July, 1910, and the Census (Great Britain) Act (10 Edw. VII. and 1 Geo. V.) received the Royal assent on 3rd August, 1910; and both these statutes authorised an inquiry into the Fertility of Marriage. Owing to the greatness and difficulty of the task, and to the war, the full findings of the consequent inquiry have not yet been published in official form and discussed, although portions of the results, with comments, are to be found in various reports, including those of the National Birth-rate Commission, which appeared in 1916.

Housing and Religion.—The particulars as to the housing of the people are of great practical use. That subject is tackled most thoroughly in the Scottish Schedule, wherein the enumerator has to enter precisely on each schedule the number of rooms with one or more windows, and various other details of

sanitary and social significance. Although its inclusion is proposed and discussed in Parliament at every Census, Religion so far has not been included in the British Schedule. It appears, however, in the Irish questionnaire, which is more extensive also in its inquiries into education and into housing, partly because of the special character of some of the older Irish houses of very simple style and material. Religious belief affects race maintenance, as evidenced in Jewish communities. This was driven home to me during an inspection of the Birth registers of a Jewish quarter in Glasgow, which publishes a newspaper in Hebrew; the Jew is bilingual from babyhood, and well nurtured. For the evaluation of any population, statically and dynamically, we must know its age-constitution and infirmities.

Age and Infirmity.—Age is asked boldly, and infirmity has been inquired into cautiously and courteously. The Great War has increased the blind and the maimed. Average age diminishes with increasing births: only death, however, can remove the now numerous sad cases of badly wounded and blinded heroes of the greatest of all European struggles of right against might.

Full Analysis of Census will Follow.—The foregoing are the briefest preliminary notes upon the Census. In future chapters I purpose explaining the method and details of collecting and tabulating the Census data, and to deal specially with the fresh features of the approaching enumeration. Incidentally, I may describe from beginning to end the complex machinery of the Census. Upon results I shall lay emphasis; and possibly the facts of the various Censuses, from 1801, viewed as a whole and in the light of present-day economic science, may show us that, in the present condition of civilisation, population does not increase in a greater ratio than subsistence. Nay, that rightly managed, the productive power of the community tends

to increase more rapidly than the consumers. Thus the bogey of over-population—always local rather than universal—disappears, and the danger dreaded by Malthus is seen to be now non-existent.

Malthus wrote his Essay first in a pre-Census period (1798), and even for the later editions he worked with imperfect information. Each succeeding Census has tended to disprove his melancholy forecasts.

A long and large view of the lessons of the Census proves that the equilibrium of Nature is maintained by balancing principles. To the eyes of the Censal-populationist the world gives reasoned hope for happiness and human progress. We have perhaps advanced more rapidly mechanically than morally; more as individuals than as citizens, and more as citizens than as nations. For should not the principles of Christianity be extended to dealings between nations as well as between individuals?

The Globe a Great Graveyard.—How many people have passed into life and into eternity? An immense inquiry! Perhaps it may be taken up in a limited form in a subsequent statistical estimate from the beginning of the Christian era. Looking back upon the past, with its majestic sequence of ordered law, we see the globe as a great graveyard. The very dust is the ashes of the unnumbered dead: the soil a buried world that sinned and suffered, and did noble and ignoble deeds, and lived heroic life, watering the seed fields of the future with its tears and its blood, and bequeathing to us our splendid social heritage. Imbued with high ideals and conscious of unending possibilities, shall we not, despite the set-backs of war and unrest, continue to move ever upward in the heavenly spiral of spiritual, social, and intellectual evolution?

Or is the belief in human progress a delusion? Our coming Census, a national stocktaking, will mark the difference in a

decade. To-day we have also fresh views on population and the economics of parenthood: the Great War has shed a lurid light on the world; no longer may we take for granted the inevitableness of improvement. The time is one of inquiry and questioning.

CHAPTER II.

SHOULD THERE BE A CENSUS OF RELIGION?

I PROPOSE to say something, suggestive rather than exhaustive, on the vexed question arising at every Census as to the desirability and practicability of taking cognisance of religious beliefs.

In the previous part some preliminary remarks were offered on the Census as a measure of population and industrial and social progress. Should the Schedule include Religion ?

Britain has become accustomed to Government inquiries, and has learnt something, not only of their obvious drawbacks (subject of common complaint), but also of their advantages; the Census being one of those communal services of value beyond disparagement, and capable of development for good along approved and useful lines—acknowledged measure in many ways of the evolution of a country, basis for legislation and administration, and for the calculation of rates of birth and mortality and other important social and vital statistics, the Population Census not only pictures the present, but, on comparison with previous Censuses, shows also the direction in which we are travelling and the rate of progress.

But Census-taking must have limits. The great analytical process should be extended with the utmost caution. To widen it too much would be to weaken it. One does not oppose innovation and extension. One only inculcates from experience and observation the need for deliberation and circumspection. France has a more elaborate system than ours. Her civilisation

is older and the character of her people such that probably her method of national stocktaking does not strike them as lacking in simplicity; and great economic surveys are possible generally only upon strong, simple lines.

What is to be Asked?—At each Census there are keen discussions in the Press and in Parliament concerning the questions to be put in the Census Schedule. Advanced sociologists would like the contents of the Schedule to record not only the usual information as to age and occupation, but also family budgets. The ideal Schedule in some minds is a sort of skeleton autobiography in the manner of the biographical sketches in "Who's Who," with the addition of statements as to height and weight, colour of hair and eyes, with confessions as to possessions, political principles, and even religious belief.

Admittedly religious belief affects population; and as this question is the first raised in connection with the coming Census, I may state, briefly, some objections generally put forward against the value of the data likely to be obtained by means of such a question in the British Schedules, where no such query has as yet been inserted. With the special case of Ireland the case is different.

Religion in Ireland.—The Irish Census Act (the measure passed in 1920 is printed in the Appendix hereto) includes a provision for taking account of Religions, with a proviso, however (since 1881), that "no person shall be subject to any such penalty" as that mentioned "for refusing to state his religious profession." A very small proportion generally refuse, only a few hundreds, it is understood. It is concluded, therefore, that the people in Ireland do not regard the question as inquisitorial. One does not care to prophesy that they will always reply carefully and conscientiously to any question put by Government in Ireland. But the inquiry is intended—

mainly, if not entirely—for the purpose of ascertaining the proportion of Protestants to Roman Catholics. Furthermore, the Census in Ireland is taken chiefly by the Royal Irish Constabulary, a body of men of high intelligence, who are familiar with the facts of their districts, and are, indeed, probably qualified themselves to report upon the religious persuasion of the people—so far as the aim of the question in the Schedule can be attained. It may be explained that Protestants are required to name their particular Church, sect, or denomination; and this variety in Protestantism is one of the practical objections, from a statistical standpoint, to the inclusion of a question as to Religion in the Census Schedule for Great Britain.

Too Many Sects in Scotland.—Partly at least on account of the religious question in the Irish Schedule, some enthusiastic ecclesiastics and a few statisticians and sociologists have again and again urged upon the Government the adoption of a similar question in the British Schedule, ignoring the important difference in the religious and social conditions of the Emerald Isle.

Heated and almost acrimonious debates have been held on the subject, one of the warmest being in Parliament forty years ago, in 1880, when a motion for the insertion of a query as to Religious Belief in Britain was rejected.

The following question is significant:—"If it were proposed to take a Religious Census, do you think it would be worth while tabulating every different sect, or dividing your Established Church in Scotland, and what is your Nonconformist Church in Scotland merely?" That is, whether there should be a column in the Census Report, with a heading for every denomination in Scotland (a very large number); or only two headings—namely, I. The Church of Scotland. II. All other Divisions: or, more shortly, I. Established and II. Dissenting.

To the foregoing question put by the Census Committee

of 1890 the Registrar-General for Scotland, Sir Stair Agnew, K.C.B., replied with caution and common-sense: "I think, if the Census (of Religion) were taken at all, that probably those who wished to have it taken would desire that it should be made as minute as possible." In other words, every sect, however small in number, would wish to have its own heading; and I am not sure how many such divisions would be necessary, for the sects have increased in recent times, and in making new divisions and (perhaps more happily) fresh reunions there is no end in the spiritual world.

An Old Attempt in Scotland Failed.—In 1851 an effort was made towards a Census of Religions in England and Scotland. In that year at the time of the Population Census, the church accommodation was recorded, and returns were made of those attending the different churches on Census Sunday, 30th March, 1851. Admittedly imperfect, such figures could not be regarded as conclusive: and it is, perhaps, not readily possible to secure anything which could be deemed an absolutely reliable Census of Religious Beliefs. And, though one does not desire to touch upon the political aspect of the subject more than may be expedient, it may be observed that the Census Commission Report (1890) recorded that—"Reasons of weight, mainly of a political character, have been urged against the requirement of returns under this head."

Still an Open Question.—I do not commit myself for or against. Experience of four Censuses, and as an Enumerator in Edinburgh and in Aberdeen, has impressed upon one, who had the point in mind from all its aspects, the initial objection to a Census of Religious Professions, lying in the fact that a very considerable number of persons, in certain City regions especially, attend and are attached to no Church regularly. In those cases, might not there be a temptation to the enumerated to insert a Church or sect which he did not really support and

in the tenets of which he had no real belief? Or might not the Enumerator be likely to make a paper convert of the enumerated by describing him as belonging to his own denomination, in those cases where he completed the Census Schedule, as the Enumerator is generally authorised to do? With the view of evaluating the work of an Enumerator in Edinburgh, I took on a very mixed district at one Census, and I might have induced the majority of the inhabitants, save a few Irish Roman Catholics, to return themselves as Established Church, whereas their true attitude in the matter of religion was mainly that indifference comprised in the phrase, "lapsed mass," or more fully, "Go-as-you-please."

Amongst Bible references to numbering the people, perhaps the most notable for us is that in the first verses of the second chapter of the Gospel of St. Luke:—

> And it came to pass in those days, that there went out a decree of Cæsar Augustus that all the (Roman) world should be taxed (enrolled). And this taxing (or enrolling) was first made when Cyrenius was Governor of Syria. And all went to be enrolled, every one into his own city.

Birthplaces are required in our Schedule, instead of calling for any such return to one's own city. By means of ascertaining the temporarily present, however, our Census arrives at actual numbers. To this matter I shall again refer more at length, when explaining the whole process of tabulation of results. On this point the Census of France is very clear and precise.

Returning to the burning question of a Religious Census, one finds that docile, highly-organised, bureaucratic, and militarist Germany classifies her inhabitants in four divisions: Protestant, Roman Catholic, Jews, and Undefined. Canada and Australia attempt the religious analysis under the five heads of Anglican, Roman Catholic, Presbyterian, Methodist, and Various.

CHAPTER III.

RELIGIOUS BELIEF

MAIN objects of the Census are:—The total number of the population; their varying occupations; their birthplaces and their migration; the proportion of the sexes; their conjugal condition; and—an innovation introduced at the last Census, 1911—the duration of marriage, and the number of children born of the marriage.

Man is both the end and an agent of production. All the causes, outward and inward, which determine human action affect the increase of mankind. Race and social inheritance, climate and government, are main factors; the two greatest forming agencies in the world's history are the economic and the religious. The steady and direct action of the economic motive is more noticeable in the ordinary business of life; but the motives derived from religion are higher and generally more intense and elevating, although sensible men do not obtrude them too ostentatiously now in Scotland. Scotland is a country, however, whose history has been much affected by religious belief. Yet, so far, no universal, synchronous Census of such belief has been attempted. I am asked—Can it be done? I reply—Yes; the Scottish Census is equal to any emergency; and if the Government decide to follow in Scotland the example of Ireland no doubt the information desired will be collected at the coming Census. It has never been done before; but the mood of the moment is for innovation, and in this way the Census might be a measure dealing with the soul as well as the body.

A new column, if narrow, can readily be added to the ever-lengthening form of the Census Schedule.

Difficulties emerge, however, the experienced official must point out, whenever it is attempted to particularise in sects.

Religious denominations are numerous. To have a heading in the Census Schedule for religion is a simple matter. It is when the question of subdivision is tackled that trouble arises.

The word Protestant or Catholic could be indicated by their initials, P. and C. Jews could be classified similarly. The simplest of plans would require four divisions: Protestants, Roman Catholics, Jews, and various. In older Scotland the parochial terms were "Established" and "Dissenting"; a touch of reproach attaching to the latter designation, as when a session clerk recorded in his "Old Parochial Register" the fact that Mr. Whyte, a Dissenter, had died owing to cutting his own throat. A ready-witted Dissenter to whom I showed this entry at once remarked that if he had not been a Dissenter, the man would have probably cut somebody else's throat. A tabulation of only the two great classes, Established and Dissenting, would be comparatively simple; it would, however, probably satisfy no religious body. The crux of the question from a statistical standpoint lies in the decision as to the number of divisions to be tabulated. Shall there be four, five, or forty? I think somewhere about forty different religious bodies having "ministers not of the Established Church" may now celebrate marriage lawfully, acting in good faith: two of the best known instances being the Salvation Army and the "Plymouth" or Christian Brethren.

Trouble in Tabulation.—Those who desire a religious Census to be taken would probably not be content with two divisions: Established Church and Nonconformist Church in Scotland. Most of the larger bodies—Episcopalians, Methodists, Baptists—would agitate in Parliament for a minuter subdivision to show their strength. Probably this could be done, without

great difficulty, if the various denominations would be satisfied with totals. It is in the tabulation of the statistics relating to the smaller burghs in Scotland that there would be waste of time and paper in blank sub-headings if there were to be thirty-five or forty such columns for denominations—of which not a few surely would have no adherents in the lesser towns.

Tabulating objections are obvious. They have been a strong argument against the Religious Census. All the objections to the inclusion of a new question in the Census need not be mentioned. One may, however, be alluded to. A new question (like new whisky or new wine) is worth less than half the value of an old inquiry, because there are no previous Census figures of 1911 with which it can be compared to show the inter-Censal amount, and the rate of increase or decrease.

A practical point also is—What about children? They might be classed in Communion in which baptised; or at what lower age would the question be applicable? Of course, there would be no higher age of exclusion—although the ages and the infirmities recorded might rather point to second childhood. Church membership is responsible, privileged, a high calling.

If the inclusion of the question had the effect of drawing the attention of adults to their failure to adhere to any religious denomination, and were to cause them to decide on a better course, the new departure might do good work. I repeat that I am impartial, and am endeavouring to set forth, although not exhaustively—which would be tedious—the pros and cons of the subject.

Almost exactly ten years ago an amendment by the Lords in the Census Bill of 1910 that the inquiry be made was rejected in the Commons. There is to-day a stronger feeling in favour of such inquiry.

Seventy years ago Britain was in a mood of enterprise. Returns were made of those attending churches upon Census Sunday, 30th March, 1851; and in Scotland, out of a popula-

tion of 2,888,742, the church attendance totalled 943,951, of which 351,454 were classed as belonging to the Church of Scotland. Similar figures, also admittedly imperfect, were published for England in its Census Report of 1851, one of the most interesting of Census Reports, which contains lengthy histories of the several religious communities, even then no fewer than thirty-five in number! As the French say, we have fifty religions—but only one sauce.

In view of the considerable number of families apparently connected with no Church, and perhaps professing no religion, it might be expedient to have a group returned as—"Undefined," and sundry odd small sects might be classified conveniently as "Various."

Religious Belief and Race Maintenance.—From the vexed question of a Census of religion a populationist may turn fittingly to the connection between religious belief and the movement and increase of mankind. It is evidenced strongly, as is well known, among the Chosen People and Roman Catholics.

Partly owing to the difficulty in procuring data, the precise character of the connection is not clear. But it is intimate, and much more important than the older writers on demography would have admitted. In the last thirty years it has affected the position of Protestantism, as compared with Roman Catholicism. As compared with the landed families as a whole, the Roman Catholic aristocracy have 6·6 children to each fertile marriage, while 3·74 is the average of their class.

In the Catholic Year Book appears a list of all the Roman Catholic dioceses in Great Britain; the Catholic population; and the number of infant baptisms. As is well known, all babies in Roman Catholic families are baptised soon after birth. So that the number of baptisms gives a rough idea, obviously rather understated, of the purely Catholic yearly birth rate. The general rate for England is about 24 or 25; whereas the

average birth rate per 1000 of the Roman Catholic population in ten typical districts is 38·6. Such a remarkable difference helps to explain the steady numerical increase in Roman Catholicism. Malthusianism, with its birth restriction, has no acceptance in the Roman Church; which also manages generally to hold its own members—conversion not being common; and were it not for the apparent abandonment of birth restriction generally in Britain, as revealed by the births in recent months, the greater birth rate among members of the Roman Church would inevitably have led, if continued through the centuries, to its ultimate ascendancy to the position of predominance numerically among religious bodies.

It rather appears that the British middle class, as a whole, has not been keeping pace with other classes. More light upon that will, however, be obtained by the *data* collected in 1921, when the fertility of marriage in 1911 (a new inquiry then) can be compared with the same fertility ten years later.

Meantime it seems safe to say that among the classes increasing by births in numbers are :—

Roman Catholics, of all classes;

Jews, and some foreigners, such as Poles and Italians;

Unskilled labouring class; also coal and iron workers.

Minimum for Race Maintenance.—No stock can maintain itself with an average of less than fully four children per marriage. To have fewer than four means that other stocks must surpass and supersede the stock which shrinks from adding normally to its numbers; and, what is emphasised here, the larger number will carry into ascendancy its moral and religious beliefs, not perhaps the ideal religious beliefs, but those which are natural and unselfish, leading to a life of simplicity and adequate prolificity. The Jewish notion that childlessness is a curse has had much effect through long ages.

The vacuum created by the failure of the better sections to reproduce is filled by the Irish and Jews and the poorer

stocks. The very small family does not lead to the production of a higher type of child. So far, then, from leading upward, a differential birth rate—high among the lower and less intelligent, and low among the upper and capable classes—would cause the race to breed a poorer and degenerate type.

Where the birth rate is normal, the health of woman is better than where it is low artificially. Restriction is injurious to the feminine nervous system; child-birth is not. Metritis and troubles of a hysterical character are aggravated by the artificial restriction of births: Nature has her Nemesis. Finally, history does not show nations where births are few and restricted rising to higher and higher stages of civilisation. Rather are such decadent peoples liable to be thrust into the background by their hardier invaders, as the later Romans fell before the incursions of tribes of purer character and healthier population.

Possible Proportions: Scotland.—Unless there have been very considerable changes in the three decades, the proportion of Protestants to Roman Catholics is probably much as in 1881 The figures then were :—

Protestants	3,371,000
Roman Catholics	318,000
Jews	6,000
The total population enumerated in 1881 being	3,695,000

Of the Protestants, 2,997,000 were Presbyterians, 99,000 Anglicans, and "All others" 281,000.

The figures are not Census statistics, but estimates—mainly calculated on ratios derived from the number of marriages solemnised yearly by ministers of the different denominations. Statistics of Church membership, as published occasionally, have also some value.

Canada and Australia have five divisions, one being

Methodists; and if there is an enumeration, giving the number of Methodists, why not also Baptists? And so we come back again to the initial difficulty of deciding how general or how minute shall be the classification of sects in Scotland in the tabulation of Census figures relating to religion.

Population and Religion.—Where the traditional Church has retained its hold families are the largest, the Roman Church tending to promote a natural increase of population, condemning materialism and inordinate ambition, also Malthusian practices.

Decline of population affects the economic condition of a country. If the children live and are healthy, the State gains much from families of a fair size well brought up. Such families are usually genial and vigorous; they educate each other by daily association; and they themselves are likely to have large and vigorous families. Indeed, some economists assert that the progress of the race is due, in considerable degree, to the descendants of exceptionally large and vigorous families. Parents of only one or two children are apt to be over careful, so that their children lack hardihood and courage, enterprise and endurance. Strength and vigour of the race should improve with numbers; and the ever-increasing and all-embracing activity and care of Government in matters affecting public health tend to increase strength and efficiency, and to lengthen and render happier the duration of human life.

Given good units, population itself is national strength. "In the multitude of people is the King's safety." No country can continue powerful without a progressive population. Not for a long time to come will the increase of numbers cause a diminution of the average real income of the British people; and if that time does ever arrive, it will be not because we have outgrown our resources, but because we have outgrown their development.

CHAPTER IV.

OCCUPATION; AND A PLAIN PHILOSOPHY OF POPULATION

In the three previous parts remarks were made on the Census generally and on religion and race maintenance; and here it is proposed to treat chiefly of occupations, and to begin a plain view of the present-day philosophy of population.

Greatest of all statistical operations, the Census is the stocktaking of our national life: family, social, and industrial.

I am asked—What is the use of the Census? and even—Is there any use for a Census? Well, population is the basis of all public service and administration. The importance of the population Census as a picture of our whole national work and life is too little understood.

Occupation and Industry.—Sydney Smith said, with his strong common-sense—Let every man be occupied: occupied in the highest occupation of which he is capable, and die with the consciousness of having done his best.

Every decade sees it growing in size—the *Census Schedule.* It is called the "Occupier's Schedule" in England and Wales; the "Family Return Form" in Ireland; and the "Householder's Schedule" in Scotland.

It was introduced for the first time at the fifth British Census, 1841, in much the same shape, but of smaller size, as for the coming Census. But it has been altered much since 1851; and especially in the compartment for *profession* or *occupation.*

Fully one-third of the space in the schedule falling to be filled up by the occupier or householder is now devoted to details regarding occupation, and a quarter or so of the whole schedule is devoted to precise instructions as to the stating of employment.

The particular branch of the trade, or industry, and the material worked or dealt in, have to be specified; also whether the person is an employer (other than that of domestic servants) a worker for an employer; working on his own account; or carrying on a trade or industry at home. To "the man in the street" such precision may appear over-elaborate. Not so to the statistician and the economist, who bear in mind that—

The key to the condition of a country lies in reliable information as to all its occupations.

Careful and intelligent classifications of industries—with the numbers and ages of those engaged in them—give results of the greatest value: revealing a country's quality; while statistics generally show merely quantity. Details as to occupations massed into a complete whole picture the condition of our country so clearly that we can see at a glance our stage of industrial development. Electricity and that allied and growing enterprise, the "cinema," now afford employment to many thousands; whereas the former at the Census of 1901 and the latter in 1911 gave occupation to only a few hundreds in Scotland. In America the cinema is the fifth industry in the matter of capital; its expansion in Scotland has been astounding; and so, in limited measure, has been that of the production of aluminium, which has not been produced in bulk for long, as it is not much more than a quarter of a century since its manufacture achieved commercial success. Its production in Scotland has developed immensely even since last Census, large aluminium works having been erected, for instance, at Burntisland.

Most delicate and difficult, the classification of occupations

is the supreme triumph of Census tabulation. Its importance cannot be over-emphasised.

All the complicated mechanism of industry is laid bare in the final tabulation of the occupational information in the Census schedules. It is the dissection of the national body—professional and industrial.

What we all live by is recorded; distinguishing those who obtain their support from the land from those who are engaged in trade; and, in graded detail, the Census reports show the number supported by each particular profession, trade, or industry.

The Census thus takes stock not only of our numbers, but also of our stage of civilisation, as revealed in our occupations, as we press on in the onward march of unceasing change.

> Men, my brothers—men, the workers—always reaping something new:
> That which they have but earnest of the things that they shall do.

In these two vivid lines is indicated the development of industry, the figures of which appear in the Census reports from 1801 to 1911—forbidding folios which few care to consult.

Three broad divisions—into (1) Agriculture, (2) Trade, and (3) Others—satisfied the Census-takers at the three earliest Censuses—1801, 1811, and 1821.

In 1831 there was tried a more detailed tabulation, and in 1841 all the principal occupations were recorded. A spirit of aspiration existed—something as at present—ten years later (1851), when the exhaustive method of tabulation now in use was originated. Anterior to 1841, the official had himself to fill up forms when acting as Enumerator at the Census. Accustomed to the decennial counting, the people are assumed to be capable of themselves filling up the Census Schedule, although power is given to the Enumerator to correct or complete the Schedule when it is obviously imperfect or incomplete.

In the Leith Walk district of Edinburgh I found it necessary to complete not a few Schedules, whereas in Rubislaw Terrace, the region I enumerated in Aberdeen, the Census Schedules

were completed with general accuracy by the occupiers, the details as to rooms with windows being the sole exception, for it was surprising how few people were absolutely certain off-hand as to the precise number of windowed rooms in their houses, even among the professional class.

General Divisions of Occupations.—Imperial and Local Government; Defence of the Country; Religion; Law and Medicine; Art and Literature; Science and Education form leading divisions into which are classed the particulars of professions and occupations.

From the Summary of Occupations at the phase and period of civilisation reached at previous enumeration in the United Kingdom one may extract the essence in this sixfold division :—

Class.	Percentage.
Professional persons	3·3
Commercial	4·4
Domestic	6·2
Agricultural and fishing	6·7
Industrial (including transport)	23·9
Children and adults with no specified occupation	55·5
	100

Very noticeable in the course of the various decades has been the growth of the industrial class, which has taken place in some measure, at the expense of agriculture, to which occupation, however, there has been a tendency exhibited recently to give greater attention; and the coming Census will doubtless reveal altered percentages.

Present-Day Philosophy of Population. — My title promises a philosophy of population. That I am prepared humbly to offer. But it is not an academic system, nor is it one quite on the lower level of "the man in the street." It is something between. Shall I say it is the philosophy of

the man in the train or the hotel? That is, the philosophy of the intelligent ordinary householder and citizen.

In some of its forms political economy—though dealing with man and his wants, his happiness and passions—is as cold, hard, and unsympathetic as if it were explaining the laws of inanimate nature. Yet the truths of economics are supposed to provide rules regulating our temporal prospects, indicating what has been done and what we might accomplish, encouraging us to intelligent effort. Failure to grasp the elements of political economy explains not a few mad projects, resting upon dangerous and disorganising misunderstanding and fallacy which have been advanced in our own times. Labour and its share in management and in rewards have been much discussed. Sometimes leaders offering guidance to practical conduct have shown themselves unqualified for leadership by their narrow, sectional views.

That labour is a condition of progress in civilisation, and that the communities furthest advanced exact perforce the greatest amount of labour and the highest quality of work all round are fairly obvious conclusions.

By the sweat of his brow man makes his bread. Where the necessity is the sternest there it has been most strenuously pursued. Where is there a more energetic farmer than in rather bleak Buchan? Not from the fertility of the soil naturally, but from the producing power and force and intelligence of the men who live thereon comes the requisite subsistence.

The land might be fertile as Italy or East Lothian, but without man, with his prolific energy, it is as naught.

Indispensable to progress is increasing production. A nation such as Scotland must in each generation do more than in the past. I do not mean only that as the numbers are greater the production is more. Individuals in the larger population must produce more. A city with seven hundred thousand inhabitants requires each person to develop more productive power

than in a town of two hundred thousand; and such increased productiveness is rendered possible by organisation, enterprise, invention. Not otherwise is it possible to escape reaching a point in our industrial progress where we could not supply our growing population with food. But I believe in the illimitable power of human invention and resource. Over-population was the bogey raised by Malthus. "The declining birth rate" was the whine of the pre-war pessimist: and perhaps the time is opportune for a plain statement of the real principles of population, sketched incidentally in connection with an exposition of the Census and Some of its Uses.

The crowning study of mankind is Man. Highest of all science is that dealing with the human race, and revealing the causes which lead to progressive and relative dominance—to progressive physical and mental development. Viewed as a measurement of the whole social organism, the Population Census is of the deepest interest to the legislator and the sociologist, and studied in all their aspects, the statistics of our numbers, occupations, and effective fertility, should indicate the economic condition of the Empire. No country can continue powerful without a progressive population.

CHAPTER V.

OCCUPATION AND SOCIAL PROGRESS

Occupations and industries as revealed by the Census, and as an index of the stage of civilisation attained by a community, were touched upon in the preceding divisions, and a hopeful augury for the future was produced from the progress shown from the first Census in 1801 to the last in 1911. Reference was made to the arising of new employments, such as the cinema and electricity now provide. A still more novel industry is that of aviation. A marvellous future is possible in aerial enterprise. Recently I discussed the possibilities with a professional expert of commercial, touring, and postal flying, and it is believed that the Controller-General of Civil Aviation contemplates the launching of a stupendous scheme of aviation training and commercial stations: also of encouraging aviation upon lines similar to that given to mail ships, such as the *Lusitania* and the *Mauretania*.

Most deplorable will it be if military utilisation should become necessary. But—just as the mercantile marine were armed—an air fleet could readily be transformed into an air army. And it is noted that Germany is now possessed of a very efficient air service. What a world! Can Germany be made to relinquish utterly her mad military ambitions? Or will the new Germany cling to the ideal inculcated by the Kaiser? We cannot afford to maintain an adequate fleet of military aeroplanes and airships; the expense of which was discussed at the first Air Parliament held in October, 1920, and found to be so prodigious as to be unthinkable in time of peace.

But aerial transport of mails, passengers, and goods is increasing steadily, both in amount and in safety. At the moment of writing, it is learned that there is under practical consideration a scheme of Territorial training in flying: and the British Government evidently intends to retain supremacy in the air. Returns of the 1921 Census will show large numbers occupied in the Air Industry. Change and transition are all around. We are moving fast.

The New Outlook.—Indeed, to the populationist the outlook at the close of the second decade of the twentieth century is alike interesting and unprecedented. Problems unparalleled in the world's history in magnitude and in complexity mark the beginning of what we believe to be a more enlightened era. There is a feeling abroad that a stage in our civilisation has closed. But it is not clear in what direction lies the path of progress: the science of human society has a difficult task. As yet sociology has given no clear message. "A land fit for heroes" is the cry. It represents a concrete idea. Meantime it is far off realisation. Unrest, social and industrial, is noticeable, especially in the four largest cities of Scotland. Even Bolshevism finds defenders and advocates in Edinburgh as in Glasgow, where public debates are held in the presence of thousands. Evidently Bolshevism meets with favour in the minds of that advanced school of social revolutionists who swear by Karl Marx, although many of them have but an incomplete knowledge of Marxian philosophy, and take from Marx only an unqualified, and obviously incomplete and misleading, section of his teaching.

Old things have passed away—material, political, social. No longer is the experience of the by-past itself a reliable guide for the future, no more than the old forms of lighting and locomotion would suffice for the present day.

Great displacements of population have taken place. New forces are gathering and marshalling. To some minds Socialism

has ceased to be a theory and is about to enter upon the practical stage. Its cry for the nationalising of the means of production, or at least for the ceasing of private ownership, is heard loudly in the land. Socialism with some has become a religion, and is making the most of its aids to belief and its criticism of the many evils it assigns to capitalism and "the robber knights of capital." Socialism represents the wage-earning class as carrying the full weight of Society upon its weary shoulders, while the unclean brigand aristocracy of the horde of company promoters and of the Stock Exchange live in luxury and idleness.

Land and Labour, Capital and Organisation are the agents of production. And it is well to remember that by Labour is meant the economic work of man, by hand, by head, and by means of Capital, which, under our present system of Industry, is required for most undertakings; in spite of the antagonism of unpractical extremists. The evil done by ignorant or ill-advised fanaticism is incalculable. And we should do what is possible to counteract pernicious propaganda by spreading a knowledge of sane social economics.

CHAPTER VI.

INDUSTRY AND SOCIALISM

To the capitalist Socialism says, in effect, to-day, "You have money, which is concentrated power. We are going to take that money from you. And we can do it, for we are numerically stronger than you. We are not able to do it immediately, but that is our aim." The voice of Socialism is heard loudest in the Labour Party. Judged by its own profession, that party stands for the interests of only one class. Its fault lies in emphasising the private ends of the citizens, which have not the large comprehensiveness of the aims and purposes of the State. Some Labour leaders propound schemes which would destroy all individual independence, and transform free citizens into slaves of a social machine. Yet such leaders assert that their intention is but to give freedom fuller play, and to extend the power and scope of the effective will of the people and public opinion! Family life and care of children as they exist in Britain now are attacked by corrupters of the working man. Such extreme Socialists have generally no clear vision of the ultimate political and social results of their notions; they are at best only the victims of sporadic and impulsive bursts of social sympathy, and at worst iconoclasts, of Bolshevistic leanings, who would

> Bring the old dark ages back, without the faith, without the hope;
> Break the State, the Church, the Throne, and roll their ruins down the slope.

Appeals to his cupidity, and (may I say it?) to that "lazy bone" which exists in most human bodies, can only demoralise

the worker. Class conceptions are destructive—whether they be plutocratic or democratic. Industrialism, which some Labour members have mainly in their minds, is the means to an end: they fail to remember that the working man is the citizen of a great State, and that, while he must have bread and a home for wife and child, he is capable of a generous idealism incompatible with the complete domination of greed. Can it be that the Labour men are the victims of the presumptions and tyranny of trades unionism? And that they think really that all the concerns are subsumed and comprehended in and under the word Labour, forgetting that the State is the defence of their freedom, the security of their own life, the condition of all the homely virtues, the common guardian of all just and lawful interests?

Did the working man read more of solid literature half a century ago? To-day I see keen-eyed men in caps scanning the newspapers in free libraries; others purchasing small books at railway stalls. I hurry forward, to find frequently that in the one case it is the betting news and in the other "Racing Up-to-Date," or something of that character which receives avid attention! In former days one has seen in Mechanics' Institutes well-thumbed copies of the "Wealth of Nations," Macaulay's "History and Essays," and even Gibbon's "Roman Empire."

Agitation and Unrest Affect Population.—Family life and the rearing of children are inextricably interwoven with the conditions of industry. For example, in Dundee the school hours have been altered to suit the arrangement whereby workers take their breakfast before they begin work in the factories. No longer is the shriek of the hooter heard at six o'clock in the morning, for the mills open only at a quarter to eight. Labour is organised strongly, and, perhaps with benefit to all concerned, here has got its own way.

Extreme Socialism is preached openly to-day, and even

anarchy in some cities. Bolshevism is an ideal held up to the gaping crowds at street corners as a means of relieving men from the burden of bringing up their progeny. Parenthood bears a heavy burden certainly; but the State is sympathetic, as shown again and again in the reduction of income tax allowed for children. The penalties of parenthood are still, however, undeniably great, as indirect taxation upon the necessaries of life falls most heavily in proportion to the number of children in the family. Perhaps direct taxation with some adjustment to the number of children supported should, to as considerable an extent as is practicable, take its place. Not preaching on the patriotism of parenthood, but tangible encouragement to undertake the increasingly onerous penalties of rearing a family well, is necessary in these trying and unsettled times.

"Save the children" is a cry which should apply to the bairns of our own country as well as to those of Central Europe. None of us who go with open eyes through the less favoured portions of such cities as Glasgow and Edinburgh, Leith and Dundee can fail to see many children on whom parental care presumably bestows scant attention, and that is not a satisfactory sight in a highly-civilised and nominally Christian community.

Germany Encourages Paternity.—As one who knows more about France than about Germany, I confess I was rather tired of references—so frequent in the pre-war period—to German methods. Her methods are mechanical; but they are thorough. Already in Germany both Church and State (perhaps still military) are said to be rather encouraging even illegitimacy; for Germany has asked for ten million additional babies during the next decade. Among the attractive inducements offered to parenthood are:—

(1) Graduated relief from taxation.

(2) Free medical attendance.

(3) Free education at school and University.
(4) Higher wages and shorter hours for parents; and
(5) Better housing accommodation.

Thus is the candid request for race-maintenance alluringly sugar-candied! That the demand should require to be so sweetened tells its own tale, however, and one believes that in Germany, more especially in Berlin, the advantages set forth have not, so far, operated very effectively. Social revolution is apparent, in some degree, in all European capitals—Berlin, Buda-Pest, Petrograd, Paris, London, and even Edinburgh.

CHAPTER VII.

WEALTH AND POPULATION ARE PRODUCED BY LABOUR—MANUAL AND MENTAL

In the last part it was seen that extreme, and evil, forms of Socialism are in the end inevitably opposed to permanent social progress. The corruption of the best makes the worst. Socialism which spells revolution really tends towards reaction rather than to progress. Russia, robbed and weakened, with a starving population in a naturally rich country, illustrates the industrial and social chaos caused by disregard of ethical and economic laws. And the astounding effect is an appeal against loafing—against actually the ca' canny policy—by, of all people, Trotsky. Listen to his abjurations :—

"A careless, unconscientious worker is the most evil foe of the Socialist State. He who loafs through the working day is the enemy of Russia, and is destroying her future."

"Firm, concentrated, harmonised labour is the basis of human life" is the burden of Trotsky's appeal; and no one will deny the general applicability to the whole world of the urgent message to speed up production.

"Workmen and workwomen, let us in united and tireless labour forge with millions of hands a more happy fate for the coming generation. Long live labour, the liberator and foundation of life!" (Gone is the notion of living on the spoliation of the rich.) Such sentiments are simply emotional echoes of Adam Smith and of present-day impartial speakers who tell the workers the truth; very different in their tone and tenor from the *ad captandum* orators most in favour with mobs,

who misrepresent Russia as an idealistic embodiment of Socialism.

"The Proper Study of Mankind is Man." — Pope's terseness and point render him peculiarly suitable for quotation, and the subject of study he so emphatically recommends may, like all Gaul, be divided into three parts :—

(1) To know ourselves and our surroundings and conditions—the existing environment—affected chiefly by occupation.

(2) To be happy and efficient under our present conditions generally ; to marry and make a home and have children.

(3) To improve ourselves and our environment ; the existing state of things being mendable and being fought intelligently against so far as they threaten to mar mankind.

In bald outline, the following observations on population in various aspects are penned in the spirit indicated by the above three divisions of social philosophy, by one whose daily professional work is connected with the three elementary events—births, deaths and marriages, and with the Census, that complete survey and stocktaking of the national life from which we learn our progress. "The most decisive mark of the prosperity of any country," remarked authoritatively Adam Smith, "is the increase of the number of its inhabitants;" and Scotland has evidenced continuous prosperity at such enumeration.

Adam Smith, the First Populationist.—Population was dealt with by Plato and Aristotle, the latter recommending late marriages—men not to marry until they were physically and mentally mature at 37, and the destruction of weak offspring. But the subject of population was not discussed scientifically and systematically until the appearance of the "Wealth of Nations." And the present is a time when it is peculiarly appropriate to go back to Adam Smith—when weakened Russia is seeking strength in his economic doctrines.

Pioneer of philosophical investigation into the proportion which the means of subsistence bears to the increase in popula-

tion, Adam Smith indicated that excessive riches and extreme poverty are almost equally unfavourable to population.

"Labour is the source of wealth," said Adam Smith; comprising in the word labour, of course, workers of all kinds—whether by brain or hand, or both. And the man of education should be able to use his brain in any kind of work. For is not one of the main advantages of a trained brain its ready adaptability?

A wide view of social and industrial economics leads to the conclusion that an increase in the volume of labour causes a more than proportionate increase in the total efficiency of labour, *ceteris paribus*. If otherwise, there must be an absence of organisation and invention; not on mere bodily work, but on work well directed by the best brains, does prosperity depend. "Two men I honour, and no third," said Carlyle, the worker with hand and the worker with head.

Labour is Manual; also Intellectual. — Our Labour friends are rather given to writing—and certainly to speaking at street corners, as if the intellectual worker was of little value to the community. Thus Socialism is drifting into a tendency to class-exclusiveness, which it denounces vociferously in other classes; and its denunciation of Dukes is sometimes so absurd that one butts in with the word "Bosh!"

Good wages for good work of any kind should be the rule. At May-day Labour processions one notices some faces intelligent, firm, capable. But the general impression left by the last such procession in Edinburgh, consisting mainly of young faces under peaked caps, was a succession of failures; of men lacking in real grit and determination. Exceptions were pleasantly noticeable among ex-service men. Many of the men were puffing clay or briar pipes; not much is to be expected from workers who narcotise themselves at noon-day, either in evolution or in revolution. Contrasted with the feebleness of the faces in the street procession were the keen, alert, wide-a-

wake workers pursuing their daily avocations, with only an occasional glance in their rapid walk at the banners of the May-day processionists. One does not know precisely in what sense the Association interprets their motto, but the painters blazoned on their great banner the splendid device—*Labor omnia vincit*—which, widely construed, embraces most of the wisdom set forth in the "Wealth of Nations."

Perforce a writer's opinions are coloured and shaped by the leading conditions of the age in which he lived, but such colouring does not render really great books of only passing value.

Like Shakespeare, Adam Smith wrote not for an age, but for all time. When his epoch-making work was published in 1775 the country was at a culminating point in working-class prosperity. Britain had passed through the barbaric, the pastoral, and the agricultural periods. Industry had arisen, but its evils were not yet very evident. Far-seeing and judicious, Adam Smith's remarks on population are surprisingly modern. He observes—"As men, like all other animals, naturally multiply in proportion to the means of their subsistence, food is always more or less in demand. . . . Every species of animal naturally multiplies in proportion to the means of their subsistence." The doctrine of Adam Smith preaches persistently "The liberal reward of labour." What the economist meant of course by "labour" was faithful work. Not by limiting output, but by honesty (admittedly in the end the best policy) can labour secure its liberal reward permanently. Adam Smith writes: "The progressive state is, in reality, the cheerful and the hearty state to all the different orders of society; the stationary is dull; the declining, melancholy." In a declining state, which may be brought about by ignoring sound, social and industrial economics, the liberal reward of labour is rendered, in time, impossible by reduced production; reversing the statement that "The liberal reward of labour, therefore, as it is the effect of increasing wealth, so it is the cause of increasing

population . . . the necessary effect and cause of the greatest public prosperity."

The "Inquiry" is All-Embracing.—There is scarcely an economic truth now known of which Adam Smith did not get some glimpse. Combining the inductive and the deductive methods, the "Wealth of Nations" is to the student of Sociology (and in Scotland that study has replaced Theology) more interesting than most novels. It is very close still to the most recent results on the production of wealth, and true to the state of Society to-day—as we have seen in Trotsky's cry—"To work." For in the opening words of his "Inquiry" Adam Smith laid down the irreversible dictum that wealth has its source in labour.

"The annual labour of every nation is the fund which originally supplies it with all the necessaries and conveniences of life which it annually consumes, and which consist always in the immediate produce of that labour, or what is purchased with that produce from other nations."

Upon the more general entrance of females into the field of employment, and the evils and the remedies for a redundancy of unmarried women, something will be said later. In the meantime it may be asserted that nature makes no mistakes. She has divided and proportioned the sexes by the deepest sentiments and strongest motive powers which move the world.

A Better Census.—The Bill of 1920 followed generally the Census Act of 1911; but the Act and the accompanying schedules and regulations mark a considerable advance upon last Census, containing various important alterations and additions. Those who thought the last Census Act had reached the limits may be surprised. Some light on the subject was given at the recent "Imperial Statistics" Conference.

Question as to a religious Census was not adopted for 1921. It is maintained, upon the one hand, that it should be taken as in Ireland, India, Canada, Australia, Spain, Italy, Holland, &c.

It is opposed, on the other hand, as not being in consonance with the traditions of this country on the grounds that questions as to religious belief should not be put in an official paper, and that such a Census would be "wholly illusory and wholly inadequate for the purpose." Opposition comes in England mainly from the Nonconformists; Scotland is favourable.

A language column is another suggestion. Rather waggishly the idea is put forward also that political views might appear in a column headed "Politics," initials being used as after the names of Members of Parliament, C.U., C.L., I.L., I.L.P., &c. Or possibly an ideal party (such as the present writer might advocate) with its own special initials, say P.C.C., for Progressive Constitutional Conservative, or other description indicating Conservation of good so far as compatible with wise and well-ordered progress: in short, the ideal Coalition.

CHAPTER VIII.

THE CENSUS ACT FOR 1921

Some Statisticians and Registrars consider that the Plimsoll mark has been attained in the Census Schedule. The subject of the Census, indeed, has reached now the practical stage when it is asked—"Can anything be omitted?" As well as the twin query—"What should be added?" Round the question of Infirmities circles keen discussion. The time has arrived for the elimination from the schedule of the column headed "Infirmity," says the Scottish Registrars' Association; and the Royal Statistical Society Census Committee, on the grounds that the results obtained are inaccurate, express their opinion that—"It is desirable that questions as to infirmities should no longer be asked in the Census."

Question as to Infirmity.—Age and Infirmity, it may be urged, on the other hand, affect the value of mankind. To disregard deductions for lessened value of the human goods would be to make a stocktaking which might be misleading. If information is obtained through other sources, such data would have to be associated with the Census Reports, otherwise there would not be the same completeness and clearness, as in the past, in the evaluation of the population of Great Britain, which inquiry has embraced Infirmity from the Census of 1851 to that of 1911 inclusive.

At the enumeration of 1851 the column was headed Deaf and Dumb or Blind, and the direction was to write opposite the name of the afflicted person "Deaf and Dumb" or "Blind."

In 1861 the question asked that "from birth" should be added, if that were the case; and the same direction was given for the Census of 1871, when, however, the Infirmities were expanded into—(1) Deaf and Dumb; (2) Blind; (3) Imbecile or Idiot; (4) Lunatic. No change was made in 1881. Mental infirmity gave most trouble. In 1891 the physical infirmities were described as in 1871 and 1881, but mental infirmities were classed as—(3) Lunatic, Imbecile, or Idiot, and it was asked that such a general term as "infirm" or "afflicted" was not to be used. If the infirmity dated from early years, it was to be described as "from childhood."

From the foregoing efforts at securing an acceptable and readily understood description of mental incapacity and weakness, it will be seen that the subject is one of difficulty. Physical defects are seen and obvious. Mental imperfection and mental feebleness are sometimes unseen and may be screened by sympathetic relatives; and fond parents may shrink naturally from designating their offspring as imbeciles or idiots. For the enumerator to do so would be possibly imposing rather much on that temporary functionary.

Inclusion of Infirmities.—In the Census Bill for 1921 appeared under (6) "Infirmity or disability" as a matter on which particulars might be required. In the Census Act for 1911 the phrase was—"Whether any person who so abode was blind, deaf, dumb, imbecile, or lunatic." And in the Census Schedule of 1911 the definitions given in the heading (col. 16) were—(1) "Totally Deaf," or "Deaf and Dumb"; (2) "Totally Blind"; (3) "Lunatic"; (4) "Imbecile" or "Feeble-minded."

These definitions are much more comprehensive than those given in the Act for taking the Census in Scotland, passed 20th August, 1860, 23 & 24 Victoria, cap. 98, providing for the Census of 1861, the first enumeration made by the Registrar-General for Scotland. That Statute asked simply whether "Blind or Deaf and Dumb."

Weighty evidence was placed before the Committee of the Royal Statistical Society to the effect that, owing to difficulties of definition and unwillingness on the part of the householder to give information, the results obtained from the column in the Census Schedule referred to (col. 16 in Scotland) are inaccurate and misleading, and that information relating to infirmities is, in fact, better obtained from other sources than that of the general Census. In this there is some considerable and weighty measure of truth to-day.

Among such sources of information are understood to be the records of the Navy and Army, of National Health Insurance, and of the Board of Control for Lunatics and Feeble-minded.

Value of Data.—Upon the other hand, the Census Committee of 1890 were in favour of the retention of the inquiry as to Infirmities, reporting thus on the subject of the information to be obtained:—The only one of these items on the value of which doubt has been cast is the return of persons deaf and dumb, blind, imbecile or idiot, or lunatic. The returns under these headings are stated to be "excessively imperfect" and "very untrustworthy"; but it was at the same time pointed out that the imperfection applies equally to all parts of the country, and that consequently "for comparative purposes between one part of the country and another you have figures quite as good as if they were perfect." Dr. Grimshaw, Registrar-General for Ireland, attached greater weight to the absolute value of the information supplied under these heads so far as Ireland was concerned. Accordingly, the Committee recommended that these particulars should continue to be supplied, adding that they were supported in that view by the opinions expressed in the Report of the Royal Commission on the Blind, &c.

The data procured cannot be regarded as completely unreliable and valueless. Certainly it is obviously of use in showing what deductions have to be made in calculating the

strength of a nation—just in the same way as allowance has to be made for the very young and the very old.

It was not intended to include in the Infirmity column the natural failings of extreme years, such being, inferentially, included in the column for age. Therefore, it was unnecessary —though very truthful—for the Duke of Wellington, aged eighty-two, to enter himself in 1851 as being deaf. The Iron Duke mentioned to a friend that he had done this, otherwise it would have remained unknown to the world, for all employed in the Census observe absolute secrecy. Census Reports make public no individual particulars, and mention no names of persons, nothing being published but in the form of general abstracts. The contents of the Census Schedule are treated as strictly confidential. If the answers are incomplete or inaccurate, the Enumerator is empowered to ask any questions necessary to enable him to complete or correct the schedule, and this part of the Census requires intelligence, care, and courtesy—qualities possessed generally by Enumerators in Scotland, who do the work satisfactorily.

"Education": a Rejected Feature.—So far as Scotland is concerned, item (5) "Education," which appeared in the Bill, but is not in the Act, is a novelty; but the matter has always been included in the Census inquiry for Ireland. More and more, however, is it being recognised by the leading statesmen that education is Imperial rather than local. Heated discussions as to the high education rate would be lessened by bearing in mind that Scotland is possibly not now so far ahead of other countries in national education as she was, and our new educational arrangements have not yet had time to bear fruit. In Scotland few there are to-day who cannot both read and write. Those persons who sign by mark at marriages are nearly all Irish, and they are generally Roman Catholics; but the number of such illiterates is small and diminishing.

In the Act, items numbered 5 and 6 both disappear; so

that, apparently, "Education" and "Infirmity" are likely to be left out of the Schedule; unless it were decided to include them, under the power given in the general heading of "any other matters," in respect of which particulars may be required, the final paragraph of the Schedule appended to the Act.

Without education a human being is not of full value to society; he is as marble in the quarry, or as an uncut diamond, the beauties of which are not revealed until the cutter and polisher has done his skilled work. Polishers are now provided in plenty, and expense is not spared in workshops; teachers and schools there are in abundance. But is there a sufficient steady supply of the best raw material? As a populationist, one rather surmises that in some localities the children are not first-rate in sufficient numbers to take the fullest advantage of the educational facilities now being furnished.

Census connected with Registration.—One is asked such questions as—What Office is responsible? What is the use of the Census? Is the expense involved necessary and justifiable? No Government undertaking should be entered upon unless its utility can be clearly proved; but the national stocktaking is alike useful and carried out economically.

For it there is no new Department created. Since 1861 the Census in Scotland has been placed upon the office of the Registrar-General—instituted in 1855 for the recording of births, deaths, and marriages. That office was formed only when it had been abundantly shown that in no other way could complete records be obtained than by the introduction of compulsory civil registration, which began in England some seventeen years previously. Profiting by the experience of the predominant partner, Scotland evolved a system of record superior in several ways to that of England, the books being kept in duplicate—one set for the parish and the other for the central office.

The Scottish Office is Responsible.—By section 9 of the Census Act, in the application of the Act to Scotland, the Secretary for Scotland shall be substituted for the Minister of Health, whose Department controls the Census in England.

Actually the enumeration is under the direction of the Department of the Registrar-General for Scotland, whose skilled officials carry out the Census, aided by the efficient and reliable Registrars all over Scotland, under whom serve a large army of intelligent and indefatigable enumerators.

Uniformity is aimed at in the British Census. The Secretary of State for Scotland is in touch with all the Departments interested in the Census, including, especially on this occasion, the English Ministry of Health and the Scottish Board of Health. All relative regulations and the Census Schedule itself require the approval of "H.M. Secretary for Scotland" (whose status is now that, in every respect, of SECRETARY OF STATE FOR SCOTLAND), and who is thus the supreme head of the Scottish Census.

From the Registrar-General for Scotland the various Registrars and others engaged in the Census receive instructions, the Registrars' duties being primarily to make arrangements sufficient to secure the enumeration of every person in their respective registration districts. The Census has always aroused much general interest; and, accordingly, from Census Schedule to luminous report, the operation is watched and criticised by many members of the community interested in administration, in statistics, and in sociology and national progress.

Summary of System.—Some detail of interest will be given later. Here it may suffice to point out that the accuracy of the Census depends upon a complete system of checks and of tabulation, proceeding by four or five stages as follow:—

The *Householder* or Occupier of the house fills up the Schedule.

The *Enumerator* collects the Schedule, which he distributed in blank.

The *Registrar* supervises the distribution and collection, &c., of the Schedules.

The *Census* Office finally receives the Schedules and produces the crown of the work—the Census Report.

A step not mentioned in the above briefest summary of a complex method is that which was in Scotland undertaken by Sheriff Clerks and Town Clerks, to which allusion will be made in a less condensed explanation, to follow, of the principles and the machinery of the great analytical process of taking the Census, the Act authorising which is a considerable advance upon all similar statutes. The Act is printed in full in the Appendix, 10 & 11 George V. chapter 41; also the Census (Ireland) Act, 1920, 10 & 11 George V. chapter 42.

PART II.

CHAPTER I.

FRESH FEATURES OF THE ACT OF 1920

A MORE FREQUENT CENSUS

In the preceding portions general observations were offered upon the subject of the Census, and there was outlined very briefly a philosophy of population. Two points made were (1) that population tends toward equilibrium, the demand for men being met by the supply, as seen in the steady stream of labour from birth-places to work places; and (2) that, owing partly to this mobility of population, ten years is too long an interval between the enumerations. The latter point was emphasised inasmuch as calculations of birth and death rates made upon an estimated population may be misleading, as well as erroneous; and thus their preparation worse than a waste of time, as was shown in various cities at the Census of 1911.

Fresh features in the measure passed on 16th August, 1920, give permanence to the Census Office, and power to ask for a Census every five years. Among the excellent effects of these improvements should be a more general utilisation of the Census information and a closer co-ordination of Census *data* with the relative information obtained from other Government Departments, such as Agriculture, Trade, Labour, and Fisheries, and with the vital statistics issued (like the Census Reports), from the office of the Registrar-General.

The Census Act, 1920—*Permanency.*—This Act has

been made perpetual. Henceforth, by section 1 of the Statute, it shall be lawful for his Majesty, by Order-in-Council, from time to time to direct that a Census shall be taken for Great Britain, or for any part of Great Britain.

The expediency of having a permanent Census Act has been pressed upon the Government during the last forty years by statesmen, economists, and statisticians; and especially by such leading bodies as the Royal Statistical Society, whose recommendations are based upon profound and accumulated knowledge and experience.

More unity and homogeneity, as well as efficiency, may be anticipated in the Censuses of the three countries. Circumstances have tended to prevent the figures for England and Wales, Scotland, and Ireland from being in all respects comparable. As the Census Committee observed, it is hardly realised that (although there are, of course, three separate censuses) there is, at present, actually no census of the United Kingdom. An Imperial Census of the whole Empire has, however, been carefully planned and projected.

An attempt in this direction made in 1871 had only moderate success. But more recent efforts, as in 1891, were less incomplete; and the Imperial Census of 1921 is anticipated to be a very marked advance upon all its predecessors, the subject having received very thorough consideration in 1920 at the Imperial Statistical Conference held in London.

Census may be taken Quinquennially.—Need for a more frequent Census has been proved again and again, the interval of ten years being too long in the circumstances of life and labour to-day, with its massing of men to work-places and its increasing mobility of population, as has been repeatedly pointed out in these papers.

It is probable that the Census to be taken in, say 1926, will not be so comprehensive in its requirements as the decennial enumeration. Ascertaining of actual numbers may be its main

purpose for such objects as the fixing of the population for the calculation of birth and death rates. At the moment of writing (in 1920) the precise population of various burghs and public health districts is not known, and estimates are used which, as at previous censuses, the numbering of the people next year may prove to be very considerably wrong, thus leading to erroneous statements in vital statistics—a defect to be prevented effectively in future.

Its cost is the sole objection put forward to an intermediate Census, which might indeed be made by post, and be of a very simple character, its main object probably being the ascertainment of the actual number of the population without occupational or other details. Accurate numbering, without particulars, should be possible at small expenditure to the State.

The Census is the greatest of all statistical operations, and the present Act has a longer description than any of its twelve predecessors, the full title of the Statute of 1920 being as follows:—

"An Act to make provision for the taking from time to time of a Census of Great Britain or any area therein, and for otherwise obtaining statistical information with respect to the population of Great Britain."

Education is not formally included separately in the Scottish enumeration. It is noteworthy that the final column of the Schedule for 1871 was headed—"Number of Children from 5 to 13 attending school or being educated at home." This query was additional to Instruction No. 10, which stated that children or young persons attending a school or receiving regular education at home were to be returned as "Scholars." The inquiry was connected, of course, with compulsory education, then in its infancy; it was enjoined that only children between 5 and 13, in regular attendance at school, or being educated at home under a tutor or governess, were to be taken into account; adding that all children entered in the Schedule

as 5 years of age were to be embraced, but all entered as 13 and upwards were to be excluded. State education has evolved much since these early years of its beneficent efforts.

The matters in respect of which particulars may be required are set forth under six headings in the Schedules; and, by Subsection (ii.) of the First Section of the Act no particulars shall be required to be stated other than particulars with respect to such matters as are mentioned in the Schedule to this Act.

What is to be Collected.—No question as to religion has ever been inserted in the British Schedule. The present Committee of the Royal Statistical Society has not advocated the inclusion of questions relating to religion (or to divorce). It will be observed, however, that under the sixth heading a very general power is given to obtain information as to social and civil condition. As set forth in the Bill (altered somewhat in the Act), the particulars to be required were as follow:—

1. Names, sex, age.
2. Occupation, profession, trade, or employment.
3. Nationality, birthplace, race, language.
4. Place of abode, and character of dwelling.
5. Condition as to marriage, relation as to head of family, issue born in marriage.
6. Any other matters with respect to which it is desirable to obtain statistical information with a view to ascertaining the social or civil condition of the population.

By Section I. (ii.) no particulars shall be required to be stated other than particulars with respect to such matters as are mentioned in the Schedule to this Act, as already stated, which looks a definite limitation.

It appears, however, that the heading numbered 6, "any other matters, &c.," is fairly comprehensive. No doubt, a fair interpretation will regulate the application and administration of the general power given, which apparently might include

anything affecting our social or civil condition of which cognisance might reasonably be taken at the Census, very clearly bestowing wide administrative authority and discretion.

No matters are actually mentioned in the paragraph referred to. But it was obviously felt that the power given is great, and it is accordingly restricted by the following provision in Section I. (2):—

"Provided that, if by part of any such Order it is proposed to prescribe any particulars with respect to any of the matters mentioned in paragraph six of the Schedule to this Act, that part of the Order shall not have effect unless both Houses by resolution approve that part of the draft, or, if any modifications in that part are agreed to by both Houses, except as so modified." Confidence in those administering the Census is indicated; but it was judicious to insert such an attempt at restriction in order to obviate possible (though unlikely) abuse of general power.

Summary.—The main fresh features of the forthcoming Census are four:—

(1) That the Census Act has been made a permanent measure; power being given to take censuses in future by Order in Council.

(2) That there may be a census every five years.

(3) That any matters may be included affecting the civil or social condition of the population as to which it is desirable to obtain statistical information, and

(4) That the place of abode and the character of dwelling are to be inquired into fully in view of the effect of the shortage of housing on the general health and welfare of the people.

To my mind, indeed, the tendency is to link up the Census more and more with public health; and by Section 3 (*g*) power is given to the Minister of Health (for England) to make regulations "making provision with respect to any matters with respect to which it is necessary to make provision for the

purpose of carrying into effect the provisions of the Order in Council." And the Registrar-General in England is under the control of the Minister of Health. But in Scotland the Registration Department is under the Secretary of State for Scotland as is laid down in Section 9 (1) of the statute.

CHAPTER II.

THE SCHEDULE: ITS VARIOUS COLUMNS

MEASURE in many ways of our industrial development, the Census schedule is the basis of the whole enumeration, and is the record of our families. It is signed by the head of the family. From the time of Cæsar Augustus, indeed, the Census has been a family matter. It will be remembered that when Augustus ordered "un denombrement de toute la terre," Joseph went with Mary to be enumerated in Bethlehem, because he was of the house and family of David: for all went to be enrolled or registered each in his own city. Hence it was crowded, and there was "no room in the inn." Thus the enrolling ordered by the edict of Cæsar Augustus was, in a way, so far as the Jews were concerned, an enumeration of the population *de famille* or *de jure* rather than *de facto*. Always, however, the British Census has been the latter: the population of a given place at a given time enumerated for 80 years by means of a schedule; each column in which has a history: and to explain all the columns, saying something as to their utility, and taking the last Census schedule for this purpose, is the plan here adopted.

The Census Schedule—Introduced in 1841.—Previous to the Census of 1841 in Scotland and in England the returns were only numerical summaries prepared locally for parishes or districts for transmission to the central Census office. Personal inquiry elicited the details required from the occupiers of

houses. But, beginning in 1841, the householder himself recorded the particulars for each individual in the Census schedule, the duty of entering details being thus put upon the shoulders of the householder. The enumerator is held responsible for the supplying of omissions and for correcting obvious errors. As an enumerator at two Censuses and from the observation of a large number of schedules both in Scotland and in England, I may observe that an intelligent and careful enumerator finds much to do in rectifying and completing schedules; especially in districts inhabited by persons of very moderate education. Always, too, there is found a few persons who are flippant and put frivolous questions: also an occasional illiterate, generally from the Green Isle of unrest, or of a tinker type; for, even in these times of compulsory elementary education, there emerges here and there a person who cannot write.

Upon the accurate and sufficient filling-up of the Schedule of questions depends the value of the Census. At every Census the Schedule is revised carefully throughout; and it is generally increased in scope and size for the coming enumeration. An exception to the rule as to expansion was the Scottish schedule of 1881, which was actually somewhat less in size than that of 1871, and, in place of the eight columns of its predecessor, had only seven. The column left out was the one numbered (8) in the Census of 1871, which asked for the "number of children from 5 to 13 attending school or being educated at home." Doubtless such information was obtained by School Boards directly in various educational areas. Hence the elimination of this question. The Registrar-General for Scotland at that time was not an enthusiast for increasing inquiries; but pressure was brought to bear in Parliament, and the Government granted authority for a question as to Gaelic being put in the Schedule of 1881. Accordingly, at the last possible moment, there was printed in red ink on the face of the Schedule the following note:—

In column 6 (headed. "Where Born") the word "Gaelic" to

be added opposite the name of each person who speaks Gaelic habitually.

Gaelic.—The question as to Gaelic has been continued at every Census since 1881. It appears in column 5 of the Scottish schedule; the instruction being:—

Write "G." opposite the name of each person, three years of age and upwards, who speaks Gaelic only, and "G. and E." opposite the name of each person who speaks both Gaelic and English.

The information has been published in the Census Reports only for those counties wherein Gaelic is most generally spoken.

All Scotland, however, is included in the inquiry, and not only those counties where the old language is most spoken, as in England, where the question as to Welsh is confined to Wales and Monmouthshire. By this limitation persons in other parts of England who speak Welsh are not included; and the many men in London from gallant little Wales are not included among the bilinguals. It is remarkable that more than 40,000 children between the ages of 5 and 15 were returned at the last English Census as able to speak Welsh only: obviously an exaggeration of the monoglot population. Probably these children speak Welsh commonly among themselves, but one believes that a large proportion must also speak English, and that is the opinion generally held. But no definite degree of acquaintance with either language is laid down for the householder in answering the question as to Welsh or Gaelic. In the examples given in the last Scottish schedule three persons are entered "G. and E."; and one, "a roadman," working under the County Council, with his birthplace in Harris, as "G.": that is, speaking only Gaelic.

Name and Surname (Column 1).—Of every person, whether member of family, visitor, boarder, or servant, who

(1) passed the night of Sunday (Census day) in this dwelling, and was alive at midnight, or

(2) arrived in this dwelling on the morning of Monday, not having been enumerated elsewhere.

Write first the name of the head of the family, then the names of his wife, children, and other relatives, as the case may be, followed by those of visitors, boarders, and servants.

Seven examples on the back of the Schedule are referred to, the first being that of a household of nine. The Schedule for 1911 had 20 lines, divided by three heavy black lines in four compartments of five lines each. It is perhaps of some significance that in the first example there is a "visitor" named Hermann Pronk, and that the third example, that for a "lodger," is a "Nat. Brit. subject," an iron founder, engaged in the industry of general engineering, born in Germany, and enjoying the Teutonic name of Karl Fischer. At first sight, and as all Census schedules are private and no names are published, it might be thought that there is little use for any names. But the names and surnames are actually very helpful in checking replies given in columns 2, 3, and 4, and 6. Column 2 asks—Relationship to head of family; cols. 3 and 4—age (last birthday) and sex—there being separate columns for males and females.

In my own experience I have found it a common form of slip for the head of the family to insert an age in the wrong column, putting, for instance, the age of a daughter in the column for male ages. So common was this error in England that there the enumerator was required to certify at the foot of the schedule that all the ages were entered in the proper sex column; also that he had counted the males and females respectively, and found them to agree in their sum with the total number of persons.

CHAPTER III.

FERTILITY OF MARRIAGE

(Cols. 6, 7, 8, and 9 in Schedule of 1911)

THE sinister fall in the birth rate, and the assertion that the best classes were not reproducing themselves in full proportion to their numbers, led to the very important inquiry into the duration of marriage and the number of children which occupies columns 6, 7, 8, and 9 : headed respectively—Particulars as to marriage (that is, whether married, single, or widowed) ; number of years married, number of children of present marriage ; total (born) and total living.

So far as the Census in Great Britain is concerned, the matter of marriage-fertility is an entirely new branch of statistical inquiry. Like almost any possible innovation in the Census of population it is only worth about half value in its first attempt, there being no like data on a census scale with which it is comparable. That *desiderata* will not, however, be obtainable at the coming Census. But there are very special circumstances in recent years which have created abnormal economic conditions favourable to both an extraordinary "war" marriage rate and a consequent upward bound in the birth rate. Gone, for a time at least, was the caution—perhaps a peril of peace—which caused the spread of birth restriction in Great Britain.

In the Census Act, 1920, the question appears as—"Issue born in marriage." And here it may be pointed out that Scotland led the way, the birth register of 1855 containing par-

ticulars as to numbers of children born and living. Unfortunately, the recording of the family in the birth entry involved a very lengthy form of register, and, to a great extent, owing to that consideration of space, the *data* as to fertility of marriage was discontinued in the register of births. From the information thus collected in 1855 a philosophy of fertility, fecundity, and sterility was attempted by Dr. Matthews Duncan in a volume of much physiological and statistical interest and value; and some experienced statisticians still consider the birth register to be the safer source of information bearing on the fertility of marriage. But the Census schedule is instantaneous and all-embracing. Accurate answers to the children question may be anticipated to be the rule in Scotland. Doubt is thrown, however, upon the trustworthiness of the information furnished in England by some careless or half-educated occupiers, who failed to remember the date and duration of their marriage, and even the exact number of children born ; or they were reluctant to record the precise number of children who died young, and therefore yielded to the temptation to give inaccurate information. Of course, it would be possible to check some selected answers from the registers of births, marriages, and deaths, if that were deemed worth while.

PROFESSION AND OCCUPATION

Occupations and Industries (Columns 10 and 11).—Profession or occupation is the most important part of the inquiry. While the enumeration is primarily a census of population, from each decennial counting since 1841 onwards, personal occupation has been asked; and in 1911 efforts were made to connect the occupation with a service or industry. For this purpose the instructions for filling up the columns headed "Profession or Occupation" were expanded, and the guidance given is now elaborate and extensive.

Personal Occupation (Column 10).—The first direction is to describe fully the occupation. If more than one occupation is followed the instruction is to enter that by which one's living is mainly earned.

Distinction is made between those who make and those who only deal in things, and they have to be so described as to make it clear whether they are actually makers or merely dealers. Dealers, shopkeepers, and shop assistants are distinguished from makers, producers, and repairers. In many cases, so runs instruction 2 on the Schedule, tailors, bootmakers hatters, watchmakers, goldsmiths, silversmiths, jewellers, chemists, bakers, seedsmen, florists, &c., and their assistants are not makers or producers; in such cases the word dealer, shopkeeper, or shop assistant should be added to the occupational name. A person who both makes and deals should be described as maker, if chiefly maker, or dealer, if chiefly dealer. Although out of work or disengaged at the time of the Census, the usual occupation must be stated.

Unemployment.—In connection with the great present-day problems of unemployment, the Royal Statistical Society made the suggestion that, in the Census of 1921, for each person returned as occupied who was not actually employed at all during the week previous to the Sunday of the Census, the letter N should be written, or in case of non-occupation through sickness or accident the letter S, or, in case of persons on holiday, the letter H.

To carry out this recommendation an additional narrow column, or subdivision of Column 10 (Personal Occupation), would have been necessary in the Census schedule.

There is at present no general and universal total which affords a basis or standard by the help of which the existing partial and comparative figures of unemployment can be interpreted. The number occupied according to the population Census in any industry is usually greater than the number

shown as employed according to the method of the Census of Production, because of the inclusion in the former of persons wholly absent in the week to which the figures relate, owing to illness, holiday, or virtual superannuation.

The elimination of the column for Infirmities leaves space for the small column suggested for this employment letter—if at any Census the idea were to be adopted.

Further reason for obtaining such particulars lies in the fact that at present it is extremely difficult to estimate the actual working force of the population; and, consequently, an essential factor in the computation of the national wages bill (and, therefore, of the national income) depends on hazardous estimates and approximations. The Royal Statistical Society Committee on the Census believe that the information whose collection in this way they recommend would make possible greater accuracy in this and other allied problems. Unemployment during an entire week is named, rather than unemployment on a particular day, or the number of days of unemployment, as leading to a question easily and definitely answered. Interesting sidelights on the Census are obtained by the study of methods adopted in the United States, in Australia, in the Indian Empire, and on the Continent; and here it may be mentioned that information about unemployment has been on several occasions secured in the French Census. The innovation is counterbalanced by the omission (as already indicated) in the schedule of the question as to infirmities, those relating to mental defects being answered inadequately. It does not in any case seem desirable to add to the size of the schedule, sixteen columns being perhaps near the outside mark for a successful Census schedule filled up by average householders, not avidly autobiographical nor keenly sociological.

CHAPTER IV.

THE CENSUS OF IRELAND

LIKE its history, the Census of Ireland has had a development differing in characteristic fashion from the enumerations carried through in the sister countries.

About the year 1659 a Census was taken in Ireland giving the population of

Leinster	155,534
Ulster	103,923
Munster	153,282
Connaught	87,352
revealing a total population for the whole country of	500,091

And this appears to be the only Census Return made to Government until 1821. The Census Act of 1801 did not extend to Ireland; and the first attempt at a general enumeration in 1811 was a failure. Indeed, the Census of 1821 was only a bare numbering, the accuracy of which is doubtful; but its figures are accepted as the commencement of the decennial Census in the country.

Always Ireland, since the dawn of the Census, has been in a condition of deplorable unrest. Honeycombed with secret societies of the Fenian or Sinn Fein character, Ireland has generally exaggerated her grievances, seeking to enlist the sympathy and assistance of France, America, and Germany upon her side, rather than endeavouring to advance her own internal prosperity.

Discontent and dissension, unrest and assassination, have shadowed Irish history for centuries, and have tended to lower the social condition of the inhabitants and the national

character. Writing more than a hundred years ago, Malthus (about 1817) pointed out that:—

The details of the population of Ireland are but little known. I shall only observe, therefore (continues Malthus), that the extended use of potatoes has allowed of a very rapid increase of it during the last century. But the cheapness of this nourishing root, and the small piece of ground which, under this kind of cultivation, will in average years produce the food for a family, joined to the ignorance and barbarism of the people, which have prompted them to follow their inclinations with no other prospect than an immediate bare subsistence, have encouraged marriage to such a degree, that the population is pushed much beyond the industry and present resources of the country; and the consequence naturally is, that the lower classes of people are in the most depressed and miserable state. The checks to the population are of course chiefly of the positive kind, and arise from the diseases occasioned by squalid poverty, by damp and wretched cabins, by bad and insufficient clothing, by the filth of their persons, and occasional want. To these positive checks have of late years been added the vice and misery of intestine commotion, of civil war, and of martial law.

Here certainly history repeats herself; for at the moment of writing in the end of December, 1920, a portion of Ireland is under martial law; and that distressful country is the subject of a fresh Home Rule Act which, it is hoped, may help to restore peace and prosperity to a land long wasted by many of the horrors of internal warfare. The measure now proposed offers a larger share of self-government than any previous Act; and possibly Ireland may be in a state of peace ere the arrival of the Census day.

What is the cause of the chronic domestic strife in Ireland? Obviously the failure of her population to fuse into a harmonious whole. Her population has much greater physical variety and many more peculiarities than are found in Scotland. Celtic in its basis, the early population consisted of some sixteen different tribes in times of Roman rule, and even earlier; for the Celtic Irish are said to have their origin in the same Eastern stem as

the Phœnicians. To-day, in the central and mountainous districts, the round face, grey eyes, high cheek-bones, brown hair, dark complexion, and muscular figure of the Celt survives. In the north and east the ruddy Saxon type prevails; while in the south and west of the island are seen the dark eye and hair, the oval face and the sinewy form of the Milesian, and Crommelins, D'Oliers, and Latouches are names indicating the infusion of a French element, who have aided in developing the muslin, linen, and "Irish poplin" industries.

The manuscript return above referred to gave Ireland in 1659 a population of 500,091. Prior to the Census of 1821, various returns or estimates appeared at irregular intervals; and these figures had generally an official or semi-official authority. The first given in the following table is according to a return by Sir William Petty, an experienced statistician, author of works on Vital Statistics then known as "Political Arithmetic," and an acknowledged authority upon Irish matters.

Population of Ireland in Periods anterior to the Census (1672-1814)

Year.	Authority.	Population.
1672	Sir William Petty	1,320,000
1695	Captain South	1,034,102
1725	Arthur Dobbs	1,669,644
1731	Established Clergy	2,010,221
1754	Tax Collectors	2,372,634
1760	De Burgo	2,317,384
1767	Tax Collectors	2,544,276
1777	Do. Do.	2,690,556
1785	Do. Do.	2,845,932
1788	Gervaise P. Bushe	4,040,000
1791	Tax Collectors	4,206,612
1792	Beaufort	4,088,226
1805	Thomas Newenham	5,395,456
1814	Parliamentary Returns	5,937,856

High prices for produce during the long war with France and the rapid prosperity engendered by the great productiveness of the potato, with improvements in the agricultural and the political conditions of the country, explain the marked increase in numbers beginning in the close of the eighteenth century; and this increase continued into the first forty years of the nineteenth century. But the pressure of famine thereafter caused the beginning of a decline which has been shown at each successive Census to be continuous.

Ireland's Population at Ten Censuses

1821	6,801,827	1871	5,412,377
1831	7,767,401	1881	5,174,836
1841	8,196,597	1891	4,704,750
1851	6,574,278	1901	4,456,546
1861	5,798,967	1911	4,390,219

During the same period England and Scotland went on the way of steady increase, as will be seen from figures cited elsewhere. Their characters are different. It has been said, and the bull is perhaps pardonable, that "Irishmen are never at peace but when they are fighting."

Evolution of Irish Census.—Until a Registrar-General was established in Ireland (1863) and the permanent local statistical machinery of that Department was available for superintending the Census, the enumeration was made at some disadvantage.

In order to render it a reliable basis for a new system of National Education the Census taken in 1831 was corrected and brought up-to-date in 1834.

Agriculture received special attention in 1841 as the main occupation.

The use of an Ordnance Survey, nearly completed then, and of the services of the very intelligent Royal Irish Constabulary made the Irish Census of 1841 satisfactory. Agricultural statistics were obtained in 1851 extending to 727 tabular folio

pages. The surface of the country was divided into Arable, Plantations, Uncultivated, Towns, and Water: a return being required of each Farm or Allotment showing its agricultural character, with the quantity of live stock, and various kindred particulars.

For the first time the Census of Ireland in 1861 was taken entirely by the Dublin Police and the Constabulary. The Returns for that enumeration include tabular summaries relating to Vital Statistics; Population; Number and Character of Houses; Number of Families living in each House, the houses being of four grades; Occupations upon which they were dependent; Condition as to Marriage; Birth-places; and Religion. In the Tables of the Occupations a large number of people were left unclassified, and the ages are understood to be, in considerable measure, returned incorrectly.

Taken under the Registration Department, the Census of Ireland in 1871 was a more thorough and better arranged enumeration, with which began the series of interesting Reports on the Irish Census continued ever since by the Registrar-General for Ireland. The decrease shown at the Census of 1871 is attributable to emigration; and it was shown that from May, 1851, to March, 1871, the loss by emigration amounted to over two millions; the figures given being precisely 2,024,609.

That number included those who emigrated to settle in Britain. It was not until 1876 that record was kept of the destination of the emigrant. But the number who settled in Great Britain between 1852 and 1880 was about 300,000.

In 1841 the number of Irish-born residents in Great Britain was	419,256
In 1851 the number had increased to . .	733,866
And by 1861 to	811,251
But by 1871 it had decreased to . . .	778,638

Of those leaving Ireland, more than two-thirds of the emigrants go to the United States, where, accordingly, there is

an Irish population exceeding that of Ireland itself. The number of emigrants showed a decrease in 1911, and the decline in population was the smallest on record, namely, 1·54 per cent., compared with 5·23 in 1901 and 9·08 in 1891. Houses showed an actual increase in number; and housing accommodation exhibited a general improvement.

Special features in the Census of Ireland consist in the taking of the enumeration by the Constabulary, who do not as in Britain leave the Schedule to be filled up by the Householder—a practice partly at least owing to illiteracy in Ireland. Wider in its scope than the British Census, the Irish enumeration collects Agricultural and Educational facts in considerable detail, also particulars, of graded character, regarding the Housing of the People, involving a greater variety of Census Schedule (24) than is used in England and Scotland. In the Appendix there appears the Census (Ireland) Act, 1920.

CENSUS OF IRELAND, 1911

FERTILITY OF MARRIAGE IN THE PRINCIPAL URBAN AREAS, AND IN THE WHOLE OF IRELAND. ISSUE OF *PRESENT* MARRIAGES UP TO 35 YEARS IN DURATION.

AREAS.	Average Number to a Family.		
	Children born alive.	Children living.	Children who have died.
Six County Boroughs . .	3·84	2·95	0·89
Dublin Registration Area .	3·69	2·82	0·87
Belfast County Borough . .	3·72	2·93	0·79
Whole of Ireland . . .	4·09	3·43	0·66

From the foregoing Table it will be seen that both the number of children born and the number surviving are greater, while the number who have died is less, in the whole of Ireland than for any of the larger urban areas, indicating that in the rural portions of the country larger families are born and survive.

CHAPTER V.

THE CENSUS IN ENGLAND

I.—1801—1901

THE same in principle, the Censuses of the three countries differ in detail; and it is purposed here to sketch the evolution of Census-taking in the country of the predominant partner.

Previous to 1920, the Act of Parliament authorising a Census to be taken was passed every ten years. The Bill "for taking account of the population of Great Britain, and of the increase or diminution thereof," introduced into the House of Commons on 20th November, 1800, received the Royal Assent on 31st December. Overseers of the poor (or substantial householders) in every parish, township, or place were required by the Act of 1800 to take an account of the actual number of people present therein on the Census day in 1801.

It is not necessary to do more than allude to the strong objections raised to the first Census Bill. Probably much of the antipathy could be traced to the feeling that the Census might be connected with increased taxation, the Roman Census being followed by the levying of taxes, and the practical British mind not yet understanding the administrative, legislative, and social uses of the national numbering authorised by the first Census Act.

In a Schedule appended to the Act its scope was defined in the three main inquiries:—

(1) How many Inhabited Houses are there in your Parish, Township, or Place? By how many Families are they occupied? And how many Houses therein are uninhabited?

(2) How many persons (including children of whatever age) are there actually found within the limits of your Parish, Township, or Place at the time of taking this account distinguishing males and females, and exclusive of men actually serving in His Majesty's Regular Forces or Militia, and exclusive also of Seamen, either in His Majesty's Service or belonging to Registered Vessels?

(3) What number of persons in your Parish, Township, or Place are chiefly employed in Agriculture? How many in Trade, Manufactures, or Handicraft? And how many are not comprised in any of the preceding classes?

It will be observed that, from the first, Housing and Occupations were associated with the Census in Great Britain, and that (unlike the Roman Census) the numbering included every man, woman, and child of whatever age or social status.

In order to obtain some idea of the increase or the decrease of the population, there was required the numbers of Baptisms and Burials in every tenth year from 1700 to 1800, and the number of Marriages in each year from 1754 to 1800; these two further questions being answered by the Officiating Ministers of the several parishes. The Home Secretary presented to Parliament the Abstract of the results of this first Census, which was thus linked up, from its advent, with Births and Deaths.

In the three succeeding Censuses alterations were made. Instead of asking how many *persons* were employed in Trade, Agriculture, &c., the query in 1811 related to *families*, with the view of ascertaining the numbers actually dependent on the various Occupations.

Age.—At the Census of 1821 the vital question of Age was tentatively and guardedly introduced; the Overseers being instructed (if of opinion that the Ages of the several individuals could be obtained in a satisfactory manner and without inconvenience to the parties) to state the number of those who were

under five years of age, aged between 5 and 10, 10 and 15, 15 and 20, 20 and 30, and so on in ten-year periods. On this voluntary basis the ages of about 90 per cent. of the population were obtained, forming a fairly reliable guide to the whole age-constitution.

Possibly, however, because the returns were incomplete by some 10 per cent. in 1821, the inquiry as to ages was omitted in 1831. But there was considerable amplification in the question relating to Occupation. Otherwise, the Census of 1831 did not differ materially from its predecessors in the particulars required and in the machinery for collection. How far the old method was successful in producing full and accurate returns is not quite certain. Fresh and more suitable organisation and machinery were now to raise the taking of the Census to a more skilled and professional level under the direction of the Registrar-General, whose Department was created by the Registration Act of 1836, which established the Civil Registration of Births, Deaths, and Marriages in England and Wales.

On the value of this innovation it is needless to expatiate to the initiated. But those who have no knowledge of the expense and inconvenience caused by the imperfect system which Civil Registration superseded, may be reminded that a large number of vital events were unrecorded, and that their proof entailed often much trouble. Dissenting Registers were centralised in Somerset House, the Church of England records remaining generally in the Districts, and Registrars of Marriages being appointed specially, as well as Registrars of Births and Deaths.

Poor Law Unions had been created by the Poor Law Act of 1834. With the exceptions of those large parishes, few in number, which did not combine with others to form Unions, Poor Law Unions extend all over England; and for the purposes of Civil Registration, such Unions were adopted generally as the most suitable areas. They constituted Registration Districts under a Superintendent Registrar for

each, with appropriate sub-districts each under a separate Registrar, the supreme and responsible Head over all these Local Officers being the Registrar-General for England and Wales.

It was obvious that in the system of Registration there was an organisation extremely well fitted for the kindred work of the Population Census; and the recently created Districts, with their officials, were used in the Census of 1841; the Registrar-General by the Census Act of 1840 having been appointed one of the Commissioners for the taking of the Census.

The Schedule and "Census Sunday."—The Census Act of 1840, like that of 1860 for Scotland, introduced the present system of Census-taking by Schedule under the supervision of the Registration Department. Every Registrar's Sub-District was divided, in terms of the Act, into a suitable and necessary number of Enumeration Districts, for each of which an enumerator was appointed, the date of the enumeration being fixed for Thursday, 1st July, 1841; but the Act was modified next session, and the Census day altered to 7th June. Some statistical advantage may accrue from taking the Census either at or near the beginning, at the middle, or at the end, of a year; and it may be borne in mind that the official year ends on the 31st March—Census Day being now generally not far from that date. In the Report on the Census of 1831, the fact that many people are not at their usual residence on Sunday night was mentioned; but the precedent of taking up the Census Schedules on a Monday was again followed, and on every subsequent occasion. "Sunday at midnight" has also been the selected time.

The amending Act, however, did not only fix a new date, it brought in a new method by introducing a separate Schedule to be filled up with the required particulars of himself and his family by each householder. Anterior to the advent of the

Schedule, the Census returns were numerical summaries prepared by the Overseer for the whole of his parish from information obtained from the householder by personal inquiry, without the use of a document filled up by the householder. From 1841 onwards the Census Schedule has been utilised; and at the same time the question as to Age was re-introduced, and there was also added a new query, namely, "Where Born?"

Like the query as to Age, this question links up the Census with the Registers of Births, which answer both queries in every case since the introduction of Compulsory Registration, which came into force in England in 1837 and in Scotland in 1855. To verify unregistered births in the preceding period is no light task; the expense of which (as already mentioned) tends to show the value to the community of the system of Compulsory Civil Registration.

1851.—Large undertakings cannot well secure arithmetical exactness. But the Census of 1851 aimed at exactitude. It did not add to the breadth of the inquiry by increasing the subjects, save to the extent of obtaining information as to Church accommodation and the number of worshippers, "in the belief that the collection of statistics with regard to places of religious worship was authorised by the Act," says page 5 of the General Report of the English Census, 1911, which ably carries on the series associated with the name of Dr. Farr.

Previous enumerations had embraced certain cognate figures as to vital events; but the Act of 1851 did not require the usual abstracts of the numbers of Baptisms, Burials, and Marriages from the Parish Registers. Such information, of course, was obtained through the Superintendent Registrars, who forward, quarterly, copies of all Entries to the Registrar-General of England, who, in this way, already possessed all the figures, and the means of procuring any such abstracts, if it had been deemed expedient to incorporate such statistics in the very full Census Report of 1851.

Statistics of Parishes and Parliamentary and Municipal Burghs were exhibited at previous Censuses; but in 1851 details were given also of other large towns in England and Scotland, and of all the ecclesiastical districts and new ecclesiastical parishes which had during the previous forty years been created in England and Wales. The Registrar-General enjoined on all concerned the necessity for exactitude in replies; and the Census Report of 1851 is written in a literary style superior to what is found in older official publications, as, for instance, the following quotation on the importance of Age Statistics:—

"A Census in which only the numbers of a people are taken is necessarily incomplete, for in time man differs almost as much from himself as he does from the things around him, and the changes which he undergoes are not wrought solely by external circumstances, but arise in the ordinary course of his life. How different is he in infancy, in the prime of manhood, and in decrepit age!"

Written about seventy years ago, the foregoing emphasises eloquently the fundamental importance of age in estimating the effective strength and character of a nation, as ascertained now so completely in the great stocktaking of human vitality and industry, revealing our continued increase and development.

1861 and 1871

Ireland has always had a separate Act. Up to 1860 Scotland was included with England. But a Registrar-General was appointed for Scotland in 1855; and in 1860 separate Acts were passed for England and Wales and for Scotland; although in later Censuses there has been a reversion to the practice of including Great Britain in one Act, with a view to common consultation and possible uniformity in the particulars collected and their tabulation.

For the purpose of securing prompt and accurate

enumeration, the Registrars were directed to arrange the districts so that the enumerators could readily overtake the enumeration within the day appointed for collecting the Schedules. Each enumeration district was to be restricted to 200 houses in towns, the general instruction being that the "beat" given should not be too extensive in the country nor too populous in the cities.

The numbers of Foreigners and of Naturalised British subjects, and of the Blind and Deaf and Dumb were shown; also of Lunatics and Imbeciles; and the population and number of houses in Civil Counties and Lieutenancy Sub-Divisions were published.

1871.—The value and the importance of the Age and the Occupation Tables were fully realised at the eighth Census.

It had been seen in 1861 that collation and comparison were possible with the Death Registers in determining Occupational Mortality; the Occupations combined with Ages appearing in the Census Reports.

For Life Insurance and for purposes of Public Health, it is possible now to ascertain the effects of different Occupations upon longevity, considered in connection with the age at which the occupation or profession is entered upon. The healthiness or otherwise of an occupation cannot be decided merely upon the mean age at death; for the mean age at death must be calculated upon the ages of the living employed in an occupation, which vary considerably in diverse occupations and professions.

To take an outstanding instance, the Census Reports and the studies of Occupational Mortality in the Registrar-General's Supplements to Annual Reports reveal clearly the greater average length of life of Clergymen and Farmers than of Hotel Servants and Licensed Victuallers.

The Tabulation in Age periods of those employed in Pro-

fessions and Industries is (one must emphasise repeatedly) a great work, upon which depends many important questions of health, length of life, and national progress. All the employed millions have to be classified; every one has to be placed in the all-embracing Tables of the Ages of the People.

1881—1901

The Census Schedule continued with its eight or nine columns much the same until 1911. In 1891 the column as to Welsh was added for Wales and Monmouthshire. Otherwise the questionnaire asked as before—Full Name; Relationship to Head of Family; Conjugal Condition; Sex; Age (Last Birthday); Rank, Profession, or Occupation; Where Born; If (1) Deaf and Dumb; (2) Blind; (3) Imbecile or Idiot; (4) Lunatic. In regard to Occupation, there was added in 1891 an inquiry regarding persons engaged in Trade or Industry, whether they were Employers, Employed, or Working on their own account; and the enumerator was asked to state the number of rooms occupied by families living in less than five rooms. These two additions resulted from the recommendations of the Departmental Committee appointed by the Treasury to inquire into the Census, which reported in May, 1890; and this is the only officially appointed body which has ever investigated into the purposes and methods of Census-taking in Great Britain and Ireland.

At the Census of 1901 new subjects were introduced. But publication of the results was speeded up by the issuing of the results in Counties; this separate County publication was adopted in Scotland in 1911; and at the Census of 1921 it is likely to be utilised for the early publication of Census figures in both Scotland and England.

The Committee was appointed following upon a very influential deputation on 11th December, 1888, to the Chancellor of the Exchequer. That deputation handed in a

Memorandum on the Improvement of Census Returns, especially as regards Occupation and Industry. The Memorandum bears the signatures of most of the Statisticians and Political Economists of the time; the President of the Royal Statistical Society; Lord Bryce; Lord Haldane; the President of the Manchester Statistical Society; Professor Alfred Marshall; and Professor J. S. Nicholson.

The Statistical and Social Inquiry Society of Ireland (Dublin) passed resolutions fully supporting the proposals contained in the Memorandum.

From the Registrars-General of the three countries and other leading authorities—such as the late Charles Booth and Professor Marshall—evidence was taken. Several recommendations by the Committee have been put into practice from time to time; the Act of 1920 embodying the Committee's final suggestion that provisions as to the taking of a periodical Census should be embodied in a Bill of a permanent character.

II.—1911 and 1921

Fertility.—The fresh feature in the Census of 1911 was an inquiry into the fertility of marriage. Duration of marriage and number of children born were stated in the Schedule, and the number of those who had died. In 1921 there is asked simply the number and ages of all living children under sixteen years of age.

For the first time in 1911 an effort was made to answer the question—Which of the social classes is failing to reproduce? Personally, I attach more importance to quality than to numbers. "Consider" (said Spencer) "the fact from any but the conventional point of view, and it will seem strange that, while the raising of first-rate bullocks is an occupation on which men of education willingly bestow much time, inquiry, and thought, the bringing up of fine human beings is an

occupation tacitly voted unworthy of their attention." To-day the taunt does not hold good. Efforts are made by the Eugenics Society and kindred bodies to diffuse knowledge on the great subject of continuing a worthy race, and the population question, treated with adequate reverence, is being studied in its moral and physiological, social and economic bearings. No longer is the noble and all-important subject of sex left in the low region of silly sneer and stupid sniggering. All its aspects are discussed openly, and venereal disease, the "hidden scourge," is attacked scientifically all over the country. We must breed wisely. Healthy children are wanted. Rapidly and recklessly are multiplying, it is said, the relatively unfit and improvident, while the artisan and middle-classes moodily restrict their families, and strive to keep pace with their monthly bills. For all human life is largely a matter of £ s. d. Social conditions render children a heavy burden on the more desirable parents of the population. Good stocks are checking their growth. Weak and careless oafs continue to have abundant offspring. Selective deterioration is thus operating both ways: the good tree is not growing, while the bad is branching out in all directions. The parasite may kill that upon which it feeds and flourishes. We are now in these Isles face to face with the hydra-headed problem of the fatal fertility of the unfit, probably accentuated by the effects of the Great War.

Obviously the remedy is to encourage parents capable of producing healthy children. Young-age pensions for parents? The Government, recognising the national danger, has made a beginning with the abatements for wife and children on income-tax; possibly the next move to encourage middle-class parenthood may be the exemption from tax of all income spent in the maintenance and education of children of the fit and deserving. The better strains will then probably increase. Those who take thought for to-morrow will not then continue comparatively childless, and the average quality of the race will cease its deadly downward deterioration.

The only disease of which nations have died is lack of efficient men. In recent decades the decline in our national fertility has been the subject of much consideration. For forty years the birth rate has fallen steadily, but there has been no accompanying and corresponding diminution in the marriage rate. Information regarding the duration of marriages and the number of children born of the marriage should provide fairly reliable data for the study of the child-bearing in different classes. These statistics have been collected in other countries, especially in the last two Censuses of the United States. The figures obtained have been useful in arriving at conclusions regarding natality and infantile mortality. The method of tabulating the new information was discussed very fully at a meeting of the Royal Statistical Society, previous to the Census of 1911.

Scotland showed the way here more than half a century ago. The numbers of "Issue living and deceased" of parents were recorded in the Scottish Registers of 1855. In the case of widows and widowers there was entered in the marriage Schedule the number of "children by each former marriage," and one of the double columns of the Death Register of 1855 is headed "If deceased was married, to whom," and issue in order of birth—their names and ages. In succeeding years, unfortunately, the collection of such complete sociological data was relinquished. It was deemed too elaborate for prompt daily registration. The success of the experiment in Scotland, however, leads to the conclusion that, at the decennial Census, questions as to marriage and "Children born thereof" can be well answered generally in very intelligent North Britain. But there was some trouble over the Border.

In this connection I may quote from a communication of Noël A. Humphreys, the well-known authority on vital statistics, whose great experience made him possibly very chary of approving innovations in so large and important an undertaking as the Census. (He was engaged on all the five Censuses from 1861

to 1901 in preparing statistics.) Mr. Humphreys maintained that the decline in the birth rate was not simply a question of fertility, and that the Marriage and Birth Registers afford ample facilities for the further investigation of this important subject. He wrote me as follows :—

"Fully recognising, as all must do, the importance of the subject, I found myself unable to support in Committee this addition to the Schedule, doubting as I do the trustworthiness of the information that will therein be furnished. Many half-educated occupiers will find it most difficult to state correctly the date of their marriage and the number of children born ; and many may object to admit the true number of children who have died young. I regret the additions to the Schedule, as I hold that if the Schedule is filled up by the occupier, as is the case in Great Britain, the trustworthiness of the information depends upon the simplicity of the questions, and on the absence of all temptation to give false answers. I think that the birth register is the safer source of information bearing on the fertility of marriage, and I always much regretted the abandonment of the valuable experiment in the Scottish birth register."

For 1921 the question is simplified, as already mentioned.

Augustine Birrell, by the way, when the new questions were proposed in 1910 for the Irish Bill, observed that he could not tell the date of his marriage "without considerable research," although he could speak with considerable confidence as to the number of his children. (He has two sons.)

Further improvements and acceleration may be expected in counting and tabulation, and the British Census of 1921, by reason of its wider scope and new features, cannot fail to rank high above its twelve predecessors.

The area of England is 58,310 square miles ; Ireland, 32,353 ; and Scotland, 30,406 ; their respective percentages of the whole area being 48, 27, and 25. The population of the United Kingdom on the night of the 31st of March, 1901, amounted to

41,454,724 persons, showing an increase of 3,721,802 upon the population enumerated at the previous Census in 1891. This increase exceeded by nearly a million the increase recorded in the preceding decennium 1881-91. The natural increase of population in the United Kingdom during the intercensal period 1891-1901, by excess of births over deaths, was 4,311,543; it appears, therefore, that the loss of population in the United Kingdom during that period through excess of emigration over immigration amounted to about 590,000. In the ten years to 1911, the United Kingdom increased by 3,766,891, while the population of Ireland showed a decrease of 66,327.

TABLE SHOWING POPULATION OF THE UNITED KINGDOM, AND OF ITS FOUR DIVISIONS, AT TEN SUCCESSIVE CENSUSES.

	1821.	1831.	1841.	1851.	1861.
United Kingdom	20,893,584	24,028584	26,730,929	27,390,629	28,927,485
England . .	11,281,883	13,090,523	15,002,443	16,921,888	18,945,444
Wales . .	718,353	806,274	911,705	1,085,721	1,111,780
Scotland . .	2,091,521	2,364,386	2,620,184	2,888,742	3,062,294
Ireland . .	6,801,827	7,767,401	8,196,597	6,574,278	5,798,967

	1871.	1881.	1891.	1901.	1911.
United Kingdom	31,484,661	34,884,848	37,732,922	41,454,724	45,221,615
England . .	21,495,131	24,613,926	27,483,490	30,805,466	34,038,478
Wales . .	1,217,135	1,360,513	1,519,035	1,720,609	2,032,014
Scotland . .	3,360,018	3,735,573	4,025,647	4,472,103	4,760,904
Ireland . .	5,412,377	5,174,836	4,704,750	4,456,546	4,390,219

The Dominions overseas have mostly followed the method of the Mother-country in Census matters. The Australian States, however, attempt to ascertain an astounding number of facts regarding land and house property, sheep and cattle; and Canada follows the United States in having an extremely exhaustive series of questions regarding its population of some four millions British and one and a half French. The United States has had a Census in terms of the requirements of its constitution every

ten years since 1790. In magnitude and complexity the Imperial Census of India is the very Mount Everest of national numbering; and, always thoroughly well prepared, it succeeds wonderfully. What possibilities there are in India's prodigious population! Population statistics are history in repose, just as human history is statistics in motion. As in the United States and Canada, the Census of India has to be rehearsed, the Enumerators being allowed a prolonged period for completing their task; and the Indian population is divided, on the basis of language, into about 120 groups and twelve leading divisions.

Particulars to be collected in 1921.—Since the Census of 1911, a Ministry of Health has been constituted with very comprehensive powers; and there has been established in Scotland a Board of Health, with marked effect upon the Census questionnaire, and probably upon the Reports of the results of the first enumeration under such auspices.

The Great European War shook the world. Unparalleled was the material upheaval; but even more revolutionary was the mental *bouleversement*, which overthrew many traditions and opened a new era, dividing modern history into two great periods of pre-war and post-war, and preparing the way for splendid social schemes and plans for Public Health.

Official ways tend almost perforce to run in ruts. Stereotyping produces ease and uniformity. Nothing less perhaps than a national upheaval could have so changed the Whitehall outlook, and rendered Government ready to accept new ideas, and to drop old ones—to alter former questions and to require fresh particulars.

It has done both in the Census of 1921. The question as to Infirmities, Physical and Mental, has disappeared; while in the English Schedule there have been inserted fresh questions, and in the Scottish questionnaire there appear also various innovations. A query as to Unemployment appears in both Schedules, and the question as to Orphans is also common. But the

query—Have you a right to National Health Insurance medical benefit? is inserted only in the Scottish Schedule.

First Order in Council: Census of Great Britain.—From the Order in Council printed in the Appendix will be seen detailed the "Persons with respect to whom Returns are to be made" and "by whom Returns are to be made."

In Part I. of the Second Schedule to the Order in Council are set forth the "Particulars to be stated in the Returns made in England and Wales."

1. Full name. 2. Relation to head of family. 3. Sex. 4. Age in years and months. 5. In respect of persons aged 15 years or over, whether single, married, widowed, or divorced.

6. Profession, trade, manufacture, service, or other occupation, stating precise branch, and whether still engaged therein, or retired; and if occupied in trade or manufacture, the particular kind of work done, of material worked in, and of article, if any, made or dealt in.

7. Whether occupied in (*a*) Full time or in (*b*) Part-time attendance at an Educational Institution.

8. Place of work, stating address, or whether working at no regular address, or at home.

9. Whether ordinarily occupied as employer, employee, or on own account.

10. If ordinarily occupied as employee, whether employed or unemployed, stating present or last employer, as the case may be, and employer's business.

11. Place of birth, stating:—

(*a*) If born in the United Kingdom, the name of the county and town or parish.

(*b*) If born outside the United Kingdom, the name of the country, and the state, province, or district.

(*c*) Whether born at sea.

12. If not born in the United Kingdom, whether visitor or resident, and whether (*a*) Natural born, or (*b*) Naturalised

British subject, or (*c*) Of foreign nationality, stating nationality.

13. Number of living rooms dwelt in by the persons in respect of whom particulars are included in any separate return.

14. In respect of married men, widowers, and widows, the number and ages of all living children and step-children under 16 years of age.

15. In respect of persons under 15 years of age, whether both parents alive, mother dead, father dead, or both parents dead.

Scotland.—Part II. of the Schedule appended to the Order in Council indicates the "Particulars to be stated in the Returns made in Scotland."

1. Full name. 2. Relation to head of family. 3. Sex. 4. Age in years and months. 5. In respect of persons aged 15 years or over, whether single, married, widowed or divorced.

6. Profession, trade, manufacture, service, or other occupation, stating precise branch, and whether still engaged therein, or retired; and if occupied in trade or manufacture, the particular kind of work done, of material worked in, and of article, if any, made or dealt in.

7. Whether ordinarily occupied as employer, employee, or on own account.

8. If ordinarily occupied as employee, whether employed or unemployed, stating present or last employer, as the case may be, and employer's business.

9. Place of birth, stating:—

(*a*) If born in the United Kingdom, the name of the county and town or parish.

(*b*) If born outside the United Kingdom, the name of the country, and state, province, or district.

(*c*) Whether born at sea.

10. If not born in the United Kingdom, whether visitor, or resident, and whether (*a*) Natural born, or (*b*) Naturalised British subject, or (*c*) Of foreign nationality, stating nationality.

11. Number of living rooms dwelt in by the persons in respect of whom particulars are included in any separate return.

12. In respect of persons aged 3 years or over, whether speaking Gaelic only, or speaking both Gaelic and English.

13. In respect of married men, widowers, and widows, the number and ages of all living children and step-children under 16 years of age.

14. In respect of persons under 15 years of age, whether both parents alive, mother dead, father dead, or both parents dead.

15. Whether entitled to medical benefit under the National Insurance (Health) Acts.

England and Wales.—Part III. Additional particulars to be stated in Returns made in Wales (including Monmouth).

1. In respect of persons aged 3 years or over, whether able to speak English only, Welsh only, or both.

PART III.

CHAPTER I.

SOME ASPECTS OF POPULATION AND THE CENSUS

Uses.—The first object of an inquiry into the condition of a community is the ascertaining of the number of persons therein. Population is, indeed, the basis also of all public service and administration; and the importance of the population Census as a measure of our progress and a picture of our whole national work is too little understood and appreciated. Never even seen by the majority of the public, the Census volumes are studied only by statisticians, publicists, officials, and sociologists, and only referred to occasionally by statesmen, administrators, and political economists. Rightly regarded, the Census figures reveal the garnered harvests of the human race, and it should always be remembered that the species is its own highest, its sole essential product. We say that "time goes." No, we go; time remains. Generation after generation takes to itself the form of a body, emerges (as Carlyle puts it) from the inane, and hastens stormfully across the astonished earth. But in healthy conditions a large number of these lives flitting across the stage of life go to swell the periodical numbers of our national stocktaking. To quote Adam Smith, "The most decisive mark of the prosperity of any country is the increase of the number of its inhabitants." Population has many and changing aspects.

The population question is perennial. It is also chameleon-

like, differing in colour according to time and place. During the last hundred and thirty years diametrically different opinions have been accepted, at least for a period. In one decade the cry was that we had not sufficient men for our Navy, a plausible enough cry while the struggle against Napoleon was in progress. The Census of 1801 showed that England and Wales had a population of 9,000,000. Cobbett denied the possibility of there being so many people, pointing out that, if it were true, in a hundred years our population would number 29,000,000. As a matter of fact, in 1901 the population of England and Wales exceeded 32,500,000, and in 1911 was 36,070,492.

Fear of over-population had its long day, begun by Malthus, and continued by well-meaning men like John Stuart Mill. Malthus invented the phrase "struggle for existence"; but he did not see far ahead, for when the Northern Kingdom had a population of less than a couple of millions he wrote: "Scotland is certainly over-peopled." Malthus, indeed, owing to the absence of reliable figures, worked at first a good deal in the dark; and, therefore, rather exaggerated the magnitude and the urgency of the danger which he discovered, and the possibilities of which he emphasised so effectively.

To-day it is generally agreed that population is strength, and that its healthful increase adds to a nation's progress. Mere density or number, however, is not enough; there must be individual quality as well as numbers for real strength. As shown in India and China, over-population has obvious evils. But no country can continue powerful without a progressive population. The later Romans went down before the incursions of the barbarians—free tribes of purer habits, who had multiplied strongly in their native North, then fittingly named *officina nationum*, the storehouse of nations. Aristotle and Plato recommended the preservation of a fit proportion between territory and population; an insufficient population being dangerous to the independence, and an excess to the

good order, of the State. Among the means of restriction mentioned by Aristotle were late marriages—men not to marry before thirty-seven, and the destruction of weak offspring.

Pre-Census Opinions.—The subject of population seems never to have been considered scientifically in this country until about the end of the eighteenth century; and the thorough treatment of the various aspects of the question arose synchronously with the large increase in the numbers of the people, and the troubles relative to the food-supply, consequent upon the changes in national life, resulting from the rapid and general development of industry.

Great Britain had passed through the Barbaric, the Pastoral, and the Agricultural periods, and had reached an Industrial epoch, when the essay of Malthus on population appeared. That work is more mentioned than read to-day—later on I shall comment on its main doctrines. Previous to the publication of the "Principles of Population," the world was content, for the most part, to multiply without worrying about the philosophy of population. Opinions which to a statistician appear very curious prevailed in pre-Malthus and pre-Census periods; and it may be interesting to glance at a few of the remarkable conclusions put forward. To count is a very modern plan; the older writers preferred to guess as to numbers, and generally their guesses overshot the mark; guesses almost invariably tending towards extravagance.

Statistics of actual numbers not being available, many eighteenth-century writers arrived at conclusions not supported by facts, assigning, for example, an enormous population to several nations of antiquity. The opinion that the world supported a much larger number of people in ancient than in modern times was accepted by Robert Wallace (1697-1771) in his very interesting book on "Various Prospects of Mankind, Nature, and Providence," an Edinburgh sociological work which stimulated Malthus. Hume

is more sceptical in his elaborate and learned essay entitled, "The Populousness of Ancient Nations" (1741). He points out significantly that Diodorus Siculus, a contemporary of Cæsar, and who lived at that period of antiquity represented generally as most populous, complains of the desolation which then prevailed, gives the preference to former times, and has recourse to ancient fables as a foundation for his opinion. But Montesquieu believed that the ancient world *regorgéainent d'habitants;* and even the accurate Gibbon made far too large an estimate of the Roman Empire. The entire population of the Empire under Augustus is reckoned at 85 millions, 40 millions being in the European, and 45 millions in the Asiatic provinces. Gibbon's calculation is "one hundred and twenty millions of persons: a degree of population which possibly exceeds that of modern Europe, and forms the most numerous society that has ever been united under the same system of Government" ("History of the Decline and Fall of the Roman Empire," Chapter II.). To-day, 140 years after the time at which Gibbon penned this sentence, the British Empire has a population of about 500 millions, or more.

Population appears to have been a current question in the eighteenth century. "Whether by the encouragement of proper laws the number of births in Great Britain might not be nearly doubled, or, at least, greatly increased," was a subject brought in 1763 by Professor Reid before the Aberdeen Philosophical Society. And Malthus was anticipated by a discussion, in 1766, in the same Society, upon the other view of the subject, "Whether good policy may not sometimes justify the laying a restraint upon population in a State?"

The opinion that population was stationary was expressed by Botero, and, later, by Buffon. That unsupported view appears also in the article by Damilaville in Diderot's "Encyclopédie" (1765). The sum of men, asserts the encyclopædist, taken together is to-day equal to that of an epoch of antiquity, and to that which it will be in future ages. If (he adds) there

have been periods when a greater or lesser scarcity of men appeared to exist, it was not because the total number was less, but that the population was migratory, and thus there occurred local diminutions of population. Voltaire estimated, in 1753, that the globe contained sixteen hundred millions; an estimate approaching its present population, for such guesses almost always exceed actuality. In our own age of inquiry and statistics, the number of formally enumerated countries is fairly satisfactory; the principal exceptions being Africa, China, Turkey, Persia, the wild tracts of Central and South America, and the large islands of the South-Eastern Seas.

At every Census population figures are coming more out of the region of conjecture into that of definite enumeration. The percentage of the population of Europe now enumerated regularly is nearly 99; of America, 93; of Oceania, 85; of Asia, 37; of Africa, over 12; and the total population of the world at the beginning of 1901 was approximately, 1,583,621,000.

TABLE SHOWING THE POPULATION OF THE GLOBE AT THE 1901 CENSUS.

Continent.	Total Population Partly Estimated.	Percentage Enumerated.	Inhabitants per Sq. Mile.
Europe . . .	393,622,000	98·4	104
Asia	874,282,000	37·0	55
Africa	164,319,000	12·1	14
America . . .	145,661,000	92·8	9
Oceania . . .	5,652,000	84·5	1·6
Polar Regions . .	85,000	...	...
The World . . .	1,583,621,000	...	...

The population which can be supported by a country depends largely upon the resources and the requirements of the people. Pastoral communities need a large area. Agricultural populations also must generally be sparse; but where a people with few wants have a fertile soil, as in portions of India, Egypt,

and China, an enormous population can be supported. In most countries, however, mineral resources and manufacturing industries are necessary for the maintenance of a dense population. The United Kingdom has a population of 300 to the square mile. In some areas of England, however, it is 500. Japan has over 290 to the square mile; Canada, 1·5, and Siberia, 1. If the present rate of increase continues for 200 years, the world will have (it has been asserted) the maximum population which the earth has been estimated to be able to support under existing conditions, namely, about 6000 millions, which is more than three times its present number.

The marriage rate of England is affected apparently as a whole by the value of exports, the marriages going up and down synchronously with the exports. Thus, a curve of value of exports is generally followed fairly closely by the fluctuations in the yearly number of marriages. Sex-distribution also affects the nuptiality of a country. In most populations there are more women than men. But more boys are born than girls, the ratio being about 207 or 210 to 200. The male death rate is, however, higher than that of the female, partly because men lead harder lives. Age-distribution is also a factor. In young countries, profiting by immigration, there is always a larger proportion of both men and women at the marriageable and child-producing period.

The numbers of births and deaths in any civilised country can readily be obtained. It would thus, at first glance, seem easy to calculate the rate; but, in reality, it is almost impossible, for the basis of calculation—the exact population—cannot generally be procured. For the purposes of reports, it has to be assumed that the increase of the population continues at the same rate as revealed by the last Census. And this assumption (that the increase of population continues), while occasionally unreliable in the case of a smaller area, gives for a large community, and especially for a whole country, generally a fairly accurate estimate of the number of its inhabitants. But birth

and death rates are sometimes only reasonable approximations for certain limited areas, in the intervals between Censuses.

In 1876 the birth rate per thousand of the population in Scotland was 35, and in France 26·2. In 1893 it was 31 and 22·1 respectively; while in 1902 it had fallen further to 29·2 in Scotland, the lowest on record, and to 22 in France, where the decrease in natality constitutes a national danger.

TABLE SHOWING EMIGRANTS FROM UNITED KINGDOM TO NON-EUROPEAN COUNTRIES, 1876-1900.

Quinquennial Period.	English.		Scots.		Irish.		Total.
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.
1876-1880	425,550	60	70,596	10	213,236	30	709,382
1881-1885	760,124	59	133,527	10	398,658	31	1,292,309
1886-1890	788,841	62	141,568	11	335,817	27	1,266,226
1891-1895	617,869	63	100,878	10	259,827	27	978,574
1896-1900	478,022	63	85,104	11	201,090	26	764,216
1876-1900	3,070,406	61	531,673	10	1,408,628	28	5,010,707

As nuptiality and natality are the forces at work increasing population, so death and emigration diminish it. From the United Kingdom there is a steady outflow of emigrants, so that never can the alteration of the population be determined by the simple process of merely deducting the deaths from the births. Not a little of the increase in population is due not to increase in births but to the diminution of deaths. The birth rate has declined. There has, however, been an even greater proportionate decline in the death rate, and the diminution of the annual death rate affects very favourably the increase of population.

That the decrease of births in the mother-country is bad for Greater Britain appears to be a fair deduction from the figures in the above tabular statement, which reveals a falling off in emigration from 1890 onwards. And the table below shows

that, next to the United States, the greatest annual rate of increase is now accredited to our erstwhile commercial rival, Germany.

TABLE SHOWING THE ANNUAL RATE PER CENT. OF INCREASE, IN A CENTURY, OF THE UNITED STATES AND EUROPE.

Country.	1800-1850.	1850-1900.	By Later Census.
United States . .	3·00	2·39	1·90
England and Wales	1·41	1·21	1·15
France . . .	0·52	0·20	0·13
Belgium . . .	0·76	0·88	1·06
Spain . . .	0·48	0·51	0·54
Italy . . .	0·56	0·58	0·69
Holland . . .	0·73	1·01	1·24
Austria . . .	0·58	0·79	0·89
Hungary . .	0·57	0·75	0·95
Norway . . .	0·94	0·92	1·10
Sweden . . .	0·79	0·78	0·71
Denmark . .	0·84	1·11	1·09
Finland . . .	0·91	0·92	1·01
Germany . .	0·96	0·99	1·50

Malthus: Refuted by the Census. — The treatise of Malthus was entitled originally "An Essay on the Principle of Population as it affects the Future Improvement of Society, with Remarks on the Speculations of Mr. Godwin, Monsieur Condorcet, and other Writers." The work startled the world, which hitherto had been content mostly to multiply without much special and scientific speculation as to the Philosophy of Population.

A mind of original caste, trained out of the ordinary mental ruts of the time, was required for an inquiry so remarkable. The British schoolboy at that period was reared upon routine, rather dulling to the edge of inquiring intellect. Such education tended to produce men suitable to administer things exactly as they are established, but not to encourage originators, and one is not surprised to learn that Malthus was never at a public school, but was taught by private tutors.

At home the boy breathed an atmosphere of social philosophy. His father was a cultured gentleman of independent fortune; a friend, and one of the executors of Rousseau. Malthus was ninth wrangler, a Fellow of Jesus College, Cambridge, and entered the Church. The beginnings of the essay are noteworthy. The father of Malthus, a comfortable and speculative optimist, was inclined to the cheerful views of Godwin and Condorcet on the Perfectibility of Human Society. But, in their prolonged discussions, Malthus maintained that the perfecting of human prosperity and happiness would always be hindered by the tendency of population to increase faster than the means of subsistence. The father asked the son to put his views and arguments into writing, thereafter recommending publication; and, thus composed, the famous essay first saw the light in 1798.

To a clear understanding of the essay, it is advisable to glance, not only at its genesis, but also at the condition of this country at that period; and in the early years of Malthus, when the impressions received were strongest, that condition was one of want, trouble, and transition. Industry was rising with astounding rapidity. Population was increasing at a rate regarded as alarming; whilst a succession of bad seasons had produced scarcity of food and impoverished the agricultural classes. Heavy customs and import duties impeded exchange. Black and ominous appeared the outlook for an overcrowded community — fit time for the acceptance of the views of Malthus.

Belief that space and subsistence were abundant and unfailing explains much of the neglect of the subject of population until the appearance of the epoch-making essay. Much of Asia and nearly all Africa was yet unknown or unexplored. Australia was only very partially colonised; and the great American continent seemed likely to be able to receive our superfluous sons and daughters for many centuries. With the widening of geographical knowledge, however, it

was seen that the uninhabited spaces of the globe were not so immeasurably vast as had been imagined.

Demographic conceptions also altered very much with the fall of feudalism, under which the chief care of every superior, as of every sovereign, was to have a large number of men fit to bear arms; an economic organisation which became obsolete with the rise of industry and capitalism, revolutionising the general idea of the value of men. The conditions of the time were thus most favourable to the full acceptance of Malthusianism, of which the following are the three main propositions:—

(*a*) Population is necessarily limited by the means of subsistence.

(*b*) Population invariably increases where the means of subsistence increase, unless prevented by some very powerful and obvious checks.

(*c*) These checks, and the checks which repress the superior power of population, and keep its effects on a level with the means of subsistence, are all resolvable into moral restraint, vice, and misery.

The foregoing quotations are taken from the **"Essay on the Principle of Population," 5th Edition (1817), pp. 33 and 34.**—As already pointed out, Malthus had to work without reliable figures; and had the national numbering of the people commenced a century earlier, Malthus would have been saved from several statistical errors. After the first Census (1801), Malthus brought out a revised edition of his essay, and four following editions in 1806, 1807, 1817, and 1826. The so-called "law" relating to the geometrical increase of population formulated by Malthus has been gradually repealed. It is to the effect that:—Population, when unchecked, may double in twenty-five years, increasing in geometrical ratio, while the means of subsistence increase only in arithmetical ratio.

If the doubling dictum worked out in practice, the population of this island, 11 millions in 1800, would have been 176 millions in 1900, and would reach 352 millions in 1925! There is much virtue, therefore, in the italicised qualifying words "when unchecked." For at all times the checks upon mankind multiplying operate through disease, want, war, vice, circumstance, and will.

In regard to the means of subsistence, the general introduction of machinery has increased the industrial capacity of mankind more than tenfold. It is, accordingly, no longer allowable to call, even by courtesy, the hypothesis of Malthus a law. Statistics prove that his theory is in disagreement with the reliable and concrete data as to population and subsistence; indeed, the more complete the statistical material, the severer is the falsification and refutation of the Malthusian statement regarding geometrical increase. The Malthusianism of Malthus, accordingly, is not only dead, but buried without hope of resurrection. It was the most remarkable paralogism ever accepted by unstatistical and short-sighted philosophy.

Neo-Malthusianism.—Malthus, to do him justice, has been a good deal misrepresented in recent times, much that is said of his views being from second-hand acquaintance. He did not deny that an increase of population is both a great positive good in itself and absolutely necessary to a further increase in the annual produce of the land and labour of any country. His opinions are thus diametrically opposed to the doctrines now popularly associated with the name of Malthus, which are comprised in "Neo-Malthusianism."

The birth rate of Great Britain was at its greatest about 1876; in 1877 came into notice the doctrine promulgated by Mrs. Besant and Charles Bradlaugh as a means of ameliorating the condition of the wage-earner. Malthus had advocated moral restraint; he disapproved distinctly of any immoral restraint, and this earnest and upright English clergyman

would have heard with horror the non-ethical views inculcated by the so-called Malthusian League. It is, indeed, a curious irony of fate that the name of Malthus has come to be associated with practices he so expressly disowned and against which the medical profession, as a body, has generally given strong condemnatory opinion, Neo-Malthusian practices being denounced by most doctors as degrading mentally and morally, and frequently injurious to both sexes in physical effects. In the words of honest Malthus: "I should always particularly reprobate any artificial and unnatural modes of checking population, both on account of their immorality and their tendency to remove a necessary stimulus to industry." Indeed, the overflow of the River of Life, the excess of Fertility, has been a cause of man's further advance.

Population and Progress.—Pressure of population is an important factor in human endeavour. Were it not for this pressure, as Herbert Spencer observes, so much thought and energy would not be spent daily on the business of life, and growth of mental power would not take place. Nothing but necessity could make men submit to this discipline, and nothing but this discipline could produce a continued progression. The long-continued application of adults is accentuated in the case of those who have children by a desire to give their offspring a good start, and is thus an incentive to higher education, to the life-long moral and mental development of mankind.

The subject of man's fertility is of great interest at this epoch. The scientist and philosopher are agreed that the degree of fertility is proportionate inversely to the grade of development, and that, therefore, higher degrees of evolution must be accompanied by lower rates of multiplication. "Individuation" and "Genesis" vary inversely.

Pressure of population has increased the ability to maintain existence, but has decreased the ability and the will to multiply.

Women cannot bear so many children now as in earlier epochs. That is partly why the death rate and the birth rate are both decreasing on an average. The effect is not a uniform effect, but a general one. All may not advance under the discipline of life in these days, but, in the nature of things, only those who do advance are successful and survive. Those who fail and succumb are those, in the average, whose energy and strength of self-preservation are least, while those who advance and successfully continue the race are matured by the struggle, and constitute the select of their generation.

"Life is not for work and learning," said Spencer, "but work and learning are for life." Man's progress in the future must lie in the development of mind. The body has developed to a standstill. Culture of mind tends to diminish undue fertility. Pressure of population disappears as its end is attained. Man's advance is complete physically. It must now be psychical. And, again in Spencer's words, "This greater emotional and intellectual development does not mean a mentally laborious life, for, as it gradually becomes organic, it will become spontaneous and pleasurable."

Action should not be repressive, but progressive. Advancing evolution must be accompanied by declining fertility, moving towards a time when the amount of life shall be the greatest possible—that is, in its highest form; and the rate of reproduction that suited to the requirements of communities. Tendency is shown towards self-adjustment—the movement of things towards equilibrium; a reduction of births accompanying a diminution of deaths; the balancing of mortality and natality.

The twin goals to which the biologist and the philosopher point are :—

(*a*) The Improvement of the People—"Racial Eugenics"—Good-breeding, in every sense of the phrase.

(*b*) The conscious and rational adjustment of the "struggle for" into the "culture of" existence.

Gradually the "struggle for life" is reaching the higher standard of "the struggle for the life of others."

The British Empire.—The Empire shows a steady advance in population. Inclusive of the Indian Feudatory States, the British Empire had a population of about 259 millions in 1861. Twenty years later it had reached nearly 310 millions. Largely owing to acquisitions, the total had grown to more than 381 millions at the Census of 1891.

The largest aggregate of population ever united under one political control, the British Empire, is also the most varied in condition, physical, and sociological. The Empire contains more than a fourth of the population of the globe, and more than a fifth of its inhabitable area. In 1911 its area was about 12,000,000 square miles, and its total population 420,882,558.

Are we worthy of this prodigious inheritance—the British Empire? Is the race which holds it capable of maintaining and developing it? This nation might do worse than inquire—"Suppose that when it decennially takes stock of its population, that it took stock of a little more. Suppose when it numbered the people, that it tested their plight—that it inquired if their condition were better or worse than it was ten years before; and so as to the position of our industries, of our education, of our naval and military systems."

That was the suggestion of Lord Rosebery in his Rectorial Address upon Questions of Empire, delivered in 1900 at Glasgow. It is characteristically thorough. And the quotation may be continued: "The general result would probably be satisfactory; but it may be predicted with much more certainty that weaknesses and abuses and stagnation would be discovered, an ill condition which is apt, when neglected, to be contagious and dangerous. . . . The shadow of the future is as vain as all other shadows. Prosperity, while it endures, is the drug, the hashish, which blinds men to all but golden visions."

With its careful analysis of Occupations, the Census of 1911

was a test of the people's plight, of their progress and condition; and a Report appeared on the population of the whole Empire.

Religion.—In view of the debate in Parliament this year regarding the question of taking a Census of religion in England, Wales, and Scotland, it is noteworthy that for the Census in 1901 of the Empire statistics were available for 319 millions, being about four-fifths of the total population. No returns were made regarding the religion of the remaining 79 millions.

Of the 319 millions, more than 20 millions, exclusive of the population of Great Britain, were returned in 1901 as professing one or other form of Christianity. Over 295 millions were classified under non-Christian religions, while the remainder, amounting to fewer than 4 millions, were classed as having no religion or as "indefinitely expressed." If to these numbers the population of Great Britain at the Census of 1901, 37 millions, and—representing the Christians in the Colonies where no religious Census was taken—a further half million is added, there is reached a total of over 57½ millions. According to the Registrar-General, that number, approaching 60 millions, may be taken as the total number of persons classified as Christians in the British Empire at the Census of 1901. Like information was collected in 1911.

With regard to a religious Census, as some statements by me have been quoted as being against the inclusion of a question in the British Schedule, I may be allowed to emphasise the fact that my objections are evolved from experience and are not in any way the result of personal predilection. Indeed, personally, I see no objection to the obtaining of data regarding religious beliefs. It is the difficulty of securing reliable replies that gives one pause. Had a question been inserted in the British Schedule—to adapt Gibbon's famous phrase—"sighed as a lover, but obeyed as a son"—the Census official would have obeyed zealously as a civil servant, but, possibly, sighed as a statistician. In the Upper House, Lord

Newton asserted in the discussion in 1910 that "Any man would rather state his religion than his income." A Scotsman surely is not ashamed to own his Church, and not only is a church a spiritual entity, but it has also an organised social side which does good work; such an organisation forming an aspect of national life not to be ignored even by the least spiritual. The only point is the procuring of quite reliable information; and I may quote the late Dr. Ogle's reply to the Census Committee with respect to the question of a return of religious belief: "I have no special view about it myself. I am afraid you would not get very accurate returns. Of course there would be no difficulty whatsoever in tabulating the information given except cost. There are, I believe, not far from 200 religious sects, and the smaller a sect is the more will it insist upon being recognised; consequently, you would have to tabulate these returns, trustworthy or not, under a very large number of headings. But of course that is only a matter of cost; there would be no difficulty about tabulation if the data were given."

Population by Sects.—Attempts to reckon the population by sects were long common in England anterior to the periodical Census. In "Gulliver's Travels," it will be remembered that the King of Brobdingnag laughed at Gulliver's "odd arithmetic, as he was pleased to call it, in reckoning the numbers of our people by a computation drawn from the several sects among us in religion and politics."

About the year 1696 King William the Third desired to learn the comparative numbers of the religious sects in the community. From all the dioceses of the realm reports were received; and it was thus ascertained that the total number of his English subjects was about 5,200,000. Statistical methods have been applied to the old Parochial Registers, which corroborated the estimate that the population of England was probably a little under the total obtained by the religious

inquiry. On the basis of the number of houses returned by the officials who made the last collection of the very unpopular hearth or "chimney" money, a computation was made in the year 1696 by the well-known Gregory King, Lancaster herald, that the population of England was nearly five millions and a half. Very close estimates of the numbers of inhabitants of Edinburgh and Glasgow, Aberdeen and Dundee, and other cities, are made to-day by the Assessors upon the basis of the inhabited houses, with the number of householders, in the intercensal years.

Some years ago I discussed vital registration and the Census with an Austrian, when I learned that "State your religion" was a question in the Austrian Schedule, a document which is as large as an open sheet of, say, *The Scotsman*. Along with it is distributed six pages of instructions. The head of the family is required to state, among other things, on the Schedule: The precise place and date of birth; number of years of residence in present place; the principal and secondary languages used in the family; the principal and collateral occupations, and the number of workmen, artisans and apprentices he employs. Whether unemployed? Number of domestic animals? Description of each room? Have you a bath-room? Gas or electricity? How much rent do you pay? And proof is required wherever documentary evidence can be procured; birth and marriage certificates, for instance, being demanded; and mis-statement is punished severely. Austria puts up with this exhaustive inquisition, but I do not think the average Briton would readily answer such a series of inquiries; and I mention the foregoing questions to indicate how far a Census is carried on the Continent. I understand that the German Census Schedule also contains an inquiry as to religion, which I am assured is answered without a thought of refusal.

Beginning of our Census.—The British Census is less comprehensive. The success of our Census is, indeed, a result

of its comparative simplicity and of continuity of system. The British Schedule has grown, however, with time; but its development has been reasonable. Innovations have been introduced with great care and only after prolonged deliberation; and I may conclude this chapter with a note on the rise of the Census.

The Census was probably the most important function discharged by the Censor in ancient Rome; and he kept a register of property and imposed taxes upon the basis of the information obtained at the Census. Although necessarily statistical in character, the Roman enumeration, as already indicated, was thus fiscal mainly in purpose. The Censor watched over the morals of the Romans, and possibly the information procured at the Census had some influence upon legislation. Its main object, however, was the apportionment, according to their property, of the duties and rights of citizens. The Romans were divided into six classes, which were subdivided into centuries. The subdivision was made according to a ratio calculated upon wealth and numbers. The Roman Census showed the number and respective class of all free persons, their domestic position as husbands and wives, fathers and mothers, sons and daughters. Slaves and freedmen were enumerated with the possessions of the head of the house. Land was classified according to its character and produce. The Census was conducted every five years. It was followed by a sacrifice of purification (lustration), and the period of five years came hence to be called lustrum. The grading by property qualification gave such phrases as *Census senatorius*, and *Census equester*. In later times we have *Census dominicatus*, a feudal tax to the lord or superior, and *Census duplicatus*, a feudal casualty, a double tax. Old English writers use cense, which became abbreviated into the modern cess.

No numbering of the people took place in the Middle Ages, however, and the word Census at that period was applied only to taxation, which did not require an enumeration of the

inhabitants. In 1700 France took a Census—incomplete and pronounced unreliable; Sweden following in 1749 with a satisfactory enumeration. Economic ends and the adjustment of social rank did not call during a period of 1700 years at least for a Census in England; nor was it until the eighteenth century that the subject was discussed practically in Great Britain.

The purpose and scheme of the Census Schedule of this country are familiar; its primary purpose is demographical, and its scheme necessarily simple. Simplicity indeed is the first requisite of a successful Census; for the questions have to be answered not only by the educated and methodical, but by the ignorant and careless. Unlike the Roman Census—a Register by the Censor of the citizens and their property—the modern Census is universal, including every soul; and the replies are recorded by the informants themselves in the Schedules. Accordingly, the questions put at the Census must be quite clear, definite, and not difficult to answer nor inquisitorial.

The first purpose of the Census is to ascertain the population of a given place at a given time. This is *la population de fait* of France, as distinguished from *la population de droit*. The latter comprises all usually resident in the district including those temporarily absent; it excludes those only temporary present. *La population municipale* is *la population de droit* minus prisoners in gaols, patients in hospitals, scholars resident in schools, the army, and members of convents, and the like. The Census of the United States being prescribed, on the principle of representation in proportion to numbers, by its constitution, has a total population, a general population, and a constitutional population; the last excludes residents in Indian Reservations, the Territories, and the District of Columbia. *La population de fait* is the aim of the British Census, which includes the Channel Islands and the Isle of Man.

More than two hundred years ago our forefathers resented much Government interference and bureaucracy. Upon the

Continent, where men were less free and rule was more despotic and much more centralised, statistical inquiries into the numbers of the inhabitants were carried out whenever occasion arose in particular areas. In the words of the well-known statistician, Dr. W. Farr :—" It was in Britain, with its abstinent Government and unrestrained people, that the want of population statistics became most flagrantly conspicuous. It is difficult at present (about 1880) to realise the idea that, long after Adam Smith's time, the number of the inhabitants of the British Empire could only be guessed at as the populousness of China is at the present day; and, as in all matters of statistics, which have their own simple solution through specific inquiry, the guesses about the population of the Empire were not only vague but extravagantly contradictory."

The Roman Census, as we have seen, was not that of persons only, but also of property; but the British Census has never yet attempted, although it has frequently been suggested, anything in the direction of a record of possessions or their value. A proposal for a Census of Great Britain first appeared in 1753, and was contained in a Bill for taking an *annual* account of the total number of the people, and of marriages, births, and deaths; also of the poor receiving alms. But this Bill was thrown out in the Lords, who took the popular side on this question. The Bill was received with a virulence of animadversion that to-day seems astounding. The member for the City of York said :—" I did not believe that there was any set of men, or indeed, any individual of the human species, so presumptuous and so abandoned, as to make the proposal we have just heard. . . . I hold this project to be totally subversive of the last remains of English liberty. . . . The new Bill will direct the imposition of new taxes, and, indeed, the addition of a very few words will make it the most effectual engine of rapacity and oppression that was ever used against an injured people. . . . Moreover, an annual register of our people will acquaint our enemies abroad with our weakness." The scheme

was denounced, further, as being borrowed from "our natural enemies," the French, and as "costly and impracticable," and likely to be followed by an "epidemical distemper!" These Biblical and other objections to the Census gradually disappeared. A great change in the public mind had come about before 1800, when a new Bill was introduced. Instead of the fear that the population was falling off, and that an enumeration would betray the insufficiency of our supply of soldiers, an alarm had arisen that the people were increasing too rapidly for the means of subsistence—a scare partly due to a dearth at this time, but more to the publication in 1798 of the essay by Malthus on the "Principle of Population." It was now seen that a Census was for several reasons absolutely necessary, and the British Population Bill was passed without opposition in November, 1800. The periodical enumeration of the people of Great Britain, which was thus originated in March, 1801, has been repeated ever since in the first year of each decennium. The increases shown in each ten years in the United Kingdom have varied from 4,400,000 to 700,000 in 1841-51, and 1,600,000 in 1851-61; these smallest augmentations being attributable, in the first decade, to the potato famine in Ireland, and in the next to the emigration therefrom. In 1914 the population was estimated just before the War at 46,089,249. The birth rate during the years of the European struggle was low; but during the past year and a half it has bounded up rapidly; and emigration has been negligible, probably more than balancing in number the loss of 700,000 young lives in the great European War; while the loss by the epidemic of influenza in 1919 may be counterbalanced by the remarkable rise in the birth rate.

CHAPTER II.

POPULATION AND PRICES

HOW COMBINATION BY LABOUR AND CAPITAL AFFECT THE CONSUMER: TRADE UNIONS AND TRUSTS, WHEAT.

THE financier thinks in terms of Money; the producer and dealer in terms rather of Goods. But the populationist thinks of Men, Women, and Children, who are the vital and real Wealth of Nations.

Mankind is the one essential and indisputable product. Life's tissue is woven of a succession of births. Existence of the race depends primarily upon reproduction. The successful rearing of children is the fundamental task of the world. It is a task threefold in aspect: ethical, spiritual, and economic. The last is the lowest. It is, however, literally material in character, and to-day, in the middle class especially, obtrudes itself with extraordinary emphasis and insistence, owing to the astounding increase in the cost of living.

Always there has been in the world's history a close connection between population and the price of food and its plenitude and distribution. Older even than civilisation are the problems of Price and Population. To-day they are excessively complex. Sustenance for man is the purpose of production; and his development and the satisfaction of his wants are the final and ultimate aims of his activities in production. Here the problems will be stated principally from the point of view of consumer with a family, and, generally, of the middle class, which is alleged to be suffering from combinations of both Labour and Capital.

Marriage.—In normal man marriage is the apex of Life. After the boyish years comes the period of preparation, and the great insurgence of Emotion and Enterprise stimulated by the stir and warmth of Love. Later the care and the education of offspring become the central interest of Life. Marriage is the natural destiny of man and woman; and the union is blessed by the Church, protected by the Law, and commended alike by the moralist and the economist.

Dramatic is the devastation of War, and it has been very great in the European War. But if men and women cannot marry and gratify legitimately the powerful cravings of sex then, especially in large cities, there is apt to emerge the commercialised intercourse of the sexes, tending to disease and an infecund population moving towards degeneration. While there is a call for citizens to a considerable number, what (I repeat) is required is *quality*, not mere numbers: we have more than we can well bear in the burden of to-day in the feeble and the mentally deficient, not to mention the frightful handicap of supporting the insane.

Facilitation of the marriage of healthy couples at the most suitable age for reproduction is a paramount duty of the State for upon such mating depend the future destiny and very existence of the race. The deplorable ravages of war among the most physically vigorous of the male population has forced the consideration of child-rearing upon the community. Health is the vital question; but it is only second to the successful recruiting of the race. Sexual ethics have been discussed in recent times with scientific thoroughness and surprising freedom. Pre-conjugal masculine chastity makes for early marriage and happiness. Purity preserves the race's vitality. Raise the standard of male morality to that of female; that way lies the elevating equalisation of the sexes and the moral antidote to diseases of immorality.

Cost of Living.—The problem most in evidence to-day is

the cost of living. Nowhere is the increase in necessaries more felt than in the home blessed with children. The South African War made us relearn geography; the Great European War makes us study the economic position of the civilised world, and especially of the United Kingdom. The profiteer is a hard teacher. Endeavour to get at the truth is itself an education. We cannot get all the data necessary for an exact and reliable statement of the present economic position. Increase of about 128 per cent. on pre-war prices is, however, a moderate estimate in dealing with a family budget.

How has Increase Arisen?—The prices of commodities form the basis for judging the increase. At one time the price of wheat figured largely in all questions as to living and the marriage rate. Compared with 1914 the price in 1918 was 131 per cent. greater—an increase exceeding the general increase of 128 per cent. already mentioned. Population and the price of wheat have been linked together since the adoption of wheat in Great Britain as the staple food during the first half of the eighteenth century; and it will be remembered that about the end of that century Pitt declared that the man who had enriched his country with children had a claim on its assistance. Exemption from taxes to the fathers of more than two children was granted by an Act in 1806. The children had to be born in wedlock. Whenever Napoleon was defeated finally and exiled to St. Helena this apparently beneficent measure was repealed.

Wheat.—Curves of population and the price of wheat followed each other so significantly for more than a century that the statistical mind is apt to think of them as allied; and the Royal Statistical Society adopted (in 1834) the wheat sheaf as its symbol. Variety in food has much increased since then; but wheat remains possibly the staple food, and a statement is appended as to "The World's Wheat." Rice has risen,

however, much more, having been in recent years "boosted" up from 2½d. or 3d. to 9d. per lb. Food production figures and prices form the most important of statistics in relation to population; and there are to be more attempts made in 1921 to correlate such figures with the results of the Census. Agriculture and Trade, Food and Fisheries, and Imports and Exports are all subjects which affect our increase of population; and they are likely to be linked up with future reports on the Census. Vital to national well-being is the great question of prices.

Causation of Increase in Prices.—What has caused the rise in prices? The rise is all round, not only in foreign imports. Scarcity of materials and, for a time, of food is an obvious source, intermittent for the most part, since the Armistice. What is being said as to scarcity cannot always be believed. There is, however, another cause of increased charge to the consumer; and I desire here specially to say something concerning the evils resulting to the common weal from combinations of Capital and of Labour, Trusts and Trade Unions.

It appears to the impartial observer that both Labour and Capital are to blame for the enhancement of prices. Labour asks for more pay and shorter hours, but does not display any intention of increasing efficiency and quality. Capital combines to keep up prices. I refer to the old saying as to Holland (not to the refusal to give up the Kaiser) when I quote as to the greed of Comines, the well-known couplet that—

> The fault of the Dutch
> Is giving too little and asking too much.

Labour sometimes gives the least possible, and asks a lot.

Trade Unions.—The evils resulting in recent times from the railway strikes, the miners' demands, and the moulders' strike are so fresh in memory that one need not spend time in

estimating the cost to the community of such waste of time and of material. Uncurbed Capital was sometimes cruel and tyrannical in the past. Now the pendulum has swung in the other direction, and the unreasoning attitude of some combinations of Labour are self-condemnatory. Impossible demands impede practical reforms. Not by destroying what has already been built, but by adding to the edifice erected by years of effort can a nation advance in welfare and happiness. It is much more easy to criticise than to construct. Trade Unions are apt to be moved by the ready and almost revolutionary orator, rather than be guided by the sane Trade Union leader and the more reliable and statesmanlike of the Labour members.

Let there be no misunderstanding. Every one knows what has been done for the worker by collective bargaining in the raising of the general status of labour. There was a period of economic slavery—from the time of Plato; and in "Sybil" the impartial Disraeli depicts the "Two Nations," the Rich and the Poor, separated by the great gulf then dividing the rich and the poor in England. But the position was never quite so bad in clannish and more democratic Scotland, thanks in some measure at least to superior education and to the influence of the Church. In the time of Trade "Guilds" there was great general efficiency enforced by the workers themselves.

Trusts and Associations.—Trade Unions are said by some advanced Trade Unionists to have done their work; the situation being now described as a deadlock. The point I make here, however, is that strikes have wasted much time and money, thus adding to the price paid by the consumer and to the expenditure of funds raised by taxes. Combinations of Capital and of Labour are common. The third combination may be that of the consumer: the middle class have suffered most. Recently I heard that section of society dismissed by a keen Trade Unionist as a "poor lot who couldn't look after

themselves." Possibly the "Middle Class Union" to be organised may prove useful in having prices modified, and be a thorn in the flesh to profiteers, or, at least, a restraining influence upon the ruthless greed shown in recent years by many of those who produce and sell.

In a measure at the mercy alike of Labour and of Capital, the consumer suffers most inevitably when the employer and the employed both combine, as in cases where the workmen have wages upon a sliding scale rising with the increase in price. The worker in such conditions even enters further into a conspiracy or collusion with the employer when he also agrees not to work for any new firm setting up in the same line of production: a striving after a safe monopoly which surely is unlikely to eventuate in favour of the consumer and the common weal.

Combinations are not Philanthropic.—They are "out for the stuff," and get it. Colossal concentration of capital has been an outstanding feature of finance in the last five years. We seem to follow the American Trusts. "Graft" or scandal surround Trusts in the United States. Stock Exchange speculation is parasitic upon industry in Great Britain as in America.

In seeking its own advantage the Trust has never been supposed to be likely to take the course most conducive to the well-being of society as a whole. "High prices and high profits," not the doctrine of maximum satisfaction, must be applied to the policy of associations in modern trade. Such trade combinations are comparatively new in Great Britain, though already Protean in shape and on the increase. Avarice is insatiable, and has been stimulated in its dreams by the vast sums scooped in by certain combines in the war period when the nation's money was being poured out like water. Well may schemes for getting at war fortunes be deemed desirable: but now too late. And the Government gathering in

of "excess profits" duty had something of the aspect of *particeps criminis*. That duty, even, was evaded in some measure by such means as marking a large sum down for depreciation or the like; so creating a secret reserve.

Associations of monopolistic character have always paid. Did not the East Indian Company in the time of Queen Elizabeth rejoice in a dividend of 171 per cent.? I take a wide outlook. It may indeed be thought that I am going too far afield. American Trusts exist mainly for the purpose of making high dividends and maintaining monopolistic prices. And the point one makes just here is that the British combinations, youthful and modest as they are, follow closely in their father's financial aims.

Increasing Cost of a Home.—Combinations in building material trades in England and Wales reveal practices prejudicial to the interests of the consumer. The demand for materials being acute, the trade associations occupy a strong position to-day, when housing is a practical question. Two companies almost monopolise cement.

Since the mid-nineteenth century there has been growing a modification of the old economic doctrine of free competition. We have now passed from competition to combination, thereby losing the safeguard against extortion, and in large measure the driving force producing a healthy tendency towards high quality of production and general efficiency.

Equivalents will have to be found, or we shall continue to suffer. Ground between the nether millstone of Labour and the upper of Capital, the consumer—and especially the middle class man with a family—has indeed been long-suffering and slow to wrath. If a new party in politics must be formed, a Centre Party of the middle class would find a national grievance to remedy in the danger to the common weal involved in the actions of combinations of Labour and of Capital.

The "Pool" in Associations.—Not only housing materials,

but also articles of furniture cost much more. A little sidelight upon the working of a Federation of Manufacturers of an article of furniture (say bedsteads) may be illuminative. On the formation of the Federation a computation was made of the total output of such furniture in the United Kingdom and of the respective share of that output contributed by each of the subscribing firms. Each firm was then assigned a percentage of the total output based on its sales prior to the formation of the Federation. Each firm remained at liberty to increase its output so far as it was able and desired to do so; but upon all sales made by a firm in excess of its assigned percentage of the aggregate of value of trade done 5 per cent. had to be paid each month into a pool.

Any firm whose output for the month was less than its proportionate share of the aggregate output was entitled to receive 5 per cent. in value upon the amount of its deficiency. Very remarkable is the result of this latter arrangement, permitting of a member's withdrawing entirely from that manufacture, transferring his capital to, say, cinemas, and drawing as compensation a substantial sum monthly from the silent pool, taken from the people.

In the iron and steel industry and other trades there are like "pooling" schemes, the existence of which explains, at least partly, the exorbitant rises in the prices of articles made of iron and of steel, as one is informed upon practical and reliable authority.

Food.—To connect Food Production and the Census is obviously desirable. All prices of commodities influence our prosperity and the increase of population. Wool and clothing are instances of inflated prices, which are almost certain to fall. It is satisfactory to observe that the price of wheat is (owing to a sufficient supply and other causes) likely to show a further fall, as explained by that acknowledged authority, Sir

James Wilson, in the following very clear and reasoned statement:—

THE WORLD'S WHEAT,

16th December, 1920.

By Sir J. Wilson, K.C.S.I.,
Formerly Delegate to International Institute of Agriculture.

On the average of the five years before the War the world's yield of wheat was about 1070 million quintals (107 million tons). The importing countries taken together had a net import of 180 m.q., Britain being the largest importer with 59 m.q. (5·9 million tons)—one-third of the world's net imports. The exporting countries together had a net export of 185 m.q. Owing to the cheapness of ocean freights, there was no great difference in the average prices in importing and in exporting countries, and hardly anywhere in the world, except in places far from the sea, or in countries where there was a high import duty, was the pre-war average price of wheat below 30s. or above 35s. a quarter.

Excluding Russia and Rumania (which on the pre-war average exported annually 59 m.q., or nearly one-third of the world's net exports) and India (export from which country was then practically prohibited), the other exporting countries began the cereal year on 1st August, 1919, with about 61 m.q. of exportable surplus still in hand (United States, 3, Canada, 2, Argentine, 25, Australia, 31); besides which there was the unusually large quantity of 19 m.q. afloat on its way from the exporting to the importing countries. During the cereal year ending with July, 1920, the exporting countries exported 188 m.q. (as compared with 185, the pre-war average net export of all exporting countries, including Russia), and ended the year on 31st July, 1920, with only about 27 m.q. of exportable surplus (United States, 18, Canada, 3, Australia, 6); besides which there were 21 m.q. afloat. Of the importing countries, Britain, France, and Italy (which on the pre-war average imported 85 m.q.) imported in 1919-20 no less than 104 m.q., and other European countries imported (including relief supplies) about 53 m.q., as compared with 63 before the war. All the importing countries taken together imported 182 m.q., or about the same

quantity as their pre-war average import; and the most important of them ended the cereal year on 1st August, 1920, with about their normal carry-over. During that year the Argentine and Australia got rid of the greater part of their embarrassing surpluses, which had accumulated mainly owing to lack of tonnage; indeed, the Argentine over-sold, and had to prohibit further export in order to retain enough wheat for home consumption. Towards the end of the cereal year the United States had a practical monopoly of export, and took advantage of the situation to obtain very high prices for large exports.

After 1st August, 1920, Britain reaped a poor crop, only about equal to the pre-war average. The measures taken to reduce the bread subsidy raised the price of the 4-lb. loaf from 9½d. to 1s. 4d., which must have some effect in reducing consumption; and the import of wheat during the current cereal year ending with July, 1921, seems likely to be about the pre-war average, say, 60 m.q., as compared with 57 last year. France has reaped a much better harvest than in the previous year, and both Government and people are making strenuous efforts to reduce consumption; she may be content with 5 m.q. of import, as compared with 24 last year. Italy has had a very poor crop, and although the Government have taken measures to reduce consumption, she may have to import about 25 m.q., compared with 23 last year. The other European countries have, on the whole, had better crops than last year, and as the cost of foreign wheat, measured in their depreciated paper currencies, is still very high, they may content themselves with an import of 55 m.q., as compared with 53 last year. Allowing for countries outside Europe, 25 m.q., or the same as last year, the import during the current cereal year of all the importing countries in the world may be roughly estimated at 170 m.q., as compared with 182 last year.

Turning to the exporting countries. The United States, though it has had a smaller yield than last year, has (including 18 m.q. of old wheat) an exportable surplus of 53 m.q. Canada has had an exceptionally good crop, and can spare a similar quantity. The Argentine and Australia are now reaping good harvests, and can probably spare 35 and 30 m.q. Bulgaria can spare 3, and the Government of India are allowing the export of at least 4 m.q. out of India's large surplus from the excellent harvest reaped last May. These make a total of 170 m.q., and as the quantity afloat on 1st August, 1920, exceeded the normal by 11 m.q., it may be estimated

that there will be 189 m.q. available to meet the demand of all the importing countries, which I have estimated at 170 m.q. This will leave on 1st August, 1921, 19 m.q. of old wheat (besides the normal carry-over) in the exporting countries, and 10 m.q. afloat—a sufficient, though not an excessive, margin on the eve of the ripening of the new harvests in the northern hemisphere.

It is greatly to the advantage of the importing countries that all five of the principal exporting countries have large surpluses to dispose of, and will compete with each other. It is also noticeable that Britain, the chief importer, has already since 1st August, 1920, imported half her requirements for the year, and is at present, including her own harvest, well stocked with wheat, so that she can afford to await for the new wheat, which will soon become available from the Argentine and Australia.

During the last six months there has been a marked fall in ocean freights, as was to be expected from the rapid increase in the quantity of tonnage available, owing to new launchings and the completion of reconditioning and repairs. Many new ships are still being launched, and it seems probable that by 1st July, 1921, the world's steamer tonnage will be approximately 60 million tons, as compared with 45 million at the outbreak of war, while the demand for cargo space will still be less than the pre-war average demand. A further fall in ocean freights, therefore, seems probable. The fall, which has already taken place, has made it possible for the importing countries to offer higher prices for their wheat to the Argentine and Australia, while reducing the c.i.f. cost of imported wheat, and enabled the British Government to reduce the price charged to millers for foreign wheat, a measure which may soon be expected to have the effect of reducing the price to the consumer of the British 4-lb. loaf.

Price is Falling.—Owing, no doubt, to this improvement in the wheat position from the point of view of the importing countries, and to the consequent relaxation of their urgent demand for wheat from North America, there has been in the United States and Canada a very marked fall from the monopoly price they were enabled to charge six months ago, though prices there are still about double what they were before the war. They are still fluctuating somewhat violently, owing to the uncertainties of the future, among which may be reckoned the probable action of the Government of India. India has undoubtedly a large surplus of wheat which she would normally

export, but this would lead to a serious rise in the price of wheat in India; and as the coming wheat harvest, to be reaped in May, promises to be poor, the Government may refuse to permit the export of more than the 4 m.q. now being purchased for that purpose. On the other hand, the wheat is there, and it would be very profitable for the holders if export were allowed; and if the winter rains prove favourable, the Government may permit a considerable export before 1st August next. It must also be remembered that in all probability millions of peasants in Russia now hold quantities of wheat they would be glad to sell to the highest bidder, and it is just possible that arrangements may be made to permit of the export of a considerable quantity before next August. If either or both of these events happen, a further fall in the world's price of wheat would probably take place. Indeed, it is quite possible that, before next August, the British farmer may find that, as he is only guaranteed for his wheat reaped in 1920 the monthly average c.i.f. price of imported wheat of comparable quality, he may not be able to obtain the maximum of 95s. per quarter of 504 lb., above which the Government said it would not go, but which it did not promise as a minimum.

CHAPTER III.

FRESH FEATURES: AND PARTICULARS REQUIRED

In this chapter it is intended to give the particulars required to be returned in the terms of the Order in Council; and the questions as they have been formulated in the Census Schedule for England.

Six forms of Schedule are prepared for England and Wales, distinguished by the letters E., W., I., NM., S., and P. Five are of special character; and it is with the first, the ordinary Household Schedule, E., that we shall deal more particularly, after a few observations on the Census Act of 1921, under the authority of which the relative Order in Council, and the several Schedules for the coming Census have been framed.

Provisional Regulations, dated 21st December, 1920, were made by the Minister of Health under section 3 (1) of the Census Act, and were signed by Mr. S. P. Vivian, then Assistant Secretary, Ministry of Health, who was appointed in January, 1921, Registrar-General for England. Thus the Census in England, as in Scotland, is more connected with Public Health than upon any previous occasion; although, of course, in the nature of things, the Census has always been a stock-taking of human vitality and fertility. To-day, the motto is—*Res medica, res publica.*

Census Act now permanent.—A new era in Census-taking has begun. The Census Act has been made perpetual, and, as

already pointed out, power has been given to take a Census every five years. In every decennium since the passing of the first Census Bill for Great Britain in 1800, an enumeration has been authorised by Parliament; and the only official Census Committee ever appointed in Britain recommended, so long ago as 1890, that provisions for taking a periodical Census should be embodied in a Bill of a permanent character. The new Act thus gives effect at last to a reasonable recommendation. Following the example of Rome, France and Germany have had enumerations every five years. Again and again, it has been suggested that Britain should have a more frequent numbering; and it is noteworthy that the first British measure proposed an *annual* Census. Had that proposal been carried, we should have had, 120 years ago, a National Register of all the people—more complete than the temporary Register prepared under the National Registration Act; for such a record would give a single master register for all purposes, revised at least annually, and including every man, woman, and child in the country. A great Register available for all needs, electoral, fiscal, public health, employment, National Health Insurance, would probably be economical. During the War, we nearly rose to the conception of so complete a National Register; but there was a suspicion of conscription attached in some minds to the scheme of National Registration which tended to render its expansion and universal utilisation an idea in advance of the ordinary non-administrative mind. And the National Register, regarded as only a War expedient, has fallen into disuse; in some measure the relinquishment of this Register is a waste of money and of work—paid and voluntary. A short Bill and moderate expenditure would have maintained the National Register. But Parliament had no time for consideration of what did not seem a proximate and pressing necessity; so the country continues its old, and probably more expensive practice of independent registers—partial, and *ad hoc*—for electoral and other purposes.

A more frequent Census authorised.—While we have not yet risen to the ideal of a General Register (revised once or twice a year), a more frequent Census is rendered probable by the authority given in the Census (Great Britain) Act of 1920, which empowers the taking of an enumeration five years after the last Census. Accordingly, it is likely (as already mentioned) that a national numbering will be undertaken in 1926. It is just possible that the intermediate enumeration will not be so exhaustive in every particular as the Decennial Census; the proposal of the Census Committee, in 1890, being "that the number of the population, and its distribution as regards age and sex, be ascertained midway between the decennial periods at which a full Census is taken"; and "that the areas for which the results of such an enumeration are tabulated should be restricted to registration counties, districts, and sub-districts, administrative counties, and sanitary districts, urban and rural." Such limitation in details was indicated in the interests of economy. A narrow and sectional, perhaps indeed a penny-wise and pound foolish, policy has in the past been observable in the Treasury treatment of statistics. Wider and more far-seeing views are now taken. It is seen that it is worse than waste to make calculations of vital statistics on the misleading basis of an approximate population; and that we should, several decades ago, have had at least a counting of heads every five years. In a number of instances, especially in England, there were found to be very considerable discrepancies between the estimates framed by the Registrar-General and the actual population at the Census.

In regard to the estimated population of Scotland for 1919, the Sixty-Fifth Annual Report of the Registrar-General contains the following observation:—"In giving these estimates of population, as also others stated and used in this Report, it is right to state that they are of necessity of comparatively small reliability, and this is so for two reasons, the one being that fully eight years have elapsed since the taking of the

last Census, and the other being the unknown effect of War conditions and casualties on the size and distribution of the population. It is feared that errors of estimate in some instances may be sufficient to materially affect and falsify the calculation of rates."

Testimony of this character has at last convinced the Treasury of the need and necessity for a more frequent numbering of the people.

Form "E, Census, England, 1921."—The particulars to be stated in the Census Schedule for England and Wales include, as in 1911, the full name, relation to head of family, and sex. Age in years and months. Heretofore, it has been the Age Last Birthday which has been asked; and only in regard to Infants under one year has it been required to state the age in months, as "under 1 month," "1 month," "under 2 months," &c.

In November, 1919, a very influential Committee of the Royal Statistical Society recommended that the Registrar-General should be asked to consider whether greater accuracy would be obtained by substitution of the date of birth for age last birthday; and the suggestion has been adopted in the modified form of requiring the addition of the number of months which have elapsed since last birthday.

All Information is Confidential.—It will be observed that the Schedule is marked *Strictly Confidential* in bold type; and in the Provisional Regulations, "Census Regulations, 1920, General," there appears, as paragraph 16, the following:—"No person having the custody, whether by himself or on behalf of any other person, of any forms of return, enumeration books, or other confidential documents relating to the Census, shall permit any other person without lawful authority to have, or fail to prevent any other person from having, access thereto."

By Regulation 7, any person of full age may ask for a

separate Return to the Enumerator. But this course is exceptional. Its common use would much complicate the taking of the Census.

In respect of persons aged 15 years or over, there has to be written the word, "Single," "Married," "Widow," or "Widower," or "Divorced," said the Order in Council.

The last word is an innovation. It is indicative of the increase in divorce, and the description "Divorced" did not appear in the British Schedule for the last Census.

"**Marriage** or **Orphanhood**" is the heading of the fifth column (*e*) in the English form of the Schedule requiring to be filled up by the householder; and the instruction there is—

For persons aged 15 and over, write "**Single,**" "**Married,**" "**Widowed,**" or if marriage dissolved by divorce write "**D.**"

For children aged under 15 write "**Both Alive**" if both parents be alive, "**Father Dead**" if father be dead, "**Mother Dead**" if mother be dead, or "**Both Dead**" if both parents be dead.

Aggravated by the Great War, the problem of assisting the orphan is a delicate social question. Boarding-out is better than Institutional treatment in the case where the child is rendered homeless, and is handicapped in bringing up by the absence of the usual training for life found in a normal family circle of four or five, guided by careful parents.

Items Nos. 1–6 in Order in Council.—The first six items in the Second Schedule or list appended to the first part of the *Order in Council* are in precisely the same terms for England and Scotland; item 6 asking:—

Profession, trade, manufacture, service, or other occupation, stating precise branch, and whether still engaged therein or retired; and if occupied in trade or manufacture, the particular kind of work done, of material worked in, and of article, if any, made or dealt in.

Occupations in the Schedule E.—Three columns are given in the English householder's form to "**Occupation** and **Employment**," which in England also covers the question of school attendance.

Column (*h*) is headed—If attending a School or any kind of Educational Institution for the purpose of receiving Instruction, write "*Whole-time*" or "*Part-time*" as the case may be.

Instruction No. 2 as to column (*h*), on back of Schedule, reads—"**Education.** For persons attending a school or other institution for the purpose of receiving education, write '*Whole-time*' if attending daily during the full day school hours or otherwise to an extent which leaves no reasonable time for employment; '*Part-time*' if attending day continuation schools or evening classes, or otherwise giving such partial or intermittent attendance as permits, or might permit, of substantial regular employment."

Occupation and Employment.—Columns (*k*) and (*l*) of the Census Schedule are the most important in the whole form, hence the Instructions as to filling up these two columns occupy a large portion of the back of the Schedule E.

Column (*k*).—Under "Personal Occupation" the directions are very definite in column (*k*) :—

State here the *precise branch* of *Profession*, *Trade*, *Manufacture*, *Service*, &c.

Where the occupation is connected with *Trade or Manufacture*, the reply should be sufficient to show the *particular kind of work done*, stating, where applicable, the *Material* worked in, and the *Article* made or dealt in, if any.

Column (*l*) is headed "Employment." Its heading is in the following terms :—

(1) *If working for an Employer* state the name and business of present employer (person, firm, company, or public body), or, if at present out of work, of last employer, adding "Out of Work."

(2) *If employing persons* for purposes of business, write "Employer."

(3) *If working on own account* and not employing persons for purposes of business, write "Own Account."

(*Note.—For domestic servants and others in private personal service, write "Private."*)

Instructions.—At the end of this chapter are printed instructions for filling up columns (*b*), (*h*), (*k*), and (*l*), which occupy half of the back of the Schedule E, Census, England, 1921. These directions are full, and the special examples are helpful in the direction of that definiteness desirable in Statement of Occupation; they give illustrations of explicit description of occupation and of employer's business, thus being ancillary in the great task of obtaining a reliable Industrial and Service Census.

Education.—Item 7 in England does not appear in the particulars required in Scotland, and its terms are as follows in the Order in Council:—

Whether occupied in (*a*) full-time or in (*b*) part-time attendance at an educational institution.

Place of Work.—Nor does item 8 of the Order appear for Scotland. It asks "Place of Work," stating address, or whether working at no regular address or at home.

In Form (E), in which Returns are to be made in England, excluding (Monmouth), by the prescribed persons, column (*m*) is headed "Place of Work," and directs as follows:—

Give the *address* of each person's place of work.

For a person with no regular place of work write "No Fixed Place."

If the work is carried on mainly at home, write "*At Home.*"

(*No entry is required for any person who is retired or out of work.*)

Transit facilities for workmen, districts in which various trades and industries are carried on, relations of place of work to place of residence considered in connection with town planning and housing matters, and measurement of the volume, direction, and distance of daily passenger traffic, are among the uses of such details as to Place of Occupation.

Item 9 in Order in Council.—Whether ordinarily occupied as employer, employee, or on own account.

This is identical with item 7 for Scotland.

The separation of employers from employed is a somewhat delicate task. At every Census efforts have been made to get those engaged in industries to indicate whether they were men or masters. The employed may be at times an employer; and *amour propre* probably tends to increase the number of those returning themselves as employers.

Differentiation of dealers and manufacturers is a work which will be facilitated by the mention of the name and business of the employer, which also helps in the fixing of the industry or service for classification.

Item 10, Unemployment.—If ordinarily occupied as employee, whether employed or unemployed, stating present or last employer, as the case may be, and employer's business.

This constitutes item No. 8 for Scotland.

In the English Householder's Schedule the particulars are asked for in column (*l*). Possibly there may be some dubiety as to the definition of "Out of Work." Recommendation 6 of the Sub-Committee of the Royal Statistical Society upon Census matters is entitled "Unemployment," and suggests that—"For each person returned as occupied who was not actually occupied at all during the week previous to the Sunday of the Census, the letter N should be written, or in the case of non-occupation through sickness or accident, the letter S, or in case of persons on holiday the letter H." As quoted

already, the reason given for the recommendation is that there is at present no general and universal total which affords a basis or standard by the help of which the existing partial and comparative figures of unemployment can be interpreted. Without full information the national wages bill cannot be computed accurately; accordingly the national income at present can only be approximately and hazardously estimated, and the statistics as to unemployment should help in the consideration of several allied problems. Before the Census of 1911, the Committee recommended the recording of the fact of unemployment, but it is only now that the innovation is adopted, exhibiting evidence of the tendency to investigate thoroughly problems of industry, which are, of course, allied to questions of Public Health and Population.

BIRTHPLACE AND NATIONALITY

Birthplace.—Items 11 and 12 are numbers 9 and 10 for Scotland in the Order in Council, and are as follows:—

11. Place of birth, stating:—
    (*a*) If born in the United Kingdom, the name of the county and town or parish.
    (*b*) If born outside the United Kingdom, the name of the country and the state, province, or district.
    (*c*) Whether born at sea.

12. If not born in the United Kingdom, whether visitor or resident, and whether (*a*) Natural born, or (*b*) Naturalised British subject, or (*c*) Of foreign nationality, stating nationality.

Schedule E.—Columns (*f*) and (*g*).

Column (*f*) directs—(1) If born in the *United Kingdom*, write the name of the County and of the Town or Parish.

(2) If born outside the United Kingdom, write the name of the Country, and of the State, Province or District, or

(3) If born at *Sea*, write "*At Sea.*"

Column (*g*) runs—(1) If not born in the United Kingdom, state whether *Visitor* or *Resident* in this Country, and state also nationality if born in a foreign Country, *e.g.*, "*British born*," "*Naturalised British Subject*," "*French*," "*German*," "*Russian*," &c.

Rooms.—Item 13 is uniform in the Order with number 11 in the particulars for Scotland.

"Number of living rooms dwelt in by the persons in respect of whom particulars are required in any separate return."

This matter is dealt with very unobtrusively in the English Schedule E, where it has to be filled into the fourth column of a small summary table at the left-hand of the Schedule, at its foot; the Enumerator therein supplying totals of Males, Females, Persons, and Rooms, and authenticating the summary by his initials.

The transference of the Number of Rooms to the Enumerator is taken from the Scottish example; the Enumerator in Scotland being required to enter on the front of the Schedule (in 1911) Number of Rooms, including Kitchen, with one or more windows, occupied by the person or persons entered on this Schedule. (Sculleries, pantries, bath-rooms, &c., not to be counted, nor Rooms used as Office, Shop, or other business purpose.)

In England the Head of the Family was directed to enter in 1911, at the foot of the Schedule, the "Number of Rooms in this Dwelling-House, Tenement, or Apartment. Count the Kitchen as a room, but do not count scullery, landing, lobby, closet, bath-room, nor warehouse, office, shop."

Enumerators enter in the Enumerator's Memorandum Book details as to character of houses occupied and unoccupied in their respective districts, recording also the number of houses being built.

Children.—Item 14 in the Order is number 13 in Scottish particulars.

It requires in respect of married men, widowers, and widows, the number and ages of all living children and step-children under 16 years of age.

Schedule E.—Columns (*n*) and (*o*), the two last in the Schedule, are devoted to this important subject of children, and the headings covering the columns run thus:—

"Information required only in respect of *Married Men, Widowers*, and *Widows.*" And "*Number and ages of all living children and step-children under* 16 *years of age*, whether enumerated on this Schedule or not, *i.e.*, whether residing as members of this household or elsewhere."

Column (*n*) is headed:—Total number under 16 years of age. If none, write "None."

Column (*o*) contains 16 very small subdivisions for "Age last Birthday"; beginning with "Under one," and running on from 1 to 15, inclusive.

The direction is:—For each child *place a* X in the column corresponding to its age. The number of crosses should be the same as the number shown in column (*n*).

For convenience there are in the Schedule E no fewer than 10 lines of the printed figures under which are to be entered the names of children.

Orphans.—This inquiry is new in the Census.

It is numbered 15 and 14 respectively in the English and the Scottish particulars in the Order in Council, and is as follows:—

In respect of persons under 15 years of age, whether both parents alive, mother dead, father dead, or both parents dead.

National Health Insurance in Scotland.—Item 15 in the particulars to be stated in the Returns made in Scotland is an inquiry apparently not to be undertaken in England; its terms are these in the Order in Council:—

Whether entitled to medical benefit under the National Insurance (Health) Acts.

Item number 12 in the Order as to the Returns required in Scotland is :—

In respect of persons aged three years or over, whether speaking Gaelic only or speaking both Gaelic and English.

This item is the equivalent of the English.

Additional particulars to be stated in Returns made in Wales (including Monmouth).

1. In respect of persons aged three years or over, whether able to speak English only, Welsh only, or both.

In accordance with subsection (2) of section 1 of the Census Act, 1920, no Order in Council could be made requiring the particulars numbered 14 and 15 in the English Returns (respectively relating to the number of Children and Orphans), and numbers 13, 14, and 15 in the Scottish Returns (Children, Orphans, and right to Medical Benefit under the National Insurance (Health) Acts), until a draft thereof shall be laid before each House of Parliament for a period of not less than twenty days; provided that, if by any part of any such Order, it is proposed to prescribe any particulars with respect to any of the matters mentioned in paragraph six of the Schedule to the Act, that part of the Order shall not have effect unless both Houses by resolution approve that part of the draft.

APPENDIX.

INSTRUCTIONS

For filling up Columns (b), (h), (k) and (l)

1. Column (*b*).—**RELATIONSHIP.**—Any relative present in the dwelling on Census night who usually lives elsewhere should, for Census purposes, be described in Column (*b*) as "Visitor," and not as "Son," "Aunt," "Sister-in-law," &c.

2. Column (*h*).—**EDUCATION.**—For persons attending a school or other institution for the purpose of receiving education, write **"Whole Time"** if attending daily during the full day school hours or otherwise to an extent which leaves no reasonable time for employment; **"Part Time"** if attending Day Continuation Schools or Evening Classes, or otherwise giving such partial or intermittent attendance as permits or might permit of substantial regular employment.

3. Columns (*k*) and (*l*).—**OCCUPATION AND EMPLOYMENT.**—For a person already entered as "Whole Time" in Column (*h*), no entry is needed in Column (*k*), unless the person is studying for a particular profession or occupation (*see* Instruction 4). For children under 12, Columns (*k*) (*l*) and (*m*) should be left blank.

PERSONS NOT PRINCIPALLY OCCUPIED IN WORKING FOR PAYMENT OR PROFIT

4. If studying or preparing for any particular profession or occupation, write accordingly in Column (*k*) "Wireless Student," "Engineering Student," "Law Student," "Medical Student," &c., and leave Column (*l*) blank. (But apprentices or persons training on similar terms should be entered as actually following the occupations to which they are apprenticed.)

5. For a member of a private household (such as householder's wife) who is mainly occupied in unpaid domestic duties at home, write "Home Duties" in Column (*k*) and leave Columns (*l*) and (*m*) blank.

6. If retired from an occupation or service, and not following any other regular occupation, state former occupation or service in

Column (*k*), adding "Retired." Column (*l*) should be filled up, business of former employer (if any) being stated.

7. For a member of the household who is chiefly occupied in giving unpaid help in a business carried on by the head of the household or other relative, state the occupation in Column (*k*) as though it were a paid occupation. The name of the head of the business should be stated in Column (*l*) as employer, together with the nature of the business.

8. For other persons not included above who are mainly dependent upon others' earnings or upon their own or others' private means, write "None" or "Not occupied for a living" in Column (*k*) and leave Column (*l*) blank.

PERSONS PRINCIPALLY OCCUPIED IN WORKING FOR PAYMENT OR PROFIT

9. The occupation should be stated in Column (*k*), whether the worker is at work or not at the time of the Census. If more than one paid occupation is followed, state only that by which the living is mainly earned.

10. The precise character of the occupation should be stated. **Vague and Indefinite Terms must not be used,** such, for example, as Assistant, Collector, Contractor, Factory Hand, Foreman, Inspector, Ironworker, Machinist, Manufacturer, Millhand, Operative, Overlooker.

(*a*) **Foremen and Overlookers** should state the department or branch of work in which they are employed.

(*b*) **Shopkeepers, Retail Dealers or Shop Assistants.** Tailors, Bootmakers, Silversmiths, Jewellers, Bakers, &c., if selling only and not making or producing, or if chiefly selling, should add the words "Shopkeeper" or "Dealer" (if principals), and "Shop Assistant" or "Salesman" (if assisting). But a person who is chiefly engaged in making or producing, though also selling, should add "Maker."

(*c*) **Agents, Brokers, Dealers, Merchants.** State particular kind of business or trade as "Cycle Agent," "Sugar Broker," "Cattle Dealer," "Coal Merchant."

(*d*) **Navy, Army, Air Force, Civil Service, Municipal Service, &c.** State the post or rank, as Able Seaman, Police Sergeant, Post-Office Sorter, Relieving Officer.

(*e*) **Nurses.** State whether "Nurse (Domestic)," "Monthly Nurse," "Sick Nurse," &c.

(*f*) **Ironworkers** should state whether Puddler, Shingler, Roller Labourer, &c.

(*g*) **Labourers.** Unskilled workers usually employed on some one kind of work should always state fully the kind of work done, *e.g.*, "Navvy,"

"Bricklayer's Labourer," "Dock Labourer," "Foundry Labourer," "Steelworks Labourer"; but those accustomed to employment in different kinds of work should describe themselves as "General Labourer." The term "Labourer" must not be used alone.

N.B.—Other workers should describe their job by the special name (if any) by which it is known in the industry or manufacture.

11. **Name and business of employer.**—The name and business of the employer (firm, company, local authority, government department, &c.) must be stated in Column (*l*); for example, a bricklayer employed in a brewery should state "Bricklayer" in Column (*k*) and "Messrs....., Brewers," in Column (*l*). A carman employed by a firm of bleachers and dyers should state "Carman" in Column (*k*) and "Messrs....., Bleachers and Dyers," in Column (*l*). **This information is required for the purpose of classifying the persons employed according to the industry or service with which their work is connected, and will not be published.**

State precisely the nature of the employer's business, *e.g.*, instead of "Manufacturer," "Merchant," "Ironworks," "Engineering Works," "Lead Works," "Civil Service," use exact business descriptions, such as "Toy Manufacturer," "Coal Merchant," "Iron Rolling Mills," "Textile Machinery Makers," "White Lead Works," "Civil Service, General Post Office," &c.

In the case of **Domestic Servants** or other persons in Private Personal Service the word "Private" should be entered in Column (*l*) and the name and business of the employer must **not** be stated. But for Cooks, Waitresses, Chambermaids, employed in Hotels, Restaurants, Boarding Houses, &c., the name and business of the employer should be stated.

The following special examples will indicate the kind of description which should be given both of the occupation and of the employer's business.

Column (*k*). *Personal Occupation.*	Column (*l*). *Employment.*
	I. Clerks
Booking Clerk . . .	Gt. Eastern Railway Co.
Walk Clerk	London & Northern Bank.
Head of Passenger Dept.	Adriatic Shipping Co.
Law Clerk	J. Sinclair, Solicitor.
Accountant's Articled Clerk	Holmes & Leader, Chartered Accountants.
Costing Clerk . . .	North British Iron Co., Iron Rolling Mills.
Book-keeper	Northern Cartage Co. (Out of work.)

Column (*k*). *Personal Occupation.*	Column (*l*). *Employment.*
II. Engineering and Metal Trades	
Gantryman	Northern Iron Co., Blast Furnaces.
Pattern Maker	J. & I. Sykes, General Engineers.
Iron Moulder	Iron Goods, Ltd., Pipe Founders.
Drop Forger	Coutts & Co., Motor Car Manufacturers.
Tool Forger (Power Hammer)	X.L. Tool Co., Tool Makers.
Tube Welder	Tubes, Ltd., Steel Tube Makers.
Capstan Lathe Hand	C. N. Smith, Ltd., Machine Tool Makers.
Loom Fitter	Jones & Wright, Textile Machinery Makers.
III. Engine Men, Engine Drivers, Stokers, Firemen	
Railway Engine Driver	Midland Railway Co.
Crane Driver	R. & L. Thomas, Brewers.
Traction Engine Driver	Seaton Urban District Council.
Winding Engine Driver	Derbyshire Collieries, Ltd.
Agricultural Engine Driver	J. Brown, farmer.
Boiler Fireman	J. Thorpe, Joinery Works.
Kiln Fireman	Nunnery Brick Co., Brick and Tile Makers.
IV. Textile Operatives, Dyers, Bleachers	
Bobbin Carrier	X.Y.Z. Spinning Co., Cotton Spinners.
Little Piecer	X.Y.Z. Spinning Co., Cotton Spinners.
Card Room Jobber	X.Y.Z. Spinning Co., Cotton Spinners.
Rag Grinder	Slaithwaite & Co., Shoddy Manufacturers.
Head Dyer	Green & Brown, Stuff Manufacturers.
Blow Room Major	Jackson & Co., Cotton Spinners.
Overlooker, Spinning Room	Black & Co., Silk Spinners.
V. Miners and Quarriers	
Coal Miner (Hewer)	Llanfan Colliery Co.
Lampman (above ground)	Llanfan Colliery Co.
Tin Streamer	Penpol Mining Co., Tin Mine Owners.
Ironstone Getter	Blackheath Mining Co., Coal & Iron Mines.
Roadstone Quarrier	Stratton Rural District Council.
Lead Miner, Stoper	Evans & Evans, Lead Mine Owners.
Iron Miner, Borer	Cumberland Iron Mining Co.
Colliery Labourer (above ground)	North Eastern Colliery Co.
VI. Farming	
Fruit Farmer	Employer.
Poultry Farmer	Own Account.
Cowman	J. Sinclair, Farmer.
Assisting father in general farm work	J. Sinclair, Farmer.
Dairy Work	J. Sinclair, Farmer.
Farm Labourer	E. Bethel, Market Gardener.
Hind, Spade Hand	O. Owen, Farmer.
Ploughman	V. Gillow, Fruit Farmer.
VII. Labourers	
Steelworks Labourer	Key & Co., Steel Manufacturers.
General Labourer	Soda, Ltd., Alkali Manufacturers.
Navvy	Mills & Mills, Dock Contractors.
Fitter's Labourer	Brown & Sharp, Agricultural Engineers.
Foundry Labourer	Wagons, Ltd., Railway Wagon Builders.

CHAPTER IV.

EMPLOYMENT AND POPULATION

THE Census Schedule is the only means of collecting universal data as to employment. Size of family is obtained, but not the family income, nor the rent of house; but some idea of its economic conditions and of its position in the social scale may be gathered from the Occupation columns: and the "Instructions" on the English Schedule, printed at the end of previous chapter, indicate the great importance of accuracy and definiteness in description of "Occupation and Employment." Careful perusal of these "Instructions," which appear on all the various Schedules, is an elementary education in the nomenclature of modern Industry.

The statistician might perhaps desire to know the age at which work was commenced (or retired from), and the wages, salary, or income enjoyed; whether solvent or insolvent; what a man is "worth"—to use the curious phrase commonly denoting what is the value of a man's possessions in money. Something in this way is done in the States in making a Census of millionaires—in dollars. But not yet—although the new plutocracy is numerous—has the almighty dollar been adopted as a direct criterion in the British Census; the nearest approach thereto, however, being in Occupations.

Classifying of Occupations.—Involving intimate knowledge of all kinds of employment, the instructions in the Classified Alphabetical List of Occupations and relative Rules require great care in their application, by enumerators and

others, consisting chiefly of terms taken from the Directories of London, Manchester, and other large towns, the first classified list of Occupations was prepared for use at the English Census of 1861. In 1881 the list was improved by the additions obtained from leading manufacturers to whom circulars were sent; and this method of obtaining information has been, followed at subsequent enumerations, being adopted also at the Census of 1921.

There appeared as Volume X., Appendix to the English 1911 Census Report; "Classified and Alphabetical Lists of Occupations and Rules adopted for Classification." It is a Blue Book of 370 pages; and students of Census statistics can see from its principles how details are combined under the various tabular headings.

The Summary of Classified List of Occupations divides the whole population into 22 Classes of Occupied and one Unoccupied, or without specified Occupations; in all, 23 Orders with Sub-Orders. Thus, Order 1, Government, has two Sub-Orders—National Government and Local Government. Professional Occupations and their Subordinate Services, Order 3, is subdivided into eight:—Clerical, Legal, Medical, Teaching, Literary, Scientific and Political; Engineers and Surveyors; Art, Music, Drama; Exhibitions, Games, &c. Some Orders require no Sub-Orders: Orders Nos. 7, 8, and 19 comprehend all engaged in Agriculture, in Fishing, and in working and dealing in Dress.

Public Service is Growing.—More and more in recent times has the tendency been shown to utilise the Civil Servant. State control of a war-character has ceased. But the call for State intervention is constant. The servant of the State is specially selected from the community. He has ability and intelligence, is trained in taking impartial and long views. He is skilled in administration and the management of men. In the Treasury or in the Ministry for Scotland, or of Health, in

the Home Office, in the Board of Trade or Agriculture, or the Office of the Registrar-General, he learns the technique of his profession, and strives to maintain the highest ideals of justice, morality, fair dealing, and social advance. A noble Guild, the British Civil Service has been characterised by one of the most able and cultured members of the Labour Party as the finest in the world, with the help of which that party hopes to rule successfully when its turn to enter into power arrives. Never was there a time when so much of the best brain of the country was given to the State as during the Great War; and the Civil Service to-day is much augmented compared with pre-war times. The great art of government has grown. No one desires that there should be a single State servant not fully occupied. It was possible to decrease their number here and there after the War. It must be emphasised, however, that the Civil servant of to-day is required to lead in aiding society towards a higher and nobler evolution, and that his efforts for the general welfare give him an honourable place, although moderate monetary reward, in the world of the well-employed. Fittingly, Order 1 in the Census classification is Government, National and Local, whose functions are so essential and important in great and growing communities.

Local Government.—In our own time there has been much expansion in Local Government, which is a healthy sign. Is it not true that a nation tends to get the Government, Local and National, that it deserves?

Citizenship in such a place, for example, as Edinburgh has high responsibilities. In a measure, each member of the community is responsible for the welfare of all. A selfish policy is vain; an attempt to stand aloof and sneer is absurd, and defeats its apparent objects, for no one can live entirely unto himself in a civilised community. All should take an intelligent interest in Local Government.

Gone are the days when it was possible to throw upon

providence the blame of sufferings from our own carelessness and ignorance. We now, for example, have learned much of the causes of disease.

No excuses can now be accepted for failure to perform the highest duties to our fellow-citizens and to the race, and some of the best men enter the field of municipal administration.

Greatest of all problems is the question of population, with its economic and ethical bearings. Its physiological aspects are now approached in a spirit of becoming reverence. Schools lay judiciously the foundations of physiological knowledge; social studies follow; and clear light is being thrown upon many of our most complex social problems, especially of employment and race maintenance by the development of enlightened public opinion. In this national advance the Census Reports alike give guidance and show the direction of our decennial progress. They reveal the recruitment of the population of cities from counties; birthplaces indicating the influx from surrounding shires. Realisation of the maximum possible of human welfare —the attainment of a happy human life by every fairly endowed human being—is the ideal of to-day. Machinery, the triumphs of invention and science, are among the most powerful factors in industry. We shall not, however, allow ourselves to be obsessed by machines. The old idea of machines-tenders being merely "hands" was callous, cruel, inhuman. But every one able must help in the production of the maximum amount of wealth, in a wholesome environment, for the community.

Only when it is kept in harmony with the whole can individual life reach its highest. From the society in which he lives man receives much of his power, and life takes direction from social environment.

The real idea of citizenship renders individualistic ideas untenable, showing that the evolution of society rests on the extension of the feeling of duty owed by each to the whole community. A fundamental condition of social advance is a genuine and active regard for the welfare of others.

All men are brethren. All should bear their share in working by hand or head. There should be no cumberers of the ground, no mass of unproductives save the ailing and the old and the little children, on whose hopeful feet the world moves forward. Humanity is antagonistic alike to adult idleness and to child-labour; very far indeed has the pendulum swung to the other side since it was necessary to put a stop to infants toiling long hours in British factories.

Nomenclature of Occupations.—The Classified List of Occupations gives 188 pages of description of employment under the 23 Orders, extending from Public Service (Order 1) to Order 21, Gas, Water, Electricity; Order 22, other General and Undefined Workers and Dealers, which includes a very miscellaneous variety of callings:—Advertising, Floor-Cloth Manufacturing, Japanning, Bone-Cutting, Making of Vacuum Cleaners, Wax Modelling, Image Making, Multiple Stores, Co-operative and General Stores, Costermongering, and Pawnbroking.

Order 23 comprehends persons without specified occupations or unoccupied. It includes persons living upon pensions and private means, Students and Scholars, while under its seventh Sub-Order there appear—Almsman, Armiger (Esq.), Bedesman, Coffee Planter (if a visitor), County Councillor, Emigrant, Gentleman, Gipsy, Landlord, Legislator, Lunatic (former trade not stated), M.P., Patentee, Pauper (trade not specified), Tramp, Vagrant, Ward in Chancery. When their trade or occupation is not stated there is entered under this Sub-Order the inmates of any Home, Hospital, Penitentiary, Prison, Reformatory, Refuge, and Workhouse.

Aeronautics having so much developed as a profession scarcely seem appropriately placed now under Exhibition, Games, &c. Aeronautical Engineers and Aeroplane Constructors, Airship Fitters and Aviation Mechanics follow Motor

Car Makers, and the expansion of the Air Service will necessitate new descriptions for Airmen.

Following the Orders and Sub-Orders, the latter of which are alphabetical, there is a double column Alphabetical List of Occupations, showing the heading to which each is to be referred. This exhaustive list was meant mainly for Census clerks. But at the end of the volume there is a fourteen-page Memorandum to the Enumerator on the subject of Occupations, reminding him of his duty to be able to answer questions that may be put to him, and to revise the Schedules at the time of collection. Many indefinite occupational names are quoted, and examples of properly completed descriptions are given for the guidance of the Enumerator in England. The whole matter, however, may be summarised in the general Instruction universally applicable to all the United Kingdom. "Vague and indefinite terms must not be used alone. Care should be taken that no occupational name common to different industries is used without a full and distinctive description."

Employment promotes Population. — Why does man toil at the varied employments of our present day civilisation? It is that he may earn money for bread and marriage. Hunger and love are the two great elemental motive powers of life. Marriage and occupation are the pillars of society. Race-maintenance rests on marriage, whether we think of it in terms of the plain-spoken marriage service or use such an elegant euphemism as "in the first glance exchanged by lovers, the unborn child opens its eyes on the world and pleads for life." That is a biological view couched in the poetic language of the present Sir Walter Raleigh. With that learned Professor of English Literature I have discussed Milton, and especially Masson's "Life of Milton," but, unfortunately, we did not exchange views on Malthus. I venture to doubt, however, whether the brilliant author of the best brief monographs on "Style," Shakespeare, Johnson, and Milton, has himself given

much time to the leaden pages of Malthus. Nor does one deem it probable that the Professor, who has all literature in English for his province, can have studied profoundly the complexities of commerce and the provision of food from world markets; otherwise Sir Walter would not have written in so unqualified a fashion (as follows) against the ideas of men like Godwin and Condorcet, who believed in the possibilities of human progress, though that advance may be marred by occasional retreats. And progress surely lies along the lines of the production of a healthy and happy population, fully occupied, believing in improvement being possible all-round by pulling together, and striving steadily and intelligently, with all the increasing resources of science, towards the ever-fleeting perfection.

At page 62 of his stimulating and sweeping Essay on Style, the Professor, after referring to an amiable fancy of Michael Angelo, as illustrative of the Flaubert illusion of the *mot propre*, observes, "or like the indolent fallacy of those economic soothsayers, to whom Malthus brought rough awakening, that population and the means of subsistence move side by side in harmonious progress. But hunger does not imply food."

In a well-ordered life of work in an industrious community properly organised, the means of subsistence does move harmoniously side by side with the means of subsistence. Even a rich and fertile country like Russia fails to support its numbers when its resources are not utilised intelligently Russia is said to be still semi-barbarous, not having yet realised that force settles nothing but those who fall in the fight, and that the brain is mightier than the muscle. Keynes suggests that "the disruptive powers of excessive national fecundity may have played a greater part in bursting the bonds of convention," but that Malthusian view has not been accepted by authorities such as Professors Sarolea and Simpson, who have travelled recently in Russia, and given the world authoritative views.

Means of Subsistence.—The factors affecting the increase of mankind embrace most of life.

Obviously the question of Population is connected with Productiveness in an industrial sense: Industry and Population being indeed twin problems of the modern world. Enlargement of productive energy increases population. Nor is there any foundation for fear that a high degree of industry will ever be associated with an insufficient supply of the necessaries of life. It is true that it is accepted as a fundamental law of population that the numbers of a people must be limited by the means of subsistence. In his observations Malthus had in view only the food possible to be produced in Britain. To-day we see that there are really no bounds to the productiveness of human labour and invention.

Faith is placed in the illimitable possibilities of human invention. Emphasis is laid on the last clause of the injunction to be fruitful and multiply and replenish the earth, and *subdue it.* I hold strongly the opinion that there is no valid reason to assume that the earth will ever be over-peopled by industrious and productive and progressive races. Rather does the survey of Census results for the 120 years lead to the conclusion that, given a continuation of the invention and industry shown in that period and of the general improvement evidenced on the whole, there are possibilities, nay, probabilities of a happier and a healthier population living on a higher spiritual and intellectual plane, just as we have, in many ways, improved upon our ancestors.

Malthus refuted by Census.—One use of the Census has been to demonstrate the absurdity of the theory of population promulgated by Malthus. The famous "Essay on Population" appeared in the pre-Census period of Great Britain, the first edition having been published in 1798.

Godwin in "Political Justice," and Condorcet in his brilliant "Sketch," had put forward their belief in human

perfectibility. The father of Malthus shared these optimistic opinions, and was a friend of Rousseau. Against the paternal optimism young Malthus urged the evils of over-population, which would always prevent the human race from reaching the goal of greater happiness.

Robert Wallace, an Edinburgh writer, had published some years before a volume of essays on "Mankind," in which the two progressions adopted by Malthus are enounced: the arithmetical for the increase of the means of subsistence, and the geometrical for the multiplication of mankind. The essay by Wallace is interesting and suggestive, but by no means dogmatic, rather has it the proper tone for such speculative thought.

Malthus, however, seized upon the theory, and his elaboration of it for long imposed upon those willing to welcome a pessimistic explanation and apology for the misery of the poor. Adam Smith has been called an optimist. But while Godwin might fitly be classed as an optimist, and Malthus as a pessimist, I think that the author of "The Wealth of Nations" should rather be termed a realist, for his views are uncoloured and are shown in the dry, clear white light of actuality. Adam Smith, first populationist, dealt with the subject only incidentally. To Malthus belongs the credit of producing the first formal treatise on Population. He worked in the dark until the British Census began in 1801, and some of his erroneous conclusions are due to the absence of reliable figures. He was no wizard to see into the future, and he had only scant *data* for the past. He regarded Britain as an island without the vast resources of the rest of the world now utilisable by transport, by sea, and by air. Nor does he seem to have tried the inversion of his geometrical progression. For instance, if one takes the population of Scotland at 5,000,000 in 1911, and halves it every hundred years, one finds 39 people left in A.D. 11. So that Cæsar landed on an island which should have been almost uninhabited! That is simply an inversion of the Malthusian

notion of population doubling every century, the working out of which for the future produces also results which are ridiculous. Variations in demographic evolution have no terror for the populationist who looks at the whole subject completely and dispassionately. Poverty is not the fated consequence of increasing numbers. The principle of Malthus is an unverified supposition. To it is opposed the whole history of civilisation. Even famines are the product rather of an inadequate system of wide circulation than of insufficient world-production. Population and production tend, statistics of all Censuses testify, towards equilibrium. War and pestilence, vice and misery, are the Malthusian checks on over-population. Surely it is odd that a clergyman (like Malthus) should have preached the doctrine that Human Calamities can generally be of any advantage to the Human Race.

War is dysgenic. It selects the young and physically fit, not for reproduction, but for destruction, tending to the recruitment of the race from the unfit and the undesirable. Pestilence does not confine its ravages to the weeds. The recent wave of influenza over the world, unparalleled in all history in its magnitude—cholera, black death, smallpox fading into comparative insignificance—killed off flowers innumerable, for many of its victims were in their early youth. And it is remarkable that always in the world's history some such scourge has followed in the wake of war.

A remarkable effect of the Great European War was the boom in marriage. Stimulated, no doubt, by the allowances for wives, the impulse was also part of the spirit of adventure in the air. Soldiers felt that they might never return. Women were fascinated by courage, admiring the uniform and the bravery of the noble and self-sacrificing defenders of the liberty of the world.

Marriage in a measure is generally penalised. To take a simple case of a man earning £300 a year marrying a woman who has been earning £200. The bride relinquishes her

employment to take care of a house and children. Comfortable on his £300 before, the man, when married, may find a struggle if there are three or four children. Salaries and wages are not generally calculated on the needs of the worker, but upon his earning capacity. "Give bachelors less than married men," say some. "Raise a man's income in proportion to the number of his children," say others. But if bachelors were paid less than married men, the employer would prefer them, and married men would be unemployed; while to increase pay with each child without limit might cause the population unduly to augment and the worker to receive an utterly uneconomic wage, a wage not actually earned by his work, and the enforcement of which upon an employer could not well be defended. Equal pay for equally competent workers is the economic rule.

During the last fifty years the State has done much for the child. Some Socialists, indeed, advocate "State-aided motherhood." Good-quality children, H. G. Wells points out, would be cheap at the price. Meantime, we move in that direction by Maternity and Welfare Centres. For to-day all admit that children are the real and indispensable Wealth of Nations.

Marriage.—Something of the essence of last Census of the United Kingdom may be given here, first in a summary of the information as to marriage, and second as to dependants, the latter being a matter got at somewhat indirectly from the Census information.

It seems odd that the number of married women outnumber that of married men by about 2 per cent. But it is a steady factor at all Censuses, and is explained by the number of "grass widows" whose husbands are abroad, of deserted wives whose husbands probably return themselves as single, by women who are not legally wives returning themselves as married for the sake of respectability, while the man has no such motive. In Scotland one knows that there are some women who are uncertain as to whether they are legally wives and who

probably are entered as married. Married Men to Married Women are thus as 290 to 296. Widowers are to Widows as 28 to 62, men dying earlier on the average; even the remarriage of Widows does not equalise the noticeable disparity. Boys under 15 outnumbered Girls under 15 as 252 to 251. But Single Women over 15 were to Single Men over 15 as 234 to 220, revealing a remarkable difference due to mortality and in some measure to emigration, and the Great War has increased the margin of single women. The so-called "superfluous" females will note, however, that more boys are born than girls.

On the whole population at last Census, about 89 per cent. of the married men were between the ages of 20 and 40. Though men may marry somewhat later in recent decades, they thus do take wives generally at an age not incompatible with the birth of children of healthy energy. Offspring of parents past their bodily best are apt to lack viability, and in after life fitness for a full day's work.

From the Census Reports of the United Kingdom it is seen that of all male persons about 40 per cent. are married or widowed; amongst male persons over 21 years of age the proportion of married rising to approximately 72 per cent. The average *family* is five and a small fraction: wife, husband, and just over three others. Some of these others, sons and daughters, may be self-supporting or partially so.

The proportion of dependants is a point on which various opinions have been put forth. In his investigations at York into "Poverty," Mr. Seebohm Rowntree deduced that the average family was four. Another writer assumes that there are five to six *dependants* per family; while Sir Leo Chiozza Money calculates that the total of all manual workers (single and married) is equal approximately to the sum total of their dependants. And Sir Leo is not so tremendously far wrong. For the proportions of male profit, salary, and wage-earners, married and unmarried, to dependants ranges from 1 to 2·28 in

Employers, 1 to 196 in Professions, Government Workers, and on Own Account, and only 1 to 1·45 in Workers for Employers. A feature of the Census is the number of Self-supporting Women, and the increasing number of Self-supporting Women working for Employers, which in round numbers at last Census were respectively 1,750,000 and 4,325,000.

What one feels in arriving at these general conclusions is that life is really a struggle for most of us, but not mainly or entirely for ourselves. In the higher civilisation, life is not a struggle for the existence of self; it has been elevated into a struggle for the life of others.

"Wiser we are as ages onward roll."—We profit by the accumulated experience of the past. Even fools are made wise by sad experience, says the proverb.

Life is a tissue composed of a succession of births; and the ultimate object of man's activities generally is and should be the continuation and the improvement of the race. Riches, invention, industry contribute fittingly to this universal aim. Bentham advocated the greatest happiness of the greatest number; the greater the number of the happy people, the greater is the sum of happiness. The importance of population cannot be emphasised too much. Greater evil than the decay of its numbers can happen to no race; improvement and increase are the greatest objects of human activity; and generally what tends to make a people happier tends also to make them more numerous.

Nuptial love increaseth the people, but wanton love doth not, says Bacon. Only family life is fitted to perpetuate a succession of efficient and improving generations. Promiscuous concubinage produces offspring liable to be neglected and generally few in number. Pride prevents men from entering into a marriage that will degrade their condition, and reduce them to a condition of life below that to which they are accustomed. A high standard of life accordingly militates

against marriage; it may also lead to the limitation of families. Industry and trade are of utility chiefly so far as subservient to the maintenance of a State—that is, mainly, the support of mankind. "Employment promotes population." Few there are who live and work well who do not directly or indirectly aid in the essential privilege and duty of carrying on the human race.

"Assyria, Greece, Rome, Carthage, where are they?"—It is not, surely, inevitable that the British Empire must also fall. Comparison has been again and again made between the British Empire and Imperial Rome, especially in attempts to answer the question, "Is Britain upon the down grade?" Let us look at Rome in her decline. In efficiency and valour the Roman armies remained as of old; but the Roman troops could not be replenished by Roman recruits. "Men were wanting; the Empire perished for want of men."

Unable to furnish soldiers for its own defences, Rome had to pit barbarian against barbarian; driven to the expedient of turning its enemies into its defenders. "In the end the Western Empire was destroyed, not by the hostile army, but by its own." The Roman army became a barbaric horde, and the Roman commander-in-chief was a barbarian prince, Ricimer, who created and deposed emperors at his pleasure; and the line of Emperors was terminated by another barbarian commander-in-chief, Odacer, who himself assumed the reins of government.

Other causes operated less definitely; but the immediate cause of the ruin and fall of the Roman Empire was the want of a Roman population.

Almost as the Anglo-Saxon occupied North America, said Sir John Seeley, the barbarian, rather than conquered, settled and peopled the Roman Empire. Rome failed to learn and profit by the lessons of her Census, the results of which must have foreshadowed her coming decline and fall. She

was proving herself unworthy of her great heritage and power.

The returns of the quinquennial Census from the time of the Second Punic War to that of Augustus show no steady increase in the number of citizens save what can be accounted for by the extension of citizenship to new classes. Indeed, in the second century before Christ, the want of increase in the population was mentioned by Polybius (i. 64); and subsequently it was evidenced in several ways, as indeed it had been earlier. When Julius Cæsar attained to supreme power, he found "an alarming thinness of population" (Dion. Cass. xliii. 25). Both Cæsar and his successor struggled against this evil; and the maxim that marriage was a duty led up to the *Lex Julia*—the resistance to which proved the necessity then of bribing by privilege the citizens to marry. Aversion to marriage had led to a stationary Roman population, and no population long remains stationary; it must inevitably decline, if it does not have the power to increase.

Before its conquest by the Romans, Greece had declined in population owing to reluctance to rear families of a fair size. An excessive standard of comfort and moral laxity were also factors militating against family life in both Greece and Rome. Few can carry a full cup. Like individuals, Empires rise higher in adversity than in luxury.

Roman civilisation was not creative, nor industrial; it was latterly destructive and military. Wealth was gained by war, not by work. Militarism was ingrained through many generations of soldiers, who were accustomed to appropriate the produce of lands conquered, but not to the production of wealth by trade and agriculture. When there were no more spoils, the Romans lived upon their capital. Unwillingness to multiply grew stronger, there followed inevitable decline and dissolution.

No external wars can destroy a nation. Nothing but its own sterility destroyed Rome. Demoralised by luxury and

effeminacy, even the barbarians who became Romans fell into feebleness; and there came also the angel of death spreading his wings from Persia to Gaul, carrying off, it is said, in many parts, a majority of the population. The plague which broke out in 166 A.D. was the first of a series of similar visitations. Pestilence more than decimated the whole population; and, as men diminished, there increased the demand for money for the enormous expenses of government. Always heavy, the fiscus became a millstone, crushing trade and enterprise. Economics, "Political Economy," had not emerged. Capital in the Roman Empire was crushed by grinding taxation. Government lay in wait for every one's savings; officials extorted for themselves as well as for the government—*locupletissimus quisque in praedam correptus.* An all-powerful set of rulers held the Empire in bondage. To the pressure of taxation was added the bleeding of conscription: the peasantry were enslaved as soldiers; while the vitals of property were preyed upon by the demands of the all-devouring vulture, the fiscus, the Emperor's treasury.

Rome, who conquered nations and erected an Empire of supreme stability, failed to raise men to maintain her high estate. Less and less became the healthy human harvest. Weakened by persistent pestilence and by remorseless taxation, the great Roman Empire was a victim of gradual sterility: a mighty illustration of the stern maxim of Nature that the only disease of which a nation dies is lack of efficient men—*viri;* men of manly character, fit to bear the heavy burden of a vast Empire.

CHAPTER V.

THE CENSUS OF SCOTLAND

Introduction. — While references may be made to other countries—especially to England—it is purposed to trace here mainly the evolution of the Census in Scotland.

Physical configuration and character, law and church government, national history and education, differentiate Scotland from England, and still more from Ireland; and, in contradistinction to the early efforts in Ireland, Census-taking in Scotland was successful from the first.

The six first enumerations, 1801-1851, were taken upon commission from London, being made chiefly through the agencies of Sheriffs in Counties and of the Provosts in the Burghs, schoolmasters in the various parishes being called upon to assist.

From 1855 Scotland enjoyed the advantages of Civil Registration of Births, Deaths, and Marriages; and in 1860 the Census Act for Scotland authorised the Registrar-General to carry out the Census of 1861 apart from England. Carefully revised and adapted, the English Census forms and instructions became the basis, as they are to-day, of those used for the Scottish Census, which, however, continues to retain some special characteristics.

1861.—The 1001 Registrars in 1861 were chiefly parochial Schoolmasters, men of reliability who knew their Registration Districts thoroughly in the country; and in the Burghs the

Registrars have always been capable men specially selected, and generally possessing considerable official experience. The Registrars were assisted by 8075 Enumerators picked by themselves—as is the existing practice, the Registrars being responsible for their Enumerators.

In 1851 all the particulars as to the population of Scotland were only for Civil Parishes and Civil Counties.

The Census Reports for 1861 gave the population for the Registration Districts and the Registration Counties. It was found that 186 of the 787 Islands of Scotland were inhabited in 1861. There were also ascertained the number of families in every Parish and County, the number of Children between 5 and 15 attending School, and the number of Houses.

Definition of a House.—There emerged in 1861 the somewhat difficult and debatable question: "What is a house?" Large, many-flatted tenement buildings with lengthy interior passages and many subdivisions are apt to confuse; and in 1861 it seems to have been decided that in Scotland flats were not to be reckoned as separate houses. Later, the following definition was adopted, and was given in 1881. The form quoted is that in which it appeared in 1911:—"Reckoning as a SEPARATE HOUSE every dwelling (1) with a distinct *Outside Entrance*, from a street, court, lane, road, &c.; or (2) with a *door opening directly into a Common Stair or Passage*, but if any such dwelling is subdivided and occupied by different families, it must be reckoned as only one house." A "family" is held to include a man and his wife and children (if any), also any relatives, visitors, servants, and persons *boarding* with the family, residing together under one roof.

In the Census Report of 1911 for Scotland two families living in one house are treated as one household. In the Report of the Census of 1901 they were treated as two households. And this alteration renders relative tables in the two Reports not strictly comparable.

1871.—Registrars, numbering 1016, employed 8342 Enumerators to obtain particulars mostly uniform in their personal character with those collected in England. In addition to the usual *data* there was ascertained the number of children aged from 5 to 13 receiving Education, and the number of Rooms with Windows in each house. Other notable features of a novel character in the Census Report of 1871 were the Ecclesiastical subdivisions of Civil Counties; the grouping of the people into Residence divisions of Town, Village, and Rural; and the particulars relative to Parliamentary Constituencies in Counties.

In connection with the Census of 1871 there is associated with the Registrar-General the noted statistician, Dr. Stark, who was regarded as one of the pioneers in Scotland of the improved Vital Statistics and Census-taking. Very elaborate, comparatively, were the Census Reports of 1871, which were conducted towards termination in a less expeditious fashion than those of later enumerations.

I. COST.—Few indeed are the official undertakings which cost more in Scotland than in the sister kingdoms; but in the carrying-out of the Census the expenditure per 1000 of the population is greatest in Scotland.

Country.	Cost per 1000 of Population. 1871.	1881.
England and Wales .	£5 5 7¾	£4 17 7
Ireland	7 2 7	4 3 7
Scotland	8 1 4	7 8 3

At first sight the figures for Scotland are startling; but experience in auditing Census accounts affords a quite satisfactory explanation. Sparseness of population; largeness of area to be covered, and the consequent charge for the "Mileage" covered by Enumerators form factors in the unavoidably large payment for Local Expenses in Scotland.

In 1881 out of a total cost of	£27,686	8	11
Payments to Registrars, Enumerators, &c., totalled	21,505	12	6
Leaving for Central Office Expenditure only .	£6,180	16	5

1881.—The Census of 1881 was carried out by 1037 Registrars and 8719 Enumerators.

This was the first of three enumerations under Sir Stair Agnew, who was Head of H.M. Treasury in Scotland, anterior to becoming Registrar-General.

It is interesting to compare with the Scottish the cost of the Irish Census, as set forth in the Report of the Census Committee.

The Irish enumeration is entrusted to the Royal Irish Constabulary and the Dublin Metropolitan Police. Local expenditure is thus minimised:—

Being in 1881 only	£3,913	16	8
While the Central Office expended . . .	17,702	3	11
The total cost of enumeration and tabulation was	£21,616	0	7

So far as the tabulation was done by Clerks upon piece-work, the following payments were made in Ireland in the 1881 Census at the Central Office:—

House Accommodation	£178	3	7
Religious Professions and Conjugal Conditions .	749	18	3
Occupations	783	3	9
Ages and Education	1052	0	6

As in Scotland, the English expenditure is greatest for collecting information.

In England and Wales the proportions of the Local and Central expense of the Census of 1881 were:—

Collection of data (Local)	£85,841	0	0
Tabulation of data (Central)	37,036	0	0
	£122,877	0	0

Clerks on time-pay in the Central Office received	£27,785	0	0

The following sums were paid for piece-work:—

Tabulating of Ages and Occupations . .	£3,082	0	0
Tabulating of Ages and Conjugal Conditions .	2,903	0	0
Tabulating of Birthplaces	1,516	0	0
	£7,501	0	0

COST OF SCOTTISH CENSUS.

Census.	Local.	Central.	Total.
1891, . . .	£22,113	£7,789	£29,902
1901, . . .	24,977	7,277	32,254
1911, . . .	25,662	7,839	33,501

Divisions of Census.—The three main divisions of the Census scheme are the Collection of Material, the Tabulation of the Material collected, and the relative Reports.

What is to be collected? is a preliminary question, upon which follows—What will be the cost of Collection and of Tabulation?

The details as to cost which have been given indicate the general proportions, approximately, of Local and of Central Expenditure, showing that the tabulation of the *data* involves such expenditure as justifies the rigid scrutiny of each question proposed to be inserted in the Schedule. Accordingly, the financial test is applied by asking—Is the information worth the expense?

Presumably the question as to Infirmities was rejected at least partly on the ground of expense; also the three queries as to Fertility of Marriage, as they appeared, for the first time, in the Schedule used in 1911.

In place of the latter, the Census Schedule for 1921 requires the number of children under 16, with the age of each child, a method of obtaining the numbers of children generally dependent upon parents, and forming the final question in the

current Census Schedule, the information being required only in respect of Married Men, Widowers, and Widows.

Fresh Features.—In accordance with the provisions of the permanent Census Act (printed in the Appendix), the particulars to be collected are prescribed by Order in Council, in which England and Wales are dealt with separately from Scotland.

For clearness and definiteness, the phrasing of the Order is altered slightly in the Schedule.

Age.—The column headed "Age" has an innovation in requiring the age to be given in years and *months;* for infants under one month old the description being "Under one month." Bisected, the Column (C) has the words "years" and "months" as sub-heads, and its filling up should present little difficulty.

"**Marriage**" or "**Orphanhood.**"—The introduction of the letter "D" in case of a marriage dissolved by divorce is a novel item under this heading; also the instruction:—For children aged under 15 write "Both alive," if both parents be alive; "Father dead," if father be dead; "Mother dead," if mother be dead; or "Both dead," if both parents be dead. In the Scottish Schedule these queries are in Column (E), and they are very explicit.

Increased by the Great War, the problem of Orphanhood involves the character of a considerable number of the young, precisely what number the Census will reveal. For parental nurture, the discipline of the home, and bringing up with brothers and sisters, there is no substitute; no training can quite take the place of what is received in the best home atmosphere, but "boarding-out" is believed to be generally successful in Scotland in the cases of children who come under parish supervision.

Column **(M)** is headed "**NATIONAL HEALTH INSURANCE,**" and quite a new feature in the Scottish Census is the question—Have you a right to benefit under the National Health Insurance Acts?

The National Insurance Act of 1911 has a very comprehensive title, implying its purpose of dealing with two of the greatest problems in the world, for its full title is—"An Act to provide for Insurance against Loss of Health and for the Prevention and Cure of Sickness, and for Insurance against Unemployment, and for purposes incidental thereto."

In the Census Schedule **(A)** for Scotland, 1921, which is the ordinary form for a household, the sub-heading says—If person has the right to **MEDICAL BENEFIT** under the **National Insurance (Health) Acts**, write "**YES.**" If **not**, write "**NO.**"

National Insurance Areas were created in terms of the Act and of its application to Scotland. All Burghs with populations of over 20,000 taken separately, and the Burghs of Dumfries and Maxwelltown taken together, became Burghal Areas under the Act. Clackmannan and Kinross, Elgin and Nairn, were taken jointly as County Areas, and each of the remaining Counties became County Areas, of course exclusive of the Burgh Areas. The Burghal Insurance Areas numbered 27, and the County Insurance Areas numbered 31. From the Census Report it is seen that, at the Census of 1911, the Burghal Insurance Areas had an average population of 88,044, and the County Insurance Areas of 76,894; four of the largest Burghal Areas being Glasgow, 784,496; Edinburgh, 320,318; Dundee, 165,004; and Aberdeen, 163,891; and four of the smallest, Arbroath, 20,647; Stirling, 21,200; Dumbarton, 21,989; and Dumfries *cum* Maxwelltown, 22,211. The County Areas varied in population from Bute, 18,186, to Lanark, 309,841.

Under amending Acts, the measure (in its two parts of Health and Unemployment) has been extended until more than fifteen millions of workers in the United Kingdom are

included in the scheme. But these insured persons are all over the country, and they are intimated to the Insurance Commission for Scotland (now the Scottish Board of Health) by various Societies. There is considerable mobility among the people, which means that the Scottish Board of Health, while it has information as to numbers through the various Societies, finds it difficult, owing to the large number of removals, to ascertain the numbers in each area. By the information to be collected in the Census Schedule, it will be possible to learn the precise number of persons returned as entitled to Medical Benefit present in every part of Scotland on Census day.

"IS A STATE MEDICAL SERVICE DESIRABLE?"

Both in England and in Scotland this question is being discussed generally. The query put at the Census time will bring the subject, at least in some measure, into every household throughout Scotland.

Public Health is now admitted to be well within the province of the State, although (excepting of course the medical service provided under the Poor Law) it is only about threequarters of a century since the beginning of Public Health work. It will be remembered that Medical Officers of Health in times not so long past were called "Drain" Doctors. In the last twenty years remarkable advances have been made in the service of Public Health, and the pace to-day promises to increase, especially in the great object of the prevention of disease.

Requirements as asked in Headings of the CENSUS SCHEDULE (A) FOR 1921

The form has thirteen Columns, numbered (**A**) to (**O**).

Column (**A**).—**NAME and SURNAME** of every person alive at midnight on **Sunday, 24th April, 1921.** Head of the Family is put first, then Wife, Children, Relatives, Visitors, Boarders, Servants.

Column (**B**).—**RELATIONSHIP to Head of Household.** State whether "**Head,**" or "**Wife,**" "**Son,**" "**Daughter,**" or other Relative, "**Visitor,**" "**Boarder,**" **or** "**Servant.**"

Column (**C**) asks **AGE** in years and months. Child "UNDER ONE MONTH" to be so described.

Column (**D**) requires **SEX** to be indicated by the initial letter for male and female: "**M.**" or "**F.**"

Column (**E**).—**MARRIAGE. ORPHANHOOD. If 15 and over** write "SINGLE," "MARRIED," "WIDOWED," or if marriage dissolved by divorce, write "**D.**"

If under 15 write "BOTH ALIVE," if both parents be alive; "FATHER DEAD," if father be dead; "MOTHER DEAD," if mother be dead; or "BOTH DEAD," if both parents be dead.

Columns (**F**) and (**G**) require particulars regarding **BIRTHPLACE and NATIONALITY**: Persons not born in the **United Kingdom** asked to state whether **Visitor** or **Resident** in this Country, and if born in a Foreign Country to state nationality, *e.g.*, "**British Born,**" "**Naturalised British Subject,**" "**French,**" "**German,**" "**Russian.**"

Column (**H**) is headed **GAELIC**, and it is to be filled up by the letters "**G**" or "**G and E**" for persons, of 3 years and upwards, who speak, respectively, Gaelic only or Gaelic and English.

Columns (**K**) and (**L**) are headed **OCCUPATION and EMPLOYMENT**; with the sub-heads of "**Personal Occupation**" and "**Employment,**" in each case having the direction to—"See Instructions on the back of the Schedule."

The **Occupation** should be stated in Column (**K**) whether the Worker is at work or not at the time of the Census. In Column (**L**), if at present out of work, Name of last Employer is to be stated; adding "**Out of work.**"

The **Name and the Business of Employer** in Column (**L**) are required for classifying the persons employed according to the Industry or Service with which their work is connected; and therefore the Business should be described precisely; examples given being "Iron Rolling Mills," "Textile Machinery Makers."

The Instructions for filling up the Occupation Columns are much the same as in the English form. Reference may, accordingly, be made to these Instructions, as appended herein to the Chapter on the Census in England.

Column (**M**), as already indicated, asks if person entitled to **MEDICAL BENEFIT** under **National Health Insurance.**

Columns (**N**) and (**O**) require, respectively, **number and ages of all living children, and step-children, under 16,** "whether enumerated on this Schedule or not, *i.e.*, whether residing as members of this household or elsewhere."

II.—METHOD OF COLLECTION

Steps in the Collection are the Plan of Division, the Census Schedule, and the Enumeration Book.

Plan of Division.—All over Scotland the Registrars of each Registration District divide their areas into suitable Enumeration Districts.

The ideal size is an Enumeration District in which the Schedules may be collected by one Enumerator in a single day.

In accordance with the Instructions to Registrars as to formation of Enumeration Districts, it is desirable to retain, so far as suitable, the same Enumeration Districts as were used in the previous Census. Registrars are, however, invited to make suggestions as to rearrangements of Enumeration Districts where they consider that there are advantageous reasons justifying such changes.

Ordnance Maps are supplied by the Registrar-General on requisition.

Local Subdivisions form the basis of the Plan of Division. Such Divisions and Administrative Areas are nine in number :—

1. Civil Parishes and Parish Wards.
2. Ecclesiastical Parishes, *Quoad Sacra* Parishes.
3. Parliamentary Constituencies.
4. Burghs and Wards of Burghs.
5 to 8. Special Water, Drainage, Scavenging, and Lighting Districts, useful for various statutory purposes; and
9. Inhabited Islands.

In a considerable number of cases the boundaries of Civil Parishes do not coincide with the boundaries of Ecclesiastical Parishes. This divergence was caused chiefly (if not entirely) owing to alterations in various Civil Parishes having been made under authority of the Local Government Acts; by orders of the Boundary Commissioners and of the Secretary for Scotland; these alterations not affecting the Ecclesiastical Parishes.

The size of Enumeration Districts is determined mainly, as already indicated, by the time employed in the Collection of Schedules, the work being such as may be overtaken in one day, but not generally more than one day. A full and fair day's work is perhaps an acceptable description of the Enumerator's duty of collecting and checking on the spot as far as possible the Schedules pertaining to an Enumeration District.

Public Institutions.—Special arrangements are made for the enumeration of Residents in Poorhouses and Lunatic Asylums, Prisons and Hospitals. Tendency is exhibited to-day towards the avoidance of designations apt to occasion pain to sensitive minds; also there is perhaps some increase in the belief that mental disease may be cured. Hence we have the desire to describe these magnificent villages, Bangour and Kingseat, as Mental Hospitals. Recently I visited Kingseat Mental Hospital and certainly the rest and the hygienic *régime* and healthy surroundings should work in the direction of restoring the

mental equilibrium of the some 600 inmates, who will fall to be enumerated by "the governor, master, or chief resident officer."

The person in charge is the Enumerator in all cases where the establishment is one in which upwards of 100 persons usually reside. In Barracks containing more than 100 soldiers, the Barrack-Master or Quartermaster shall be the Enumerator.

All Public Institutions and large Establishments, including Common or "Model" Lodging-Houses of every kind; large Hotels, Inns, Hostels, and the like, which require Schedules to hold more than 20 names, have to be entered on a form early in the Census year; also the number of Schedules for Vessels for the enumeration of any persons in inland waters on boats and barges.

An Enumeration Book for Public Institution is conveyed by the Registrar to the Resident Governor or Head, who is then informed that it is his duty to make a correct return of all the officers, inmates, and all other persons in the Institution. After Census day the Registrar procures from each Establishment the Book properly filled up by the Head, with the relative Claim for Allowances.

The Plan of Division is submitted to the Registrar-General for examination and approval.

At the same time the Return of Public Institutions is transmitted in duplicate, and one copy is returned to the Registrar.

In the special cases of six of the largest towns, the assessor is associated with the revision of the Plan of Division, and the subdivision of each principal Census Division into suitable Enumeration Districts.

A List of the Enumerators proposed is submitted by each Registrar, who selects his own Enumerators.

An Enumerator is required to be a person of some address, tact, and intelligence, who can write well, and is between 18 and 65 years of age.

Registrars pick out persons of reliability and good character from the applicants for the work. Women are not ineligible.

To each Enumerator the Registrar gives personally very

careful and complete directions, and a detailed description of his Enumeration District.

The duties of the Registrar thus consist in making arrangements for the efficient enumeration of every person in his Registration District, and ascertaining that the Enumerators do their part well and promptly.

The *Enumerator* leaves a Schedule with every Occupier of a house in his district during the week previous to Census Sunday, keeping a record in the "Enumerator's Memo. Book" of each Schedule given out, with some other particulars.

And he sees that all the Schedules left are accounted for on the Monday following Census Day, when he collects the completed Schedules; sometimes requiring to aid the householder in filling in details.

The Enumerator himself enters in the Schedule the number of Windowed Rooms.

Uninhabited (unlet) and unoccupied houses, and houses being built in his district are mentioned by the Enumerator; their general character being indicated.

In order to preserve the continuity of our national Census figures, the *de facto* population is always obtained.

It is the enumeration of the people on a given area at a given time; and it affords an instantaneous picture of the population of Scotland.

Enumeration Book.—The Schedules having been completed in every detail, the Enumerator in Scotland (though not in England or Ireland) copies carefully all the particulars from each Schedule into an Enumeration Book; making, finally, a summary of its contents, showing exactly the total population, male and female, houses, &c., in his district.

In this detail differing from Ireland and England, Scotland adheres to the use of the Enumeration Book. It is a convenience in coding occupations, and does away with the necessity of constant reference to bulky bundles of Census

Schedules, unwieldy and heavy to handle; nor are the contents of the separate Schedules generally so clearly written as in the Enumeration Books, the majority of which are engrossed with commendable care and clearness of caligraphy.

On Census Collection Day the Registrar watches vigilantly the progress of Enumerators. Next day Enumerators report collection of Schedules.

A week later or thereby the Enumerators deliver to Registrars all the Schedules collected, their Instruction and Memorandum Books, and their completed Enumeration Books.

At the same time the Enumerators lodge with the Registrars their Claims for Allowances.

About twenty days after their Collection, the Schedules are all forwarded to the Registrar-General by the Registrar, who, after examining the Enumeration Books with the Schedules, makes a summary of the whole. From the "Registrar's Summary" the Census Office prepares the Preliminary Report, giving the total population of Scotland.

Tabulation.—All the Enumeration Books and Schedules having reached the Central Office, the Tabulation and the Summarising of the information collected is commenced under the direction of the Registrar-General.

The Scottish Census of 1911 was taken under the direction of Sir James Patten MacDougall, formerly Chairman of the Local Government Board for Scotland, with Dr. James Craufurd Dunlop, as Superintendent of the Statistical Department of the Registrar-General's Office. Fresh features of this enumeration and tabulation were the additional personal information obtained as to the fertility of existing marriages, and the use of mechanical tabulation. In the Second Volume of the Report, it is remarked that the use of machines greatly facilitated the tabulation by single ages of the population, and of the birthplaces of Gaelic speakers, given in that volume; also, in the same volume, the elaborate tabulation of the Industries of the population,

which was only made feasible by the adoption of mechanical tabulation.

In Appendix B (page 259) of the General Report for the English Census of 1911 there appears a very lucid description of the "Method of Tabulating Census Results," giving details, illustrated by representations of the Cards — Population, Personal, and Fertility, used in the process—the system adopted being the Hollerith. Three kinds of Machines, Punching, Sorting, and Automatic Counting Machines were used in largest number in England; the full number of machines actually in use at one time being 68 Key Punches, 8 Gang Punches; 15 Sorting Machines; 8 Counting Machines, and 2 Tabulating Machines. An old schoolmaster to whom I described the great advantage of these ingenious inventions observed, "It was like witchcraft." Certainly the method is a very marked advance of the "box-making" upon an immense Occupation Sheet, which was the previous means of tabulating, each "box" consisting of five strokes of the tiniest character made with the finest pointed pens |—|. But the newspaper press is rather too elliptical in describing such an aid as "the Machine that takes the Census." Though, when it is taken, such a machine much expedites the preparation and publication of the increasingly important and valuable information given to the world in the Census Report.

III.—THE CENSUS REPORTS, AND THEIR VALUE

In this chapter there has been sketched the method of Collection. It is purposed here to write briefly of the Results; and of these the first is the Preliminary Report. That publication is based upon the Summaries transmitted by each Registrar to the Registrar-General. Being in the nature of an Interim Report, the Preliminary Report is superseded by the later Census Report; but the difference or net error in the total population of Scotland as given in the final figures

obtained after revisal of the Census is generally very small, amounting in 1901 and 1911 respectively to only 103, and 14. Published a few weeks after the date of the Census, the Preliminary Report is thus of a merely provisional character, dealing only with the figures of the more important administrative divisions.

Volume I. of the Census Report, 1911, dealt more especially with information required for local administrative purposes. Vol. II. contained information applicable to Scotland as a whole. Vol. III. was devoted to special Statistical Studies, such as the Fertility of Married Women.

Vols. II. and III. each appeared as one book. But Vol. I., giving much information of local interest, was published, for the sake of expedition and convenience, in 37 separate parts, of which the first 4 related to the Cities of Edinburgh, Glasgow, Dundee, and Aberdeen, and 33 to the Counties, exclusive of these cities.

The County parts were issued in alphabetical order. Real or typical Scotland begins north of the Forth; and it is proposed here to give a brief notice of Part 17 of Vol. I., summarising the Returns for the County of Fife.

Historically and industrially, Fife is most interesting. Its semi-regal and self-contained character has for centuries given it the right to be called the Kingdom of Fife. It was a chief part of the ancient Pictavia; and, until the erection of the Forth and Tay Bridges, its peninsular shape in a measure cut it off from contact with its neighbours, tending to give the inhabitants a special character.

THE COUNTY OF FIFE

Fife is one of the Counties of Scotland which have greatly increased in population during the intercensal period. In 1901 its population was 218,840, it is now 267,739, and thus the intercensal increase amounts to 48,899, or 22·3 per cent. The only County in

Scotland where a greater increase of population is found is Lanark, and the only one in which a higher rate of intercensal increase is found is Dumbarton, where the rate is 22·8, or 0·5 per cent. more than in Fife.

Of the population of Fife on Census day, 132,133 were males, and 135,606, females. The male population is 27,009, or 25·7 per cent., more than in 1901, and the female population, 21,890, or 19·2 per cent., more than in that year.

Population at each Census since 1801.

Census.	Population.			Intercensal Change.		
				Actual.		
	Both Sexes.	Males.	Females.	Both Sexes.	Males.	Females.
1801	93,743	42,952	50,791	...	...	...
1811	101,272	45,968	55,304	7,529	3,016	4,513
1821	114,556	53,540	61,016	13,284	7,572	5,712
1831	128,839	60,781	68,058	14,283	7,241	7,042
1841	140,140	65,715	74,425	11,301	4,934	6,367
1851	153,546	73,175	80,371	13,406	7,460	5,946
1861	154,770	72,608	82,162	1,224	-567	1,791
1871	160,735	75,127	85,608	5,965	2,519	3,446
1881	171,931	80,893	91,038	11,196	5,766	5,430
1891	187,346	89,135	98,211	15,415	8,242	7,173
1901	218,840	105,124	113,716	31,494	15,989	15,505
1911	267,739	132,133	135,606	48,899	27,009	21,890

In 1801, the date of the first Census of Scotland, the population of this County amounted to 93,743, and by all subsequent Censuses it is found to have increased. In 1811 the population exceeded 100,000; in 1851 it exceeded 150,000; in 1891 it exceeded 180,000; in 1901 it exceeded 200,000; and now it is upwards of 250,000. The largest intercensal increases are those found by this Census, 48,899; in 1901, 31,494; and in 1891, 15,415; and the smallest increases are those found in 1861, 1224; in 1871, 5965; and in 1811, 7529. The highest rates of intercensal increases are those found by this Census, 22·34, and by those of 1901 and 1821, which

were 16·8 and 13·1, respectively; and the lowest rates are those found by the Censuses of 1861, 0·8; of 1871, 3·9; and of 1881, 7·0.

The total area of Fife is 314,952 acres, of which fully four-fifths is under cultivation.

It has more Royal Burghs (28) than any other County.

Its great extent of seacoast and its situation make the salmon and deep-sea fishing of importance; Anstruther being the centre of the deep-sea fishing.

But it is not to agriculture and fishing that Fife owes her remarkable growth of population. Coal-mining is the cause of the great development of this very progressive County.

A charter granted to the Monks of Holyrood by the proprietor of the coal-works of Carriden in the twelfth century is the earliest mention in Scotland of the working of coal. Connected under the Forth with that of Midlothian, the Fife coal-basin may be divided into the coal-fields of Dunfermline, Cowdenbeath, Cardenden, and Lochgelly; and those of Wemyss, Dysart, Buckhaven, and Methil. At Methil the North British Railway Company have erected a harbour costing some three-quarters of a million sterling or more, from which the Wemyss coal is chiefly exported. Gas coal of good quality comes from Methil; the principal house coals, including some anthracite, being found in the Dunfermline district. Though upon a much smaller scale, coal is also wrought in various places in the north-eastern part of the basin: at Largoward, Falfield, Radernie, and Ceres.

One of the largest and richest in Scotland, the coal-field of Fife is worked at great depth, about two miles, for example, at Cardenden; and mines appear from time to time at fresh spots as recently near Culross.

Most of the chief coal districts are now linked up by railways and electric tram-cars.

From the Census Report of 1911 we learned that the group of **Occupations** to which the largest number of males are re-

turned is that connected with Mining, for it includes 26,634 or 31·5 per cent. of the total occupied, a number which is 11,049, or 70·9 per cent. more than in 1901. Women in Mining Occupations numbered 919. They were all Workers above Ground, and were 402 more than in 1901. These increases indicate the **Coal Industry** to be thriving. In that **Industry** indeed 28,577 out of the 84,443 occupied Males were employed in 1911; and next to the Coal Industry, Agriculture gives most employment, 6873 of the occupied males being returned as employed in it.

It will be observed that the numbers actually occupied in working in Coal-mining, for example, are less than those returned as engaged in that Industry, and in others, as set forth in the relative Tables: the figures as to Industries including in terms of Col. 11 of the Census Schedule for 1911 those connected with Industries defined as the Occupation of the Employer.

Linen and Linoleum are two leading manufactures. From the finest damask to the coarsest "ducks," linen cloth is made at Dunfermline, Kirkcaldy, Cupar, Falkland, Kingskettle, and Newburgh. The largest flax-spinning mill is at Prinlaws, near Leslie. Paper is made at Inverkeithing, Guardbridge, Markinch, and Leslie. At Burntisland there is a small distillery; another at Auchtertool; and a large one at Cameron Bridge.

Dunfermline.—Perhaps the most interesting of the 28 Burghs of Fife is Dunfermline, population 28,103, being an increase of 2853 over its numbers in 1901; the benefactions of Andrew Carnegie to his birthplace being considerable and permanent. His native town has a special character—musical, residential, and educational. At the entrance of the Glen which he gave to Dunfermline there is a statue of Carnegie. The Carnegie Public Baths and Free Libraries are palatial. Very interesting are the remains of the Abbey and Palace at Dunfermline, which has a fine situation upon a hill-slope.

Occupations.—Mining occupied 1956 of the males enumerated in 1911 in the Burgh of Dunfermline. The Coal Industry gave employment, in all, to 2054 males.

Kirkcaldy.—This progressive Burgh increased 5522, and in 1911 had a population of 39,601. Greatest centre in Scotland of the Linoleum Industry, most of the 2564 men and 99 women engaged in "Other Defined Industries," in Table XXIV. B. of Part 17 of the Census Report, are employed in floorcloth manufacture, of which Kirkcaldy has some seven large factories.

The Table gives 1756 men and 15 women under Coal Industry, and 947 men and 29 women under Iron Manufacture. Cabinet-making is a considerable Occupation in Kirkcaldy, and under the heading of Wood and Furniture Industries appear 548 men and 68 women. Brick, Cement, Pottery and Glass Industries engage 312 males and 189 females. The Linen Industry has a preponderance of females, 2319 to 620 males.

Kirkcaldy, as every one knows, means the Kirk of the Culdees, a name reminiscent of Christianity introduced here by St. Columba. Here Adam Smith was born, and here, after his professorial and continental experiences, he wrote (1757-1776) the "Wealth of Nations." With a Free Library attached, the Adam Smith Memorial is a fitting memorial of the founder of Political Economy, and his influence has helped to stimulate and shape the development of Fife generally, and of Kirkcaldy in particular, for his native town has exhibited varied economic enterprise, as evidenced in its numerous industries and in its recent municipal finance.

It is not intended to give anything in the nature of a complete summary of the County part of the Census Report relating to Fife. But what is desired to be emphasised is the value of the Population statistics, and especially of the employment information massed into telling figures, as in the following Table for the whole County :—

County of FIFE.—Numbers engaged in the Principal Industries and Services

Industries.	Males.	Females.	Industries.	Males.	Females.
1. Civil Service	660	213	30. Brick, Cement, Pottery, Glass—Industries	632	279
2. Local Government Service	1,915	1,096	31. Chemical and Rubber Industries	460	247
3. Naval and Military	435	...	32. Leather and Leather Goods Manufacture	149	14
4. Clerical Profession and Service	341	43	33. Paper and Stationery Manufacture	1,159	687
5. Legal Profession and Service	411	103	34. Printing, Publishing, and Allied Industries	433	253
6. Medical Profession and Service	199	309	35. Cotton Industry	19	102
7. Teaching Profession and Service (not under Local Authority)	129	193	36. Wool Industry	30	79
8. *Other* Professions and their Services	710	166	37. Silk Industry	1	1
9. Domestic and Institution Service	1,524	6,526	38. Linen Industry	2,820	8,267
10. Hotel, Eating House Service	770	450	39. Hemp, Jute, Rope, Mat—Industries	527	922
11. Commerce	417	223	40. Thread, Hosiery, and other Textile Industries	92	262
12. Banking and Insurance	637	17	41. Bleaching, Dyeing, and Allied Industries	328	289
13. Railway Service	3,172	15	42. Dealing in Drapery and Textiles	609	485
14. Road Transit	1,193	17	43. Hat Making and Selling	21	322
15. Railway, Road, Canal, Harbour — Construction	2,119	...	44. Tailoring, Dressmaking	840	1,960
16. Coach, Motor, Cycle—Building	287	19	45. Bootmaking	588	145
17. Shipping and Docks	1,589	6	46. *Other* Dress Industries	286	156
18. Shipbuilding	161	2	47. Preparation and Sale of Provisions	4,582	1,389
19. Agriculture	6,873	1,442	48. Tobacco Manufacture and Sale	47	66
20. Fishing	1,838	114	49. Brewing, Distilling	415	24
21. Coal Industry	28,577	962	50. Gas, Water, Electricity —Supply (not under Local Authority)	187	2
22. Shale Industry	24	...	51. Drainage and Sanitary Service (not under Local Authority)	14	...
23. *Other* Mining Industries	62	...	52. General Shopkeeping and Dealing	284	348
24. Quarrying	993	...	53. *Other* Defined Industries	2,983	157
25. Iron Manufacture	2,771	94	54. Undefined Industries	2,357	336
26. Metal Manufacture other than Iron	226	13			
27. Precious Metals, Jewels, Musical and Scientific Instruments—Manufacture and Sale	540	31			
28. House, &c., Building and Decorating	4,703	29			
29. Wood and Furniture Industries	1,304	124	**Total Occupied**	**84,443**	**28,999**

1801.—It is interesting to contrast the condition of Fife in 1801 with the wealth of Industries detailed in the foregoing Table. The Census statute of 1800 was—An Act for taking the Population of Great Britain and the Increase or Diminution thereof. Scotland in 1801 had a population in this Report of 1,599,068, corrected to 1,608,420, and Fife of 93,743, of whom 9651 were returned as being engaged in Agriculture, and 17,300 in Trade, Manufacture, and Handicraft. Agriculture, Trade, and "Others" were the only three divisions then used; and "Others" in 1801 included 59,866 of the County's whole population.

There were 17,065 Houses in the County inhabited by 22,298 Families, 42,952 persons being males, and 50,791 females. Uninhabited houses numbered 766.

Figures are given for the four Divisions of Fife:—

Cupar District has 2621 persons under Agriculture, and 4384 under Trade.

St. Andrews District has 3220 persons under Agriculture, and 3982 under Trade.

Kirkcaldy District has 2271 persons under Agriculture, and 5733 under Trade.

Dunfermline District has 1539 persons under Agriculture, and 3201 under Trade.

Scarcely legible are some of the figures in the copy of the 1801 Report consulted. Simple indeed are the forms in which the results are given; the whole Report for Scotland occupying only about 40 pages. Embodying a more complex civilisation and larger numbers, the County part for Fife alone in 1911 fills over 200 foolscap pages; full of interest and value to all interested in the steady progress of this Eastern portion of Pictavia, the inhabitants of which were named Horesti by the Romans, of whom traces remain to this day in camps and vestiges of Roman buildings. For Fife is rich alike in archæology and in industry, in old memories and Abbey and Palace ruins, and in manifold present activities, as re-

vealed in the Occupation Columns of the national numbering.

For various reasons several other Counties, as well as Fife, have advanced remarkably since 1801; among such are Aberdeen, Ayr, Dumbarton, Renfrew, Forfar, Edinburgh, and Lanark. But space here does not permit of dwelling on the causes of their prosperity, as indicated by accretions of population depicted in "Table A8," in Volume II. of the Census Report of 1911, in which Volume the results of the Census of the whole of Scotland are collected in comprehensive and convenient form. It is largely left to the reader's own knowledge and fancy to throw light upon official Tables; it being considered the primary duty of Census Reports to record facts rather than to draw inferences from them, the latter (as mentioned on page iv. of Vol. II. referred to) not being the function of those charged with compilation and tabulation, who, however, have made the Tables full and self-explanatory, as exemplified in the following tabular statement of the increases in all the Counties since the first Census:—

CENSUS REPORT, 1911—TABLE A8.

INCREASE OR DECREASE OF POPULATION IN THE COUNTIES SINCE 1801.

COUNTIES.	POPULATION 1911.	POPULATION 1801.	Difference.	Increase— % of Total.
SCOTLAND.	**4,760,904**	**1,608,420**	**3,152,484**	**100·000**
Aberdeen	312,177	121,065	191,112	6·062
Argyll	70,902	81,277	−10,375	−0·329
Ayr	268,337	84,207	184,130	5·841
Banff	61,402	37,216	24,186	0·767
Berwick	29,643	30,206	−563	−0·018
Bute	18,186	11,791	6,395	0·203
Caithness	32,010	22,609	9,401	0·298
Clackmannan	31,121	10,858	20,263	0·643
Dumbarton	139,831	20,710	119,121	3·779
Dumfries	72,825	54,597	18,228	0·578
Edinburgh	507,666	122,597	385,069	12·215
Elgin (or Moray)	43,427	27,760	15,667	0·497
Fife	267,739	93,743	173,996	5·519
Forfar	281,417	99,053	182,364	5·785
Haddington	43,254	29,986	13,268	0·421
Inverness	87,272	72,672	14,600	0·463
Kincardine	41,008	26,349	14,659	0·465
Kinross	7,527	6,725	802	0·025
Kirkcudbright	38,367	29,211	9,156	0·290
Lanark	1,447,034	147,692	1,299,342	41·216
Linlithgow	80,155	17,844	62,311	1·977
Nairn	9,319	8,322	997	0·032
Orkney	25,897	24,445	1,452	0·046
Peebles	15,258	8,735	6,523	0·207
Perth	124,342	125,583	−1,241	−0·039
Renfrew	314,552	78,501	236,051	7·488
Ross and Cromarty	77,364	56,318	21,046	0·668
Roxburgh	47,192	33,721	13,471	0·427
Selkirk	24,601	5,388	19,213	0·609
Shetland	27,911	22,379	5,532	0·175
Stirling	160,991	50,825	110,166	3·495
Sutherland	20,179	23,117	−2,938	−0·093
Wigtown	31,998	22,918	9,080	0·288

GROWTH OF SCOTLAND'S POPULATION

The question of the population of Scotland emerged from the region of guessing in 1755, when the returns made to Dr. Webster by the Clergy reached a total of 1,265,380. This number was confirmed by the figures of the first decennial Census, forty-six years later, which revealed a population of 1,608,420.

Made at the time of the Union in 1707, the round number estimate of one million may have been on the small side. Nor does it seem safe to accept half that number as an accurate estimate for the end of the fifteenth century. Yet 500,000 has been taken as the probable population at that period, of which 20,000 was assigned to Edinburgh, 9000 to Perth, and 4000 each to Aberdeen, Dundee, and St. Andrews.

One of the leading ports north of the Forth, St. Andrews, importing wood and coal, and exporting agricultural produce, is said to have had towards the end of the sixteenth century about 14,000 inhabitants; but its trade declined, and 3263 was the population of that ancient University town in 1801 at the first Census; when Edinburgh, with Leith, had reached 81,404; Perth, 16,388; Dundee, 27,396; Aberdeen, 26,992; Paisley, 25,058; Greenock, 17,190; and Glasgow had risen rapidly to 77,385. To-day its population, with extended area, is probably 1,140,000; and similarly, Edinburgh, by extension and by absorbing Leith has about half a million.

Cities.—Massing of population into growing aggregations is the outstanding feature emphasised generally by all recent Censuses; and Glasgow is the greatest example in Great Britain of the connection between the evolution of Industry and increase in numbers. It is a movement of concentration. Then comes crowding, followed by a tendency to leave the centre and reside near the circumference, resulting in expansion

and annexation. Thus have grown the Cities of "Greater" Edinburgh and Glasgow, and "extended" Aberdeen and Dundee; and the Returns for these four developing Cities appear as the first parts of the Census Report.

From 1801-1911, Glasgow contributed considerably to the total increase in the population of Scotland, and from the foregoing County Table (A8) it will be observed that 41·216 of the whole increase in Scotland since the first Census has taken place in Lanark, that county having added, in the 110 years, 1,299,342 to its first enumeration of 147,692.

Tables A1 and A2 which follow should be read together.

Census Report, 1911—Table A1.

POPULATION OF SCOTLAND AT EACH CENSUS—1801 TO 1911.

Census.	Both Sexes.			Males.			Females.			Ratio of Females to each 100 Males.
	Number.	Decennial Increase.		Number.	Decennial Increase.		Number.	Decennial Increase.		
		Actual.	Per Cent.		Actual.	Per Cent.		Actual.	Per Cent.	
1801	1,608,420	...	...	739,091	...	...	869,329	...	...	117·6
1811	1,805,864	197,444	12·3	826,296	87,205	11·8	979,568	110,239	12·7	118·5
1821	2,091,521	285,657	15·8	982,623	156,327	18·9	1,108,898	129,330	13·2	112·8
1831	2,364,386	272,865	13·0	1,114,456	131,833	13·4	1,249,930	141,032	12·7	112·1
1841	2,620,184	255,798	10·8	1,241,862	127,406	11·4	1,378,322	128,392	10·3	110·9
1851	2,888,742	268,558	10·2	1,375,479	133,617	10·8	1,513,263	134,941	9·8	110·0
1861	3,062,294	173,552	6·0	1,449,848	74,369	5·4	1,612,446	99,183	6·6	111·2
1871	3,360,018	297,724	9·7	1,603,143	153,295	10·6	1,756,875	144,429	9·0	109·6
1881	3,735,573	375,555	11·2	1,799,475	196,332	12·2	1,936,098	179,223	10·2	107·6
1891	4,025,647	290,074	7·8	1,942,717	143,242	8·0	2,082,930	146,832	7·6	107·2
1901	4,472,103	446,456	11·1	2,173,755	231,038	11·9	2,298,348	215,418	10·3	105·7
1911	4,760,904	288,801	6·5	2,308,839	135,084	6·2	2,452,065	153,717	6·8	106·2

Note.—The respective decennial Census dates were as follow :—

1801, March 10th.	1821, May 28th.	1841, June 7th.	1861, April 8th.	1881, April 4th.	1901, March 31st.
1811, May 17th.	1831, May 29th.	1851, March 31st.	1871, April 3rd.	1891, April 5th.	1911, April 2nd.

Table A2.

LOSS OF POPULATION BY MIGRATION — 1861–1911.

Intercensal Period.	Natural Increase of Population.	Increase as ascertained by Census.	Amount of Natural Increase lost by Migration.	Per Cent. of Natural Increase lost by Migration.
	BOTH SEXES.			
1861–1871 . .	414,726	297.724	117,002	28·3
1871–1881 . .	468,883	375,555	93,328	19·9
1881–1891 . .	507,492	290,074	217,418	42·8
1891–1901 . .	499,812	446,456	53,356	10·7
1901–1911 . .	542,843	288,801	254,042	46·8
	MALES.			
1861–1871 . .	225,018	153,295	71,723	31·9
1871–1881 . .	251,191	196,332	54,859	21·8
1881–1891 . .	273,390	143,242	130,148	47·6
1891–1901 . .	266,784	231,038	35,746	13·4
1901–1911 . .	285,299	135,084	150,215	52·7
	FEMALES.			
1861–1871 . .	189,708	144,429	45,279	23·9
1871–1881 . .	217,692	179,223	38,469	17·7
1881–1891 . .	234,102	146,832	87,270	37·3
1891–1901 . .	233,028	215,418	17,610	7·6
1901–1911 . .	257,544	153,717	103,827	40·3

OCCUPATIONS AND INDUSTRY

As already emphasised, Occupational Tables portray the stage of Industry attained by the nation, and these Tables—XXVI. to XXXII. in Vol. II. of the 1911 Census Report—deal essentially with the aggregate numbers of persons in Scotland with remunerative occupations; and in Tables XXXVI. and XXXVII. the occupied are tabulated under Industries, Table XXXIII. giving an Alphabetical List of all the Occupations.

Of the highest statistical, sociological, and industrial value, these Tables are self-explanatory, showing the Occupations by which we all live. Table XXVI. summarises the Occupations of males and females, separately, aged 10 years and upwards in eleven groups of ages, and by status, that is, as employed and employer. For instance, a glance at the first age column gives us assurance that few indeed to-day are the children aged 10 to 13 who are doing any paid work—only 1016 boys and 590 girls in all Scotland.

Agriculture decreased; professional, commercial, and industrial occupations increased, as also the unoccupied or unproductive classes, with the practice of allowing children to remain at school until a higher age.

Census Reports, read intelligently, reveal the present condition of the working classes, using that phrase in its fullest sense.

A history of the Evolution of Industry from 1801 to 1921 might well be based upon the results of the occupation columns of the Census Schedule as massed into the telling Tables in the Census volumes. Indeed, no history of civilisation in Scotland could well be written without these decennial records of the march of occupational progress.

Evolution in industry has augmented wealth. It has also generally increased welfare. The people have grown in numbers and in wants. Invention makes each man's work more productive, making limited resources go further to meet growing

social demands, and adding new products to the common stock. More goods are earned by less labour. Industry expands. Trade extends. Organisation improves, making the same amount of labour support more workers. Industry and population are twins who grow together.

Stages of progress are shown at each national stocktaking, the tendency of Western civilisation being toward specialisation and combination. Grading involves a greater number of descriptions of employment, hence every Census finds new occupations arising, and a few disappearing. Division of labour entails stratification; social evolution comes from the progress of industry; the evolution of occupations taking us inevitably into the question of the evolution of Society generally, and leading on to a practical philosophy of population.

CHAPTER VI.

FERTILITY OF MARRIAGE, ETC. CONCLUSION

In the foregoing Chapters an attempt has been made to treat the Census from a broad standpoint, and to indicate that all the motives, material and moral, intellectual and spiritual, determining human conduct tend to affect the all-important question of population.

Standard of comfort is an obvious factor; most parents have the power to produce more children than they can well provide for, and there is, accordingly, a reserve power of multiplication in most civilised communities. The rate of increase is much greater where the conditions are altered, as in French Canada. Difficult and delicate moral questions arise regarding self-restraint. Malthus really cut away his first line of argument by introducing in the Second Edition of his "Essay" the principle of self-restraint, moral or prudential. Based on pre-Census *data*, the "Essay" in its first form was convincing in argument, and in its later form was inconclusive, but based on true facts; Malthus was mainly the mouthpiece of his time in decrying Godwin's Utopia, he was a reactionary against the dreams of progress and perfectibility, without which mankind would degenerate. His first theory of population did not include self-restraint; his second essentially depended on it, but he failed to rise above his dismal original theory, now largely discredited.

Population tends naturally to equilibrium. In a well-

ordered community the rate of increase is generally commensurate with the means of subsistence.

In the "Principles of Biology," Spencer says of Human Population in the Future: Any further evolution in the most highly-evolved of terrestrial beings, Man, must be of the same nature as evolution in general. It must be an advance towards completion of that continuous adjustment of internal to external relations which constitute Life.

And asking what direction this more complete moving equilibrium, this better adjustment of inward to outward relations, this more perfect co-ordination of actions is likely to follow, Spencer concludes "that it must take mainly the direction of a higher intellectual and emotional development."

Pressure of population has caused progress in the past. But Man's further evolution will necessitate a decline in his fertility, there being, in the Spencerian view, an antagonism of Individuation and Genesis, which involves the belief that when much nervous energy is expended on self-development there may be less for reproduction. On such a matter statistics have not power yet to shed much light. *Data* regarding Fertility of Marriage operate in that direction. While philosophers dispute about the government of the world, Hunger and Love are performing the task. Already the Spencerian generalisation must be modified. To-day the subject is looked upon in new and stronger lights, but we may fittingly quote the general summary of Spencer: "Changes numerical, social, organic, must, by their mutual influences, operate unceasingly towards a state of harmony."

Fertility of Marriage.—For many years it has been generally understood that the more prudent and prosperous classes have been of diminished fertility. In 1903 Professor Pearson lectured on the subject, and in a memoir in 1906 Dr. Heron exhibited the relation of fertility in man to social status, showing the changes which had taken place during the

last fifty years. I met Dr. Heron in Dundee later, when we talked over this difficult and complex subject, which was tackled in the Census of 1911.

The Census Report for Scotland, Volume III., gives various Fertility Tables based upon returns respecting 680,684 married women out of a total enumerated of 762,835, 82,151 cases being rejected where the wife was aged 45 and upwards at marriage, or where the husband was not enumerated on the same Schedule as the wife, and consequently his age was not stated; and cases were also eliminated in which the returns were obviously incorrect, mostly from the apparent inclusion of children of a first marriage in the stated fertility of a second.

The ages at marriage were obtained by deducting the duration of marriage from the "age last birthday," the years of marriage being stated in the Schedule.

The influence of the woman's age at marriage on the size of the complete family is obviously great; the average number of children in the completed families was found to be 5·49. But the average for the young women was higher, that for the older women being lower. Thus, 9·02 children was average for women 17 at time of marriage, while for women of 40 it was less than one child, 0·86. At 20, 7·86; 25, 5·66; 30, 3·89; and at 35, 2·29.

High correlation was also indicated between the age of the husband at marriage and the number of children born to the marriage; approximately 0·44 to 0·58 for wife's age.

The foregoing figures are taken from a paper read before the Royal Statistical Society (on whose initiative principally the Fertility questions were inserted in the Census Schedule) by Dr. James Craufurd Dunlop, now the Registrar-General for Scotland. As Superintendent of Statistics in the Registrar-General's office, Dr. Dunlop is responsible also for the Statistics as to Fertility, which are very complex, published in Vol. III. of the Report of the 1911 Census (Cd. 7163). To the Tables therein given, and to Dr. Dunlop's Census Study of

Fertility of Marriage in Scotland in the Royal Statistical Society's Journal, February, 1914, reference may be made. Marriage fertility is shown graphically to have fallen since 1861; the average family having steadily decreased.

Decline in Fertility is equally great in England. Comparing 1911 with 1876, the Registrar-General for England and Wales wrote in his detailed Report:—

If the Fertility of Married Women in proportion to their numbers had been as high as in 1876-80, the legitimate births would have numbered 1,273,698 instead of the actual number recorded—843,505. The fall in the proportion of births to the number of women of child-bearing age accordingly amounted to 36 per cent.

One must repeat, however, that an important factor in regard to Fertility is the increasing average age at marriage for both sexes, alike for bachelors and spinsters, widows and widowers.

In regard to the Decline of Fertility in Scotland in recent years, from Vol. III. of the Scottish Report of Census, 1911, one learns that marriages of women aged 20, and taking place in 1864 and previous years, resulted in complete families averaging 8·48 children; for marriages of the years 1865-1869, 8·42; 1870-1874, 8·04; 1875-1879, 7·88; 1880-1884, 7·59; and 7·39 for 1885 and 1886, no corresponding figures for subsequent years being available, because the completion of the fertile period had not been reached. But in concrete form the fertility of marriage for age of wife 21 has fallen from 818 children per hundred marriages to 700. Into the causation of the decreased fertility, the Census Report declines to go, observing that it is a subject on which Census information throws no real light.

"The Fertility of Various Social Classes in England and Wales from the Middle of the Nineteenth Century to 1911" is the title of a lengthy paper read before the Royal Statistical Society in April, 1920, by Dr. T. H. Stevenson, C.B.E., Superintendent of Statistics in the Office of the Registrar-General for

England. In that address Dr. Stevenson points out that the Census of 1911 provided material for analysing the fall in fertility since 1876 by social class, occupation, birthplace, and locality of residence. Not only the rates at which children are born to various sections of the community, but also the varying extents to which these sections successfully rear children can be compared, revealing the total and the effective fertility.

Differences in fertility greatly dominate those in mortality.

Filling more than thirty pages of the *Journal*, the disquisition has seven telling Tables, and it was the subject of a discussion summarised in about a dozen pages. Reference is made to human volition as an agency in the reduction of the nation's fertility. Table VII. gives the Fertility, total and effective, in certain Class I. occupations. All the evidence of the Table points to a continuation within the ranks of Class I. itself of that inverse ratio of fertility to social status which we have seen, concludes Dr. Stevenson, to obtain as between the five great social classes tabulated. . . . The Census Returns suggest the continued application of the rule from one end of the social scale to the other. Therefore one is driven to the conclusion that generally the race is being recruited mostly from the least educated and less intelligent sections of the community ; the lack of fertility in the better classes being (as Dr. Stevenson observes) a formidable fact.

The Fertility questions are discontinued in 1921. In a measure this appears regrettable, for comparative results would have been of more than double value. Complex and difficult the subject undoubtedly is. It was tackled, as we have seen, very thoroughly in the Scottish Census 1911 Report, Vol. III., to which those with a taste for applied mathematics may refer, and to Dr. Dunlop's statistical study referred to. Here one has space only to quote the more important facts established by the Census tabulation, as summarised by Dr. Stevenson in his very suggestive paper; in the discussion on which emerged the opinion expressed by Dr. Dudfield that the State had en-

couraged the fertility of the lower strata by remedial social legislation; maternity grant, free education, free boots, free dinners, and so forth, whereas those in higher classes had to bear the full burden of their own expenses in addition to their contributions towards such State aids.

Dr. Stevenson summarised his paper under ten heads:—

(1) Child mortality varies directly and enormously with the number of children born, and with the rapidity with which they are born.

(2) Child mortality also varies with the age of the mother at marriage.

(3) In order to compare fertility of marriage in the various social classes, allowance must be made for variation in the age at which they marry. When this is done by the method of standardisation described, fertility is found to increase downwards throughout the social scale.

(4) The difference in fertility between the social classes is small for marriages contracted before 1861, and rapidly increases to a maximum for those of 1891-96. The slight subsequent approximation between the classes may be apparent rather than real. The difference in fertility between the social classes is, broadly speaking, a new phenomenon, and on that account the more disquieting.

(5) When the necessary allowances are made the commencement of the decline as measured by the Census fertility returns corresponds in date with the commencement of the fall in the birth rate. This strongly confirms the reliability of the Census figures. Similar confirmation is afforded by close correspondence of the average age at marriage as deduced from the Census figures with that derived from the registration returns.

(6) The following features of the Census figures point towards artificial restraint of fertility as the cause of its decline:—

(*a*) The gradual spread of the decline throughout society from above downwards.

(*b*) The exceptionally low fertility of occupied mothers.

(*c*) The increase in the defect for the higher social classes with increase of duration of marriage up to twenty-five years.

(7) The lowest fertility rates are returned for the most purely middle class occupations—the professions.

(8) The comparatively low child mortality of the less fertile classes goes but a small way to compensate for their low fertility.

(9) The classes which are least fertile in marriage also marry latest in life.

(10) Ante-nuptial conception leads to great understatement of the number of marriages of less than twelve months' duration. Such understatement is the rule amongst all classes where the wife's marriage age is under twenty, and becomes less frequent as the wife's age increases. At ages over twenty its frequency varies with social position, reaching its maximum amongst unskilled labourers.

From this statistical diagnosis we can understand the disease. Increased astoundingly, however, has been the birth rate since men returned home after the Armistice. And a prognosis will puzzle demographers.

Eugenists, like Dr. C. W. Saleeby, deplore the omission of the fertility questions from the 1921 Schedule. Much was made of the information by the National Council of Public Morals, to whom Dr. Stevenson supplied statistical information. That Council appointed a Committee to inquire into the extent, the causes, the effects, and the economic, social, moral, and national aspects of the decline in the birth rate; and the Committee took evidence, of which an example is given in the Appendix. British blue-books are not generally bright reading. Census Reports simply state facts. But papers such as that quoted above draw inferences of general interest; and the Birth-rate Committee's Report contains a mass of evidence and statistics upon the falling off in reproduction—the effects of

which have been observed in the Censuses of the last half century.

Irish.—The two Tables which follow are self-explanatory; the first showing intercensal increase in occupations; and the second, a decrease in the same period of the Irish-born resident in Scotland. It will, of course, be kept in mind that a number of those born in Ireland have children born in Scotland; and thus there is in Scotland, especially in the Burghs, a very considerable percentage of persons of Irish *extraction*. As to their probable percentage, many years ago, I had some discussion with a former Irish Secretary, Lord Morley, when we arrived at the safe tentative conclusion for 1901 of 12 to 15 per cent. Manual labour is the lot of most of the Irish in Scotland. Table A in Vol. III. of the Census Report for Scotland, 1911, gives 24,813 Irish Born as occupied in Iron and other Metal Manufacture; 11,909 in Mining Occupations; and 6019 as General Labourers. Somewhat sadly, for he is very sympathetic to the Emerald Isle, Morley observed that the Irish were not the most intelligent and desirable citizens. My own experience is that they furnish almost all of the few illiterates now to be found in Scotland, and mostly in Fife, Dundee, and Glasgow.

POPULATION OF SCOTLAND.

Tabulated Summary in Occupations at the Two Censuses of 1881 and 1891.

CLASSIFIED IN FIVE GENERAL DIVISIONS OF OCCUPATIONS.

Occupational Division.	1881.	1891.	Per Cent. of Total Population.	
			1881.	1891.
1. Professional	96,103	111,319	2·57	2·76
2. Domestic	176,565	203,153	4·73	5·05
3. Commercial	132,126	180,952	3·54	4·49
4. Agriculture and Fishing	269,537	249,124	7·21	6·19
5. Industrial	932,653	1,032,404	24·97	25·65
Unproductive: Children, and Adults with no Occupation	2,128,589	2,248,695	56·98	55·86
	3,735,573	4,025,647	100·00	100·00

It was estimated later that the percentage of the whole population of Scotland actively employed in the three great Divisions of Trade, Industry, and Agriculture were respectively 10, 58, and 14; Agriculture diminishing, while Trade and Industry revealed accretion in each decade.

IRISH, &c., IN THE WHOLE OF SCOTLAND AND IN THE BURGHS.

	1881.		1891.		1891 Burghs.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Scots	3,397,759	90·96	3,698,700	91·61	1,770,028	88·70
Irish	218,745	5·86	184,807	4·84	135,826	6·81
English	90,017	2·41	108,736	2·70	67,949	3·40
British Colonials	12,874	0·34	13,607	0·36	8,671	0·44
British Born Abroad or at Sea	7,024	0·19	8,051	0·20	5,028	0·25
Foreigners	6,399	0·17	8,510	0·21	6,078	0·30
Welsh	1,806	0·05	2,309	0·06	1,362	0·07
Channel Islanders	949	0·02	927	0·02	567	0·03
	3,735,573	100·00	4,025,647	100·00	1,995,509	100·00

The Census is not Departmental. It is national. It is international; and, for Britain, it is in its interests even imperial.

There are many demographic questions connected with the Census into which one would like to go fully, such as Migration, Emigration, and the number of Foreigners. But limits of space forbid here, and I hasten to conclude this rapid and imperfect sketch of the British Census and some of its uses. Revealing the quantity and the quality by Occupations of the people, an organised enumeration is the basis of administration and of demography.

Demography embraces all relevant vital statistics and social information. It is indeed the study of mankind, of the social organism in all its manifestations. In the evolution of Occupations and Industries is traceable in the Census the development of man, from the earliest self-supporting nomad to the citizen, enjoying the division of labour. With growing complexity of life comes the growth of the classes not concerned directly with production, some individuals specialising in work and service only indirectly productive; of such are Servants of the State and of Local Government. Among the functions of the State is the taking of the Census, without which our population could not be numbered and classified under our increasing Industries.

The present-day opinion of Population is not that of Godwin altogether, far less is it that of the first "Essay" of Malthus. Rather is that of Adam Smith brought up-to-date.

Adam Smith's "Inquiry" was into the causes of the Wealth of Nations, while the "Essay" of Malthus was intended to explain their poverty. The power of labour to create wealth was proved by the former, the latter emphasised the power of poverty, which he dwelt upon as resulting from the principle of population. In considerable measure the difference between Malthus and Adam Smith is one of emphasis. Neither should be debited with their doctrines as altered by their followers.

Darwin is not responsible for Neo-Darwinism, nor Malthus for Neo-Malthusianism.

Population problems are perennial. They are also chamleon-like, taking their colour from the time, and the "Essay on Population" is best understood when studied in its historical context. The "Essay" took one feature of human nature and concentrated the searchlight upon it, leaving out most of the rest; and, as has been observed here again and again, most of human conduct affects population. But the first aim of Malthus was mainly to supply a counterbalancing statement to Godwin's exposition of perfectibility, at a critical period when Pitt's Poor Law Bill required the arguments of the "Essay" to cause its abandonment; Pitt being persuaded that the Bill might cause an undue increase of the poor.

Proverbs and sayings should be sold in pairs. Solomon said, "There is nothing new under the sun." It is a half truth. "Change and decay in all around we see." There is nothing old under the sun. Ideas are so altered that they become as new, or they are utterly abandoned in the light of advancing science. Like the "principles" enounced in the "Essays," they may be interesting historically. Hunger is a primitive force, it is not an intellectual motive for work; but man is more than pig. Civilisation advances. Lowest stages in the struggle for existence diminish, disappear. To-day, man is regarded as a citizen rather than as an animal. Social and Industrial welfare is even a subject of State action, and poverty is prevented by National Insurance. We try to raise the very lowest, to save from want the very weakest. As Malthus admitted in his much-modified second edition of his "Essay," greater than the power of the principle of population is the power of an advancing and inventive civilisation. That civilisation has brought about a change in the dominant ideas of present-day society Malthusianism in its lowest application is rejected, but retained in its higher amended meaning, that of moral restraint.

Let there be no misunderstanding, I fully appreciate all that was done by Malthus, having studied his "Essay." I should like even to have read his "High Price of Provisions." I am aware that he was one of the first Fellows of the Royal Statistical Society, and I value the facts set forth systematically in the "Essay." To make matters clearer, I may say that Malthus regarded the power of population as malign, whereas the twentieth century view is rather that it is benign. Our national ideals are not of a stationary population, of a static condition of industry. Places which show increase at the enumeration are pleased. Where there is decadence there is generally no joy over the Census Reports, those impartial and all-including volumes by the careful study of which we may reach forward to more illuminating theories of human effort and to fresh principles of population.

The pathology of economic science was partly begun by Malthus. What would he have written to-day of Middle Europe, of Ireland, and of Russia? He spoke very frankly in his time of unfortunate Ireland.

"Act so that the maxim of thy will can at the same time be accepted as the principle of a universal legislation."

What are the elements which go to make and continue a superior race? May we say that it is high social heredity, lofty national ideals, stable government, a real religion? Our Scottish ideals. Lack of these leads to chaos. One cannot accept the suggestion of Mr. Keynes, at page 23 of his book, "The Economic Consequences of the Peace," that "the disruptive powers of excessive fecundity may have played a greater part in bursting the bounds of convention" than the evils of autocracy in Russia. Long ago, Sir Donald Mackenzie Wallace, and recently that far-seeing political philosopher, Professor Sarolea, showed that the weakness of Russia lay in an unreal and unsuitable system of government, and in a hollow, pretentious, unsatisfactory Church.

A well-regulated Russia has abundance of food, and can

even export large quantities. Without an effective Government, destitute of a true and influential Church, Russia is to be pitied; and to-day is an object-lesson which is surely not contrary to the plain philosophy of population which is herein outlined. Want should be almost unknown in an industrious and well-ordered community, and always population tends towards equilibrium.

Means of subsistence are increased by the steady development of industry, as in Scotland. More and more man is not only replenishing the earth, but also subduing it by mastering the secrets of nature, and thereby expanding the resources of the world.

The British Census Schedule is explained as an object-lesson to the children in schools, and this course is of assistance in securing the proper filling up of the Schedule on Census Sunday, 24th April. Practical questions are settled anterior to the Census Day. Already I have been asked, How do persons know that they are entitled to medical benefit under the National Health Insurance Acts; and, How are twins to be entered in the column for age? Queries which Registrars and Enumerators can readily answer.

In a recent discussion questions arose as to intercensal computation of population, a matter rather of a departmental character into which one cannot well enter here. But the query put to me by a lady, whether she was bound to give the information for the Census to the head of the household; or, could she not have a form for herself? is answered upon the Schedule, under the general heading of NOTICE, paragraph 4 mentioning that a separate Schedule may be obtained.

Conclusion

Thus even the supersensitive person is considered in the British Census by the provision for making a private return. "Any person who objects to give information to the head of a household or other person responsible for the entering of the prescribed particulars on the Schedule may obtain a separate Schedule from any Registrar, and may make a confidential return by filling in the necessary particulars thereon, and handing it under cover to the head of the household or other person responsible for the filling up of the Schedule pertaining to the household, vessel, institution, establishment or other premises, for delivery to the Enumerator or the Registrar as the case may be. In such a case the householder or other person responsible shall indicate on the face of the Schedule filled up by him that such person is, in terms of this Regulation, making a confidential return." This privilege is given by No. 12 of the Scottish Census Regulations of 1920 bearing the signature of His Majesty's Secretary for Scotland, the Right Honourable Robert Munro, K.C., M.P.

The Scottish Secretary kindly gave cordial encouragement to the preparation of this publication, and it cannot have a more appropriate ending than the expression of belief in the coming of "a brighter and a better Britain" in Mr. Munro's New Year Message on next page.

NEW YEAR MESSAGE.

The year 1920 has been a difficult one everywhere. The repercussion of the War has been world-wide. Loss of credit, industrial unrest, unemployment, these are by no means confined to Great Britain to-day.

As we survey the future, there is no cause for dismay—if we steer our course aright.

Production, not pleasure, must be our motto; thrift, not improvidence, our watchword.

The Allies have won the greatest war in the world. How? By courage, by unity, and by sacrifice. These qualities will also win for us the peace.

I have faith in my fellow countrymen. I know they will not fail either in patriotism or in prudence. Believing this, I can see a brighter and a better Britain arising from the ashes of the past—a Britain which will be true to high and noble ideals, a Britain which shall be the home of a prosperous, a happy, and a united race.

ROBERT MUNRO.

APPENDIX

CENSUS ACT, 1920

10 & 11 GEORGE 5

CHAPTER 41

An Act to make provision for the taking from time to time of a Census for Great Britain or any area therein and for otherwise obtaining Statistical Information with respect to the Population of Great Britain. — [16th August, 1920.] A.D. 1920.

BE it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

Power to direct taking of census.

1.—(1) Subject to the provisions of this Act, it shall be lawful for His Majesty by Order in Council from time to time to direct that a census shall be taken for Great Britain, or for any part of Great Britain, and any Order under this section may prescribe—

(*a*) the date on which the census is to be taken; and

(*b*) the persons by whom and with respect to whom the returns for the purpose of the census are to be made; and

(*c*) the particulars to be stated in the returns:

Provided that—

(i) an Order shall not be made under this section so as to require a census to be taken in any part of Great Britain in any year unless at the commencement of

that year at least five years have elapsed since the commencement of the year in which a census was last taken in that part of Great Britain; and

(ii) no particulars shall be required to be stated other than particulars with respect to such matters as are mentioned in the Schedule to this Act.

(2) Before any Order in Council is made under this section, a draft thereof shall be laid before each House of Parliament for a period of not less than twenty days on which that House has sat, and, if either House before the expiration of that period presents an address to His Majesty against the draft or any part thereof, no further proceedings shall be taken thereon, but without prejudice to the making of a new draft Order: Provided that, if by part of any such Order it is proposed to prescribe any particulars with respect to any of the matters mentioned in paragraph six of the Schedule to this Act, that part of the Order shall not have effect unless both Houses by resolution approve that part of the draft, or, if any modifications in that part are agreed to by both Houses, except as so modified.

(3) Any Order in Council made under this section may be revoked, amended or varied by a subsequent Order.

Duty of Registrar-General to carry out census, and provision for expenses.

2.—(1) It shall be the duty of the Registrar-General to make such arrangements and do all such things as are necessary for the taking of a census in accordance with the provisions of this Act and of any Order in Council or regulations made thereunder, and for that purpose to make arrangements for the preparation and issue of the necessary forms and instructions and for the collection of the forms when filled up.

(2) The Registrar-General in the exercise of his powers and in the performance of his duties under this Act or under any Order in Council or regulations made thereunder, shall be subject to the control of, and comply with any directions given by, the Minister of Health.

(3) Any expenses incurred with the sanction of the Treasury by the Minister of Health or the Registrar-General in connection with the taking of a census or otherwise in connection with the exercise of his powers or the performance of his duties under this Act shall be defrayed out of moneys provided by Parliament.

Regulations with respect to proceedings for taking census.

3.—(1) For the purpose of enabling any Order in Council directing a census to be taken to be carried into effect, the Minister of Health may make regulations—

(*a*) providing for the division of the country into districts for the

purpose of the census and the appointment of persons to act in those districts in connection with the census;

(*b*) requiring superintendent registrars, registrars, overseers and assistant overseers of the poor, relieving officers for poor law unions, collectors of the poor rate, and such other persons as may be employed for the purpose of the census, to perform such duties in connection with the taking of the census as may be prescribed;

(*c*) requiring persons employed for the purpose of the census to make a statutory declaration with respect to the performance of their duties, and authorising any superintendent registrar or registrar to take such a declaration;

(*d*) requiring the chief officers of public or charitable institutions, or of any other institutions prescribed by the regulations, to make returns with respect to the inmates thereof;

(*e*) requiring information to be given to the persons liable to make returns by the persons with respect to whom the returns are to be made;

(*f*) with respect to the forms to be used in the taking of a census;

(*g*) making provision with respect to any other matters with respect to which it is necessary to make provision for the purpose of carrying into effect the provisions of the Order in Council.

(2) Every regulation made under this section shall be laid before both Houses of Parliament as soon as may be after it is made, and, if an address is presented to His Majesty by either House within the next subsequent twenty days on which that House has sat next after any such regulation is laid before it praying that the regulation may be annulled, His Majesty in Council may annul the regulation, and it shall thenceforth be void, but without prejudice to the validity of anything done thereunder.

Preparation of reports and abstracts.

4.—(1) The Registrar-General shall, as soon as may be after the taking of a census, prepare reports on the census returns, and every such report shall be printed and laid before both Houses of Parliament.

(2) The Registrar-General may, if he so thinks fit, at the request and cost of any local authority or person, cause abstracts to be prepared containing any such statistical information, being information which is not contained in the reports made by him under this section

and which in his opinion it is reasonable for that authority or person to require, as can be derived from the census returns.

Preparation of statistics in respect of periods between one census and another.

5. It shall be the duty of the Registrar-General from time to time to collect and publish any available statistical information with respect to the number and condition of the population in the interval between one census and another, and otherwise to further the supply and provide for the better co-ordination of such information, and the Registrar-General may make arrangements with any Government Department or local authority for the purpose of acquiring any materials or information necessary for the purpose aforesaid.

Provision with respect to local census.

6.—(1) If an application is made to the Minister of Health by a local authority to which this section applies asking that a census may be taken for the whole or any part of the area of the authority, or for an area consisting of the whole or any part of that area and of the whole or any part of an adjoining area, the Minister may, if he thinks fit, submit the application to His Majesty, and His Majesty may by Order in Council, if it appears to His Majesty expedient so to do for the purpose of facilitating the due performance by the local authority of its statutory duties, direct that a census shall be taken for the area specified in the application, or for any part of that area.

(2) The provisions of this Act with respect to the taking of a census for Great Britain (other than the provision with respect to the interval between one census and another) shall, subject to such exceptions, modifications and adaptations as may be specified in the Order, apply to the taking of a census under this section.

(3) The local authorities to which this section applies are the common council of the City of London, metropolitan borough councils, the councils of counties, the councils of boroughs, and urban district councils:

Provided that, without prejudice to the power of any other authority being a local authority to which this section applies to make an application under this section, an application may be made by the council of a county and an order may be made under this section with respect to the whole of the area of the council, including the areas of any authorities which are local authorities for the purposes of this section.

Expenses of local authorities.

7. Any expenses incurred in connection with the taking of a census under this Act in pursuance of an application made by a local authority, including the publication of any reports or returns relating to the census, shall be paid by the local authority by which the

application for the census was made, and any expenses so incurred, and any other expenses incurred by a local authority under this Act, shall be defrayed in the case of the common council of the City of London and a metropolitan borough out of the general rate, in the case of a county council as expenses for general county purposes, and in the case of other councils as expenses incurred in the administration of the Public Health Acts, 1875 to 1908.

Penalties.

8.—(1) If any person—

(*a*) refuses or neglects to comply with or acts in contravention of any of the provisions of this Act or any Order in Council or regulations made under this Act; or

(*b*) being a person required under this Act to make a statutory declaration with respect to the performance of his duties, makes a false declaration; or

(*c*) being a person required by any Order in Council or regulations made under this Act to make, sign, or deliver any document, makes, signs, or delivers, or causes to be made, signed, or delivered a false document; or

(*d*) being a person required in pursuance of any such Order in Council or regulations to answer any question, refuses to answer or gives a false answer to that question;

he shall for each offence be liable on summary conviction to a fine not exceeding ten pounds.

(2) If any person—

(*a*) being a person employed in taking a census, without lawful authority publishes or communicates to any person otherwise than in the ordinary course of such employment any information acquired by him in the course of his employment; or

(*b*) having possession of any information which to his knowledge has been disclosed in contravention of this Act, publishes or communicates that information to any other person;

he shall be guilty of a misdemeanour, and shall on conviction be liable to imprisonment with or without hard labour for a term not exceeding two years or to a fine, or to both such imprisonment and fine.

Application to Scotland.

9. In the application of this Act to Scotland—

(1) The Secretary for Scotland shall be substituted for the Minister of Health and the Registrar-General for Scotland shall be substituted for the Registrar-General;

(2) The local authorities to which the section of this Act relating

to the taking of a local census applies shall be the councils of counties and burghs, and any expenses incurred by such councils under this Act shall be defrayed in the case of a county council out of the general purposes rate, and in the case of a town council out of the burgh general improvement assessment or any other assessment leviable in equal proportions on owners and occupiers, provided that the ratepayers of a police burgh shall not be assessed by the county council for any such expenses;

(3) Sheriffs, sheriff clerks, chief magistrates, county clerks, town clerks, inspectors of poor, and assistant inspectors of poor, shall, in connection with the taking of a census, perform such duties as may be prescribed by regulations made under this Act.

Short title and extent.

10.—(1) This Act may be cited as the Census Act, 1920.

(2) This Act shall not extend to Ireland.

SCHEDULE

Matters in respect of which Particulars may be required.

1. Names, sex, age.
2. Occupation, profession, trade or employment.
3. Nationality, birthplace, race, language.
4. Place of abode and character of dwelling.
5. Condition as to marriage, relation to head of family, issue born in marriage.
6. Any other matters with respect to which it is desirable to obtain statistical information with a view to ascertaining the social or civil condition of the population.

CENSUS (IRELAND) ACT, 1920

10 & 11 GEORGE 5

CHAPTER 42

An Act for taking the Census for Ireland in the year nineteen hundred and twenty-one.—[16th August 1920.]

BE it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

Census to be taken in 1921.

1. A census for Ireland shall be taken in the year nineteen hundred and twenty-one in the manner hereinafter directed, and the census day shall be Sunday the twenty-fourth day of April in that year.

Enumerators and their duties.

2.—(1) The Lord Lieutenant may appoint such officers of local authorities or such other persons as he thinks proper to act as and be enumerators for the purpose of this Act, or to superintend or assist in the enumeration.

(2) Every enumerator shall, upon the Monday following the census day, and such one or more next consecutive days as the Lord Lieutenant may fix, visit every house within the district assigned to him and take an account in writing, according to such instructions as may be given to him by the Chief or Under Secretary to the Lord Lieutenant, of the number of persons who abode therein on the night of the census day, and of the sex, age, religious profession, birthplace, parentage, condition as to marriage, relation to head of family, and occupation of all such persons, and (in the case of persons married or having been married) the number of children and step children living.

(3) Every enumerator shall take an account of the number of inhabited houses and of uninhabited houses and of houses then building

within his district and of the number of rooms occupied by any occupier; and shall also furnish such particulars as may be directed as to the counties, boroughs, towns, districts, and other areas for electoral or administrative purposes in which the houses are situate.

(4) The enumerators shall also take an account of all such further particulars as they may be directed to inquire into by such instructions as are authorised to be issued under this Act.

(5) Every enumerator may ask all such questions of all persons within his district respecting themselves or the persons constituting their respective families, and respecting such further particulars, as may be necessary for the purpose of taking the said accounts.

Enumeration in public and charitable institutions.

3. The governor, master, or chief resident officer of every prison, workhouse, barrack, hospital, or lunatic asylum, and of every public or charitable institution which may be determined upon by the Lord Lieutenant, shall act as and be the enumerator of the inmates thereof, and shall conform to such instructions as may be sent to him by the authority of the Lord Lieutenant for obtaining the returns required by this Act, so far as may be practicable, with respect to such inmates, but the initial letters only of the Christian names and surnames of such inmates shall be stated in any such return.

Provision as to houseless persons.

4. The Chief Secretary shall obtain returns of the particulars required by this Act with respect to all houseless persons, and all persons who during the night of the census day were travelling or on shipboard, or for any other reason were not abiding on that night in any house of which account is to be taken by the enumerators, and shall include such returns in the abstract to be laid before Parliament.

Forms, instructions and expenses.

5.—(1) The Chief or Under Secretary to the Lord Lieutenant shall prepare and issue such forms and instructions as he may think necessary for the taking of the census, and the census shall be taken by means of and in the manner prescribed by those forms and instructions, and no question shall be put for the purpose of obtaining information other than the information required by those forms and instructions.

(2) The expenses incurred with the approval of the Treasury for the purposes of the census shall be paid out of moneys provided by Parliament.

Certificates of accounts and abstract of returns.

6.—(1) Every enumerator shall sign and certify the account taken by him, and make a statutory declaration, to the effect that the said account has been truly and faithfully taken by him, and that, to the best of his knowledge, the same is correct, so

far as may be known, and shall deliver the same to such person as may be appointed by the Lord Lieutenant to receive the same from him.

(2) The accounts shall be examined, corrected, certified, and transmitted in such manner and within such time as the Lord Lieutenant may direct, and the same shall be digested and reduced into order, under the direction of the Chief or Under-Secretary to the Lord Lieutenant, by the Registrar-General of Births, Deaths and Marriages in Ireland, and by such other persons as the Lord Lieutenant may appoint for that purpose.

(3) An abstract of the accounts taken under this Act shall be laid before both Houses of Parliament within twelve months after the census day, if Parliament be then sitting, or, if Parliament be not then sitting, within the first fourteen days of the session then next ensuing.

Penalties.

7.—(1) If any enumerator makes wilful default in the performance of any of his duties under this Act, he shall for each offence be liable on conviction under the Summary Jurisdiction (Ireland) Acts to a fine not exceeding five pounds.

(2) If any person refuses to answer or wilfully gives a false answer to any question necessary for obtaining the information required to be obtained under this Act, he shall for each offence be liable on conviction under the Summary Jurisdiction (Ireland) Acts to a fine not exceeding five pounds: Provided that no person shall be subject to any such penalty for refusing to state his religious profession.

(3) If any person employed in taking the census communicates without lawful authority any information acquired in the course of his employment, he shall be guilty of a misdemeanour and shall on conviction be liable to imprisonment with or without hard labour for a term not exceeding two years, or to a fine or to both such imprisonment and fine.

Certificate of population.

8. A certificate from the General Register Office, purporting to be signed by the Registrar-General of Births, Deaths and Marriages in Ireland, shall be admitted in any court of law as evidence of the population, at the census taken under this Act, of any county, borough, town, district or other area to which it refers, and the said Registrar-General shall be bound, if possible, to deliver such certificate to any person on payment of a fee of one shilling.

Short title.

9. This Act may be cited as the Census (Ireland) Act, 1920.

CENSUS

GREAT BRITAIN

THE CENSUS ORDER, 1920

ORDER IN COUNCIL MADE UNDER SUB-SECTION (1) OF SECTION ONE OF THE CENSUS ACT, 1920.

AT THE COURT AT BUCKINGHAM PALACE,

The 21st day of December, 1920.

PRESENT,

THE KING'S MOST EXCELLENT MAJESTY IN COUNCIL.

WHEREAS by sub-section (1) of Section one of the Census Act, 1920, it is provided that His Majesty may by Order in Council from time to time direct that a Census shall be taken for Great Britain, and any Order so made may prescribe the date of such Census, the persons by whom and in respect to whom the returns for the purpose of such Census are to be made and the particulars to be stated in the returns, subject in the case of the particulars aforesaid to the provisions of sub-section (2) of the said Section:

NOW, THEREFORE, His Majesty, by and with the advice of His Privy Council, in pursuance of sub-section (1) of Section one of the Census Act, 1920, and of all other powers enabling Him in that behalf, is pleased to order, and it is hereby ordered, as follows:—

1.—(1) This Order may be cited as the Census Order, 1920.

(2) The Interpretation Act, 1889, applies to the interpretation of this Order as it applies to the interpretation of an Act of Parliament.

2. A Census shall be taken on the 24th day of April, 1921 (herein-

after called "the Census day"), in respect of all persons in Great Britain who are alive at midnight on that day.

3. The returns for the purpose of the Census shall be made with respect to the classes of persons mentioned in the first column of the First Schedule to this Order by the persons specified opposite each such class in the second column of that Schedule:

Provided nevertheless that any person claiming in the prescribed manner to make a confidential return shall, subject to the prescribed conditions, be deemed to be the person by whom the return is to be made with respect to himself.

4. The returns shall state—

(*a*) in the case of all persons with respect to whom returns are to be made in England and Wales, the particulars specified in Part I. of the Second Schedule to this Order;

(*b*) in the case of all persons with respect to whom returns are to be made in Scotland, the particulars specified in Part II. of that Schedule; and

(*c*) in the case of all persons with respect to whom returns are to be made in Wales (including Monmouth), the additional particulars specified in Part III. of that Schedule.

FIRST SCHEDULE

Persons with respect to whom Returns are to be made.	Persons by whom Returns are to be made.
1. Persons present at midnight on the Census day in a dwelling, lodgings or rooms, separately occupied by any private household of which they are members, guests (including paying guests or boarders), or employees.	1. The head, or person for the time being acting as the head, of the household.
2. Persons present at midnight on the Census day on the premises of any hotel, club, boarding-house, or common or other lodging-house.	2. The manager or other person for the time being in charge of the premises.

3. Persons present at midnight on the Census day on the premises of any public or private hospital, sanatorium, convalescent or nursing home, workhouse, poor-house, infirmary, asylum, religious or charitable community, residential school or college, or residential institution of any other kind.	3. The chief resident officer or other person for the time being in charge of the institution.
4. Persons belonging to the naval, military, or air forces of the Crown, and any other persons, present at midnight on the Census day on any vessel or in any barracks, station, or other premises under naval, military, or air force discipline.	4. The officer or other person appointed for the purpose in pursuance of arrangements made by the Admiralty, Army Council, or Air Council.
5. Persons present at midnight on the Census day on any ship, boat, barge, or other vessel in any inland waters or engaged in any coast-wise or fishing voyage, or lying moored or anchored in any place.	5. The captain, master, or other person for the time being in charge of the vessel.
6. Persons present at midnight on the Census day on the premises of any civil prison, lock-up or other place of detention.	6. The governor or other person for the time being in charge of the premises.
7. Persons who, not having been enumerated elsewhere for the purpose of the Census, arrive at any of the places or premises above mentioned after midnight on the Census day and before the returns in respect of persons present on or in such premises or places are required to be delivered up.	7. The person specified above as the person by whom the returns are to be made with respect to the persons present at midnight on the Census day on or in any of the premises or places above mentioned.
8. Persons not included among any of the classes of persons above mentioned.	8. The person with respect to whom the return is to be made.

SECOND SCHEDULE

Part I.

Particulars to be stated in the Returns made in England and Wales.

1. Full name.
2. Relation to head of family.
3. Sex.
4. Age in years and months.
5. In respect of persons aged 15 years or over, whether single, married, widowed or divorced.
6. Profession, trade, manufacture, service or other occupation, stating precise branch, and whether still engaged therein, or retired; and if occupied in trade or manufacture, the particular kind of work done, of material worked in and of article, if any, made or dealt in.
7. Whether occupied in (*a*) full-time or in (*b*) part-time attendance at an educational institution.
8. Place of work, stating address or whether working at no regular address or at home.
9. Whether ordinarily occupied as employer, employee, or on own account.
10. If ordinarily occupied as employee, whether employed or unemployed, stating present or last employer, as the case may be, and employer's business.
11. Place of birth, stating:—
    (*a*) If born in the United Kingdom, the name of the county and town or parish:
    (*b*) If born outside the United Kingdom, the name of the country and the state, province, or district:
    (*c*) Whether born at sea.
12. If not born in the United Kingdom, whether visitor or resident, and whether (*a*) natural born or (*b*) naturalised British subject, or (*c*) of foreign nationality, stating nationality.
13. Number of living rooms dwelt in by the persons in respect of whom particulars are included in any separte return

*[14. *In respect of married men, widowers, and widows, the number and ages of all living children and stepchildren under* 16 *years of age.*

* *Note.*—In accordance with sub-section (2) of Section one of the Census Act, 1920, no Order in Council could be made requiring the particulars enclosed in brackets to be stated in the Census returns, until both Houses of Parliament by resolution had approved their inclusion.

15. *In respect of persons under* 15 *years of age, whether both parents alive, mother deed, father dead, or both parents dead.*]

Part II.

Particulars to be stated in the Returns made in Scotland.

1. Full name.
2. Relation to head of family.
3. Sex.
4. Age in years and months.
5. In respect of persons aged 15 years or over, whether single, married, widowed, or divorced.
6. Profession, trade, manufacture, service, or other occupation, stating precise branch and whether still engaged therein or retired; and, if occupied in trade or manufacture, the particular kind of work done, of material worked in, and of article, if any, made or dealt in.
7. Whether ordinarily occupied as employer, employee, or on own account.
8. If ordinarily occupied as employee, whether employed or unemployed, stating present or last employer, as the case may be, and employer's business.
9. Place of birth, stating:—
   (*a*) If born in the United Kingdom, the name of the county and town or parish;
   (*b*) If born outside the United Kingdom, the name of the country and state, province, or district;
   (*c*) Whether born at sea.
10. If not born in the United Kingdom, whether visitor or resident, and whether (*a*) natural born or (*b*) naturalised British subject, or (*c*) of foreign nationality, stating nationality.
11. Number of living rooms dwelt in by the persons in respect of whom particulars are included in any separate return.
12. In respect of persons aged three years or over, whether speaking Gaelic only or speaking both Gaelic and English.

*[13. *In respect of married men, widowers, and widows, the*

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* *Note.*—In accordance with sub-section (2) of Section one of the Census Act, 1920, no Order in Council could be made requiring the particulars enclosed in brackets to be stated in the Census returns, until both Houses of Parliament by resolution had approved their inclusion.

number and ages of all living children and stepchildren under 16 *years of age.*

14. *In respect of persons under* 15 *years of age, whether both parents alive, mother dead, father dead, or both parents dead.*

15. *Whether entitled to medical benefit under the National Insurance (Health) Acts.*]

Part III.

Additional particulars to be stated in returns made in Wales (including Monmouth).

1. In respect of persons aged three years or over, whether able to speak English only, Welsh only, or both.

RELIGIOUS CENSUS

On 16th March, 1920, I penned the following article as a summary of the case as to the possibility of a Census of Religious Denominations, and the contribution duly appeared in *The Scotsman*, eliciting personal criticism, chiefly in favour of the idea of a Religious Census:—

The Church and the Census.

The Church has always been desirous that the Decennial Census Schedule—that half-yard measure of social progress—should take cognisance of religious denominations. But, heretofore, at any rate, in vain; although at every British Census there is a request for the collection of statistics regarding religion. The Irish Census Act includes a provision for taking account of religions, with a proviso, however, that no person shall be subject to any penalty for refusing to state his religious profession; and it appears, accordingly, that the people in Ireland do not object to the question. To ascertain the proportion of Protestants to Catholics is presumably the main object of the inquiry. In Ireland the Census is taken chiefly by the Royal Irish Constabulary, a very highly-trained and intelligent body of officials, who know a great deal concerning most of the inhabitants of their districts, and can themselves readily check most of the details collected in the Irish Census Schedule, in which Protestants are requested to name their "particular Church, denomination, or body." Indeed, the number of religious sects in Great Britain constitute an obvious difficulty in tabulating information as to religious denominations. A column could readily be added to the Schedule asking, for adults, shall we say, What religion? Such a Census would, of course, be rather an enumeration of Churchmen and Churchwomen than a really Religious Census; religious beliefs are almost automatically inviolate; and, certainly, they cannot be

expressed readily in the brief and cold terms of the Official Census Schedule.

Scottish gregariousness or "clannishness" is greater than that of the English. As a people we have more pride in our history, and more coherency as a nation; hence, since the days of Knox, Scotland has been a soil most favourable to Presbyterianism, a soil ready prepared for it in national predilection, making, in the circumstances, Presbyterianism the one natural and paramount idea as the proper form of ecclesiastical government.

The English ideal is to collect a few neighbours and make a church of them, but Scotsmen would like rather to make a church of all Scotland, and we would certainly like to know the progress of Presbyterianism as revealed by Census figures. And just here I may point out that the figures of 1931 would have double value, for we should then be able to compare them with those of 1921, and observe the trend of popularity in various religious denominations.

Basing their proposal upon the success of the Census of religious denominations in Ireland, enthusiastic churchmen and statisticians have again and again urged upon the Government the adoption of a like question in the Schedule for England and Scotland, with the view of obtaining comparable figures for the three countries. Forty years ago the subject was debated in Parliament very thoroughly. Almost exactly ten years ago, the usual question as to the insertion of a question as to religion received the almost stereotyped reply in the negative, an amendment by the Lords, that the inquiry be made, also being rejected in the Commons; but at this moment there is a new spirit of innovation and enterprise. Accordingly, a religious enumeration is not unlikely.

Seventy years ago (1850) there were pæans of joy over prospects of peace and progress. The mood, as now, was one of inquiry and adventure. An attempt was made in the Census of 1851 towards a Census of religions in England and Scotland. Church accommodation was enumerated. Returns were made of those attending the different churches upon Census Sunday, 30th March, 1851. In Scotland, the figures totalled 943,951 — of which 351,454 were classed as belonging to the Church of Scotland—out of a population of 2,888,742. Admittedly imperfect, these ecclesiastical statistics are not worth much. In England the Census Report gave lengthy histories of the several religious communities, some thirty-five in number, for as Hume observed of the Southerners, "all sorts of

religion are to be found among them." Religious belief is connected with race maintenance; so its inclusion in a population Census is not inappropriate. Jews and Roman Catholics do not adopt the Neo-Malthusian notion of birth restriction. The former are increasing in Scotland; and it is clear that Catholics are fully holding their own, as revealed in the *Catholic Year-Book*, wherein are detailed the numbers of baptisms and the total Roman Catholic population.

In dealing with the subject in Census tabulation, it would probably be expedient to adopt the same method as in Roman Catholicism, of classifying the whole family of whatever age, as belonging to the religious sect favoured by the parents, unless, of course, where an adult was averred to be of a different denomination.

The writer of an article on the forthcoming Census in *The Scotsman* of 8th March, 1920, observed that the Government department entrusted with the Census should be capable of arranging for a more comprehensive population and statistical inquiry than any we have yet had, and refers to the "many streams of religious belief which make up the Empire." I have been reminded recently that in a publication of mine, entitled "Vital Registration," there is a reference in the chapter headed "The Census, and Some of its Uses" to the objections, so well known, to a Religious Census. Difficulties there are admittedly, but no one has said that they are insuperable, and circumstances have altered since even the second edition of "Vital Registration" appeared in 1907. Food production and imperial population are correlated. But man does not live (from age to age) by bread alone. Race maintenance and religion have relationships being more and more recognised; and remarkable indeed it is that none of the twelve enumerations of England and Scotland, from 1801 to 1911, have included religion in the national stock-taking of souls.

Differing from its Roman namesake, the British Census is all-inclusive—like Christianity. Rome ignored the proletariat, and had assessment much in view in carrying out quinquennially its Census. Possibly, as in America and elsewhere, we in Great Britain may be asked to state in some Census Schedule of the future what we are worth, returning thus to the model of ancient Rome.

Already in its occupation columns the Census Schedule is a measure of industrial progress, showing by the various employments the stage of civilisation attained. Are not the two great motive-

powers of mankind the economic and the religious? and could not the British Census take notice of both these mighty forces as is done in our Indian Empire, in Canada, and in Australia?

Desire for a Census of Religion in Scotland has led to various efforts at estimating the denominations, say, according to the ratio of their marriages. Thus, in 1881, an estimate upon that basis was as follows:—Protestants, 3,371,000; Roman Catholics, 318,000; Jews, 6000; and of the Protestants, 99,000 were reckoned to be Anglicans. Upon another occasion the church accommodation was enumerated, and the church attendance upon Census Sunday; but the figures obtained are unreliable, and might have been misleading.

Church union will probably be accomplished before 1931. The coming Census is thus the last opportunity there will be of obtaining figures as to Established and United Free adherents.

Census tabulation is facilitated to-day by machinery. A Religious Census is practicable and should not be expensive. England is entering by the Enabling Act on a new era of Church government, and would appreciate a Religious Census, some political objections to which have also lessened in Scotland. Why should not the British Census of 1921 include, in a land of churches, a complete inquiry as to religion?

At every Census the Schedule is expanded. In 1911 there was added an inquiry as to marriage fertility—the duration of the union, and the number of children. Jews and Roman Catholics multiply freely. Their tenets abhor Neo-Malthusianism. Protestants practise birth restriction, having smaller families than Catholics. Religion is thus a factor in fertility, and a question as to religious belief in the Schedule of 1921 would be complementary to the new query in 1911 as to size of the family. That "It has never been done before" in Scotland or England is not, surely, a sufficient reason why the British Census Schedule should not in 1921 contain a question relating to religion.

As one who has had some share in several enumerations, and has acted as an enumerator upon two occasions at Censuses, I may say, as an individual, that a Religious Census is not apparently impracticable; and it appears to be now very desirable, and is likely to be very valuable, as a guide to religious and educational administration.

NOTE ON THE CENSUS OF IRELAND

The Census (Ireland) Act is printed above (page 201). But there may be trouble in carrying out the Irish Enumeration. For now, at Christmas, 1920, Sinn Fein holds sway over the most of Ireland—certainly over three parts—making stealthy war upon the British Army of occupation, and rendering British law and government a byword. Allegiance to the Republican Government has been sworn by 73 Irish Members. In the County Councils, Sinn Fein dominates 27 out of 33, Nationalists control 2, leaving to the Unionists only 4 of the 9 counties of Ulster; and in the Urban elections Sinn Fein swept Ireland almost to Belfast; while the elections for Rural Councils and Guardians revealed a like triumph for Dail Eireann.

In this atmosphere of anarchy and bloodshed—for Sinn Fein has taken to arms in earnest—sectarian strife has revived; workers have driven Roman Catholics from the shipyards, and the Catholics have retaliated—sometimes by burning the houses of Protestants.

A Sinn Fein Government has met regularly and made laws. There is a Sinn Fein army, and a Sinn Fein Ministry, with a growing national debt. Land is confiscated, and, without title, is redistributed. Forces of intimidation have killed the jury system. British justice is being administered by a new Coercion Act, by means of courts-martial; and in some counties the British Government has proclaimed Martial Law, with the view of trying to stop murder and arson. Never was the Anglo-Irish problem so acute. Home Rule Bills fail. Labour Members and some Liberals are said to favour Dominion Home Rule. Would it be possible to rise to the height of the solution of this pressing danger on the lines of the League of Nations policy and of the principles of Christianity? or is firm handling of Sinn Fein the cure?

The Moderator of the United Free Church of Scotland cour-

ageously advocates a Christian treatment of the Irish question, pointing out that the place for Christianity in human affairs is—everywhere: industrially, internationally, and also in dealing with Ireland. The noble and chivalrous George Wyndham tried treating Ireland in a great and generous spirit. But he did not quite succeed in governing an ungovernable people, to some of whom his methods may have seemed suspicious; for the variety of race and of character in "John Bull's other Island" has always militated against the advance of peace, homogeneity, and prosperity. Census Returns reveal some illiteracy, and, even still, some squalid housing and other poor social conditions. Intelligence and education, thrift and industry, are not equally diffused; the Milesian is not racially a good worker, and the root of the problem lies in the character of the people. Cromwell treated Ireland with severity. Gladstone broke up his party for an Irish Home Rule measure. Arthur James Balfour was firm. Augustine Birrell was easy and humorous. The Marquess of Aberdeen was exceedingly sympathetic as Viceroy. Much social reform was achieved, indeed, by Lord and Lady Aberdeen; and, apparently, their methods were the nearest to the divine principles of the New Testament ever attempted in Ireland. Their success may justify the larger effort to show that "Christianity writ large" is as applicable to the treatment of Ireland as to the countries within the present League of Nations; but at present confidence is continued in our Government's attempts to secure peace and safety.

Principal Martin is a leading supporter of the League of Nations, and some such magnanimous and Christian solution as is suggested in the following letter to *The Scotsman* may help to restore peace to Ireland anterior to the time, in April, 1921, of the numbering of her inhabitants. Indeed, hope is expressed by those in authority that Sinn Fein may be overcome and reconciled before the Easter of 1921 by some plan commensurate with the honour and the safety of the Empire and acceptable to the representatives of the Irish people. An immediate truce, as indicated by Professor Martin, would surely be especially appropriate at the season of "Goodwill to men," and might be the auspicious "beginning of the end" at any time of the long-drawn contest whose shadow has darkened the Green Isle for centuries. Surely, after winning the Great War, we should be capable of dealing effectively and enduringly even with the complex problem of Anglo-Irish relations. The letter strikes a high and noble note which will find response—perchance qualified in some doubting

hearts who know Ireland—and its terms exhibit an earnest desire to eliminate all "methods of barbarism," and to bring Ireland to a state of peace consistent with Christian civilisation.

The State of Ireland and the Churches.

New College,
Edinburgh, *Christmas Eve*, 1920.

Has the Christian Church at this season no word to utter on the hideous imbroglio across the St. George's Channel. The singular silence in many quarters during these months of horror has not been due merely to want of imagination and heart—in the coil into which things are fallen many honestly know not what to think or say. But below the surface there runs, as I believe, a deep undercurrent of protest and intense desire to see another method of solution tried from that thus far attempted.

About the grand lesson which the world has been bidden learn of late there can be no doubt at all. It is that of Advent over again. The superiority of the spiritual to the material forces in existence: how the peoples whose lives are in any real degree swayed by them are the higher and essentially the stronger peoples; and how no policy, social system, or institution founded upon anything else bears the stamp of endurance on it—these things, taught in a tremendous instance and at enormous cost, men and nations have had occasion as never before to lay to heart. There could be no greater tragedy than that we should forget or fail to practise them.

What, then, of Ireland and our present response to her age-long demand? The appeal to force which blocked the way to a constitutional settlement in 1914 dates from pre-war days, but that rash and anarchical proceeding governs the situation still. What else has entailed upon us this welter of misery and shame? Nor even yet, apparently, have we learned how to deal rightly with the situation which has followed from it. The Easter rebellion of '16 was warning sufficient of the formidable forces of resentment and baffled hope which had been dammed up in the national life, but instead of studying how to conciliate and pacify these forces, we have pursued a melancholy course of intimidation and repression (including the supreme unwisdom of the imposing of military conscription on a nation clamorous for autonomy) which has driven an exceptionally

law-abiding people mad, and has culminated in an exhibition of savage lawlessness on both sides which has shocked the conscience of civilised mankind, and made the proclamation of martial law a welcome alternative to worse evils. Our belated effort, on the other hand, to satisfy the passionate desire for self-government is of such a kind—effecting a present definite dissection of the country, with the shadowy promise of future unification—that Nationalism is wounded more deeply than before and scorns it. Its chances of success seem twofold. First, that under duress, and in order to escape the humiliation of perpetual Crown Colony government, the South may be concussed into the acceptance of it; while the Lord Chancellor, again, stakes upon an "incalculable element" in the Irish character, which, he conceives, may yet reconcile the people to what for the present they loathe. Such, to date, is the reply of the Mother of Parliaments to the claim of the sister people to self-determination. Need we be surprised that it should be followed by increased aversion to Britain and an intensifying of the spirit of Republicanism? And, meanwhile, the shooting and burning go on apace, and in the capital city and over wide stretches of the land blank terror reigns by night and day.

The season, and also the wisdom of the situation, call, I submit, or a different treatment. They call for the proclamation of an immediate truce, and a frank summons to the responsible heads of the Nationalist movement—in jail or out of jail—to conference (with representatives, one would be disposed to add, of all the political parties) with a view, if possible, to an agreed solution. The case is unique, and might well be handled uniquely. Such a demonstration of magnanimity might even yet win Ireland for her own place of loyalty and honour in our glorious free Commonwealth of self-governing communities. But the offer must be handsome, unreserved, and promptly made. Otherwise a vista of disaster and reproach looms ahead into which who can bear to look?

"What!" it will be said, "are we to let these cowardly assassins off?" Not if you can lay hands on your cowardly assassin, certainly. But the men who muster by the hundred to attack the police barracks of Newry or to take part in a "battle" in Tipperary deserve another name. And, after all, who or what has driven them to take the field? "But at this moment of all others are we to hold our hand, when they are on the run, and very soon our troops will have captured or shot down the last of them?" Yes, I would reply, at

this moment above all. Of course, you can beat the Irish rebels to their knees, as you have so often done before. But is it worthy of you? Is it worth doing at the cost of the enhanced estrangement and sullen anger that must ensue and smoulder on, perhaps for generations more? The effort at conciliation and reconciliation, if to be made with any grace or effect at all, should not be delayed an hour. The time for it is now.

The real objection felt to any such proposal will be that all this is, at the best, well-meant sentimentalism, Christianity in the wrong place. But the place in human affairs for Christianity is everywhere. Christianity is good business—industrially, internationally, and in dealing with Ireland also. And until as a nation we learn to apply its lessons, so long will there be before us unrest and strain, confusion and strife, disappointment and embitterment without end.

ALEX. MARTIN.

INCREASING THE WORLD'S FOOD SUPPLIES BY PLANT-BREEDING

"THE Plant-Wizard of America: Luther Burbank," is the subject of two papers in the April (1920) number of *Chambers's Journal*. They are devoted to a description of his wonderful career, and of some of his experiments in plant culture. The results of the experiments are of a remarkable character. Burbank's first success, it is told, was with a potato, which has since become famous as the Burbank potato, and of which it is estimated that some £4,000,000 worth have been raised in the United States alone. The potato plant, it is stated, does not usually produce seed, but young Burbank one day saw a plant with a seed-cluster containing twenty-three seeds. He saved this through the winter, and planted the seeds separately in the following spring. To his surprise, no two seeds produced the same kind of potatoes; but one yielded tubers of exceptional size and whiteness, and these he saved and planted the next year. Finding that they reproduced their fine qualities, he sold the potato to a nurseryman, and received for it in all £30, which enabled him to travel from his home in Massachusetts across the continent to California, where he had decided to carry on his experimental work under the most favourable weather conditions that the world could provide.

Marvellous details are given in regard to Burbank's success in the production of new varieties of different kinds of fruit and flowers. In recognition of the value of his work, his birthday, the 9th of March, is specially set aside by the Californian State Legislature as an annual holiday for school children, and is known as Burbank Day.

"How great is the amount of work the plant-wizard gets through is shown (the writer concludes) by the fact that at one time he was experimenting with as many as 300,000 distinct varieties of the plum, 60,000 peaches and nectarines, 6000 almonds, 5000 chestnuts, 5000 walnuts, 3000 apples, 2000 pears, 2000 cherries, 1000 grapes, and 6000 berries of various kinds. In a single season over 100,000 grafts have been set, and from these have been obtained, also in one season, material for ten million additional grafts.

"Perhaps the highest testimony to the plant-wizard's worth—one that can be fully trusted—is that of the famous Dutch botanist, De Vries, who says:—'He has already accomplished in his chosen line of life more than any other man who has ever lived. Indeed, when the full sweep of all his achievements shall finally come into view, it may not be unfair to say that not all the plant-breeders who have preceded or accompanied him have done so much for the world. He has done more in a generation in creating new and useful types of plant-life than Nature, unaided, could have done in a millennium; more, indeed, than Nature, unaided, would ever have accomplished.'

"Burbank himself is enthusiastic about the future and the possibilities of increasing the food supplies of the world, through the improvements wrought by plant-breeding. 'The vast possibilities of plant-breeding,' he says, 'can hardly be estimated. It would not be difficult for one man to breed a new rye, wheat, barley, oats, or rice which would produce one grain more to each head, or a corn which would produce an extra kernel to each ear, another potato to each plant, or an apple, plum, orange, or nut to each tree. What would be the result? In five years only in the United States alone the inexhaustible forces of Nature would produce annually, without effort and without cost, 15,000,000 extra bushels of wheat, 5,200,000 extra bushels of maize, 20,000,000 extra bushels of oats, 1,500,000 extra bushels of barley, and 21,000,000 extra bushels of potatoes. But these vast possibilities are not alone for one year, or for our own time or race, but are beneficent legacies for every man, woman, or child who shall ever inhabit the earth. Science sees better grains, nuts, fruits, and vegetables all in new forms, sizes, colours, and

flavours, with more nutrients and less waste, and with every injurious and poisonous quality eliminated, and with power to resist fungus and insect pests; fruits without stones, seeds, or spines; better fibre, coffee, tea, spices, rubber, oil, paper, and timber trees, and sugar, starch, colour, and perfume plants. Every one of these, and ten thousand more, are within the reach of the most ordinary skill in plant-breeding.'"

SAVING THE CHILDREN: MATERNITY CENTRES

To safeguard the health of the community is one of the principal objects of the Ministry of Health. It will be scarcely necessary to insist on the importance of that object. Yet a few facts may not be out of place. In spite of the vast strides made by medical science during the last half-century, the death-rate of women in child-birth remains approximately what it was twenty-five years ago. Each year upwards of 3000 mothers are lost to the State in the fulfilment of their primary and most vital function. Again, according to Sir George Newman, "a substantial number of the 700,000 mothers who gave birth to children in 1919 were so injured or disabled in pregnancy or child-birth as to make them chronic invalids and bring them in very large numbers to the gynecological clinic or the hospital ward—an excessive burden of preventable invalidity, incapacitating in its immediate and deterrent in its remote effects." Lastly, we still lose by death no fewer than 60,000 infants in the year (including 19,000 still-births).

The establishment of maternity and infant welfare centres has already done much to check the spread of preventable mortality among women and children. In order to ensure the success of the maternity centres, the co-operation of the midwives of this country is badly needed. Experience has shown that while mothers will readily bring their babies to be examined at an infant welfare centre, they are exceedingly reluctant to present themselves for examination before the babies are born. This is a matter in which the greatest tact is called for. The midwife must be made to realise that she is in no danger of losing her patient or her fee by inducing an expectant mother to attend a maternity centre, and of course it is of the greatest importance that she should be kept accurately informed of the condition of her patient. The centres are under the super-

vision of a fully-qualified medical officer, who is generally a woman. To this officer is entrusted the duty of conducting consultations with the patients who attend the centre. Other work undertaken by the maternity centres includes home visiting, educational classes in the hygiene of pregnancy, mothercraft, &c., and dental treatment for expectant and nursing mothers. Dinners and milk for expectant and nursing mothers are also provided through the centres.

Allied to the maternity centres are the infant welfare centres, which aim at providing for the systematic supervision for the health of babies and little children until they are old enough to attend school and come automatically under the care of the school medical officer.

ONE-THIRD DECLINE IN BIRTH RATE WITHIN THIRTY-FIVE YEARS

The Commission appointed to investigate the declining birth rate of the nation has issued its report in the form of a book entitled "The Declining Birth-rate: Its Causes and Effects." The Commission included in its ranks men and women doctors, religious and social workers, and others, and evidence was given by a number of well-known doctors, ministers, and public officials.

The report shows that the Commission regarded the following five propositions as definitely established:—

(1) That the birth rate has declined to the extent of about one-third within 35 years.

(2) That the decline is not appreciably due to alterations in the rate or age of marriage or kindred causes.

(3) That it is not uniformly distributed.

(4) That it is on the whole more marked in the well-to-do classes.

(5) That the greater infant mortality among the poor does not reduce their effective fertility to the level of that of the wealthier classes—or, in other words, that although the children of the poor die in greater numbers, their families remain larger than the families of more fortunate parents.

To the foregoing conclusions the Commission add, less positively, two others:—

(1) That conscious limitation is widely practised in the upper

and middle classes, while, in addition to other means of limitation, illegal abortion occurs frequently among the industrial population; and

(2) That there is no reason to believe that the higher education of women diminishes the power of child-bearing.

Restriction of Births.—The published evidence contains some outspoken views on social conditions and marital relationship.

Dr. Amand Routh, consulting obstetric physician to the Charing Cross Hospital, stated that, according to the Registrar-General, if the fertility of married women in proportion to their numbers had been as high in 1911 as in 1876-1880 the legitimate births would have numbered 1,273,698 instead of 843,505. There was thus a potential loss to the nation of 430,000 lives in that one year. The Registrar-General considered that the large reduction was due mainly to deliberate restriction methods.

Witness added that it was often arranged between couples before marriage that no children would be born.

Dr. Mary Scharlieb expressed the view that the time will come, and that it is not very far off, when certificates of health will be exchanged by brides and bridegrooms.

"I think a girl's father has a perfect right to ask for a certificate of health, and if I were a young man about to marry I should require a certificate of health from the bride.

"A woman should be able to sue for nullity if a man marries her under false pretences—marries when he knows he is not likely to become a father."

A confession of certain diseases, in the opinion of Dr. Scharlieb, should prevent a person from marrying. She thought 50 per cent. of the birth rate decline was due to voluntary causes. "The whole of the nation," she added, "wants a basis of physiological righteousness. We are not doing our duty. We are selfish from top to bottom."

Mr. James Marchant, F.R.S., secretary to the committee, asked the Bishop of Southwark the following question:—

It has been, may I say, universally assumed that certain actions have their lawful place in marriage life, and that they need not necessarily have the one motive of parenthood, but may have the pure object of mutual affection. If you believe those acts to be absolutely restricted to the single and occasional object of parenthood, are you not lowering marital relations to the standard of the stock yard?

The Lord Bishop.—I cannot follow in the least what the acts referred to can mean at all beyond being the appointed means by which human life is carried on.

Mrs. Bramwell Booth.—In the life of an ordinary healthy woman she ought not to conceive while nursing another, and as the woman who bears a child more frequently than once in two years is not healthy, the healthy woman would not need to have children more than every three years. Now, if the view of the Lord Bishop of Southwark is the right one, it would mean that during the course of child-bearing years the husband and wife would only have the mutual embrace, say, seven or eight times, according to the number of their children.

The Lord Bishop.—Well, what is the harm of that?

Mrs. Bramwell Booth.—Well, I do not know that there would be any harm in it, but I have never heard such a view of married life entertained before, and it does seem to me that such a view is not entertained in Scripture.

The Lord Bishop.—I cannot answer that.

Dr. J. W. Ballantyne, a well-known writer on birth problems, urged that it was necessary to gradually build up a spirit of self-sacrifice or rational foresight, which shall make it possible for parents of the good classes to have again the larger families, which used to be common. The extra baby must be weighed against the motor car. Motherhood must be exalted.

Means should be considered for encouraging parenthood by relief of taxation, or giving bonuses.

THE FALL OF THE BIRTH RATE

From an Address by Mr. G. Udny Yule, M.A., F.S.S., the well-known Author, and Lecturer on Statistics at Cambridge.

In the course of his paper, the author arrives at the following very interesting and suggestive conclusions:—

(1) There has been since 1876 a heavy fall in the birth rate amounting to roundly one-third.

(2) This has been accompanied by a countervailing fall in the death rate (involving since 1900 a considerable saving of infant life), so

that there was still in both the last two intercensal periods a natural rate of increase of over 11 per thousand per annum, or rather more than 12 per cent. in a decade.

(3) The marriage rate showed an abrupt, but not a persistent fall. In so far as this goes, it suggests that the fall in the birth rate is due rather to a fall in the productivity of married couples than to a fall in the proportion of married couples to the population.

(4) The fall in the birth rate, since 1891 at least, cannot be due to a fall in the proportion of married women to the population, since that proportion has risen, not fallen.

(5) The fall in the birth rate cannot be due to a fall in the proportion of married women of fertile ages to the population, for this proportion has risen since 1891, and now stands at the highest point since 1851.

(6) The effect of the increasing proportion to the population of married women of fertile age will have been lessened, or probably nullified, by their increasing average age.

(7) The main factor in the fall of the birth rate has been a decrease in the fertility of married women: this fall has been proceeding at an accelerating speed.

(8) At the present date there is no doubt that marriage fertility is on the whole, broadly speaking, graduated continuously from a very low figure for the upper and professional classes to a very much higher figure for unskilled labour.

(9) At the same time there are some very marked occupational differentiations which cut right across the social gradation.

(10) The social and occupational differentiation is now very much greater than it was half a century ago.

(11) The recent fall in fertility has not been effected solely or mainly by the use of artificial methods of contraception.

(12) In general, fertility cannot be regarded as a fixed quantity for a given nation, but is subject to natural fluctuations.

INDEX

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