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978-0-521-07330-1 - Nineteenth-Century Society: Essays in the Use of Quantitative Methods for the Study of Social Data

Edited by E. A. Wrigley

Excerpt

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Introduction

E. A. Wrigley

During the nineteenth century the state became involved in gathering more and more information about its subjects. To the traditional interests in trade, taxable wealth, religious schismatics and war potential, were added many new interests which resulted in immense compilations of data. Some of these were eventually tabulated and published, though far more were not. Even the material which was published was so bulky that it is seldom consulted. Anyone, for example, who has worked with the hundreds of heavy volumes of the *Statistik des Deutschen Reichs* and other similar series produced by the Statistical Office in Berlin must occasionally have felt his spirits droop at their oppressive combined mass. And in all economically advanced countries the trend was similar. Because so much information was collected by the state during the course of the last century, there are great opportunities for studying nineteenth-century society in depth, but also special difficulties in doing so.

The main focus of attention in this book is the census – what information was required on census night; how the information was collected; how accurately and completely population characteristics were recorded; the problems which arise in attempting to use either the published census volumes or the enumerators' books; and the techniques which have proved useful in analysis. The census is too big a topic to be covered exhaustively in a single volume but in spite of this it is a good point of entry into the whole sweep of state-collected data about social, economic and demographic affairs. It was the most ambitious exercise of its type, covering every family in the land and requiring the co-operation of every household head, and work on the census exemplifies both the fascinations and frustrations of using nineteenth-century descriptive statistics.

There is a delusive clarity and apparent authority in the printed word or digit. But what is printed in a census volume or any other statistical publication represents the last operation in a long chain of data collection and collation, subject to error, omission and misinterpretation at every stage from the phrasing of the original enquiry to the proof-reading of the printer's galleys. This is a problem as old as administration itself, evident in eighteenth-century Scandinavia (where Drake has shown that the death rate in Norway in 1742 was inflated by a clerical error in making up totals of deaths to 70 per 1,000 where the true figure is about 50 per 1,000),¹ and in Britain in 1969 (where it became evident that the

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under-recording of exports had for some years been on a scale sufficient to make a significant difference to the appearance of the balance of payments).

In some respects close examination of the accuracy of the census is reassuring; in others it shows how unsafe it is to trust any straightforward inferences drawn from the published figures. Tillott's work in unravelling the ways in which inaccuracies creep into census materials bears eloquent witness to the extreme difficulty of ensuring that there is exact correspondence between legislative intention and administrative action. He investigates both the circumstances in which information was originally obtained and the ways in which it was subsequently altered. And he shows that deficiencies were not uniform throughout the country. Local registrars sometimes indulged in highly idiosyncratic interpretations of their briefs and as a result there might be a spurious boost in the number of, say, lodgers at the expense of visitors or vice versa. Census checkers could be equally arbitrary.

The history of the census at the national level is described by Drake. He draws heavily upon contemporary comment to show how certain questions came to be regarded as normal on census schedules while others were taboo. Some remained long in doubt. The furious swaying battle over the taking of a religious census makes an instructive and exciting story – an epitome of the many nineteenth-century struggles between the Nonconformists and the Established Church. The appendixes to Chapter 1 provide in summary or tabular form an inventory of the contents of the nineteenth-century censuses, making it easy to discover which tabulations were made consistently and which appeared only sporadically.

The chapters written by Tillott, Anderson, and Coleman in different settings all underline the promise of micro-studies based on enumerators' books. It is a matter for regret that under the hundred years' rule enforced by the General Register Office these books can at present be consulted only down to the 1861 census, but it is significant that in spite of this restriction they are attracting many scholars who find the printed tabulations of the censuses unsuited to their purposes. Working from enumerators' books offers two great advantages over using census volumes; that the information can be extracted to fit the problem in mind, and that each entry concerns a named individual.

The significance of the first point will be recognised immediately by anyone who has been obliged to depend upon printed census tabulations, for it is always and inevitably the case that detailed cross-tabulations are available for very large populations only, while for small areas or socio-economic groups the tabulations are much simpler. At the parish level little more than the crude total of population may be printed. Yet to study the interlinkage of social, economic and demographic characteristics in a population, the gross statistics of large populations are usually of very little help because they refer to complex groups within which smaller and more homogeneous groups are submerged. Consider, for example, the history of the decline in fertility in the late nineteenth century.

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The fertility tabulations of the 1911 census show well enough how national fertility fell gradually from about 1860 and also how wide was the difference in the timing and extent of the fall between different socio-economic groups. The professional classes were at one extreme: miners and agricultural workers at the other. Family limitation clearly percolated down through the ranks of society quite slowly so that high fertility groups in the 1890s might be at the same point as low fertility groups in the 1860s.

But to know these general characteristics of the fertility fall only serves to set the stage for work which might yield an adequate appreciation of the circumstances in which behaviour changed. For example, it would be valuable to know whether members of groups in which fertility fell early were responsive to local conditions as well as national trends. Did school-teachers, clerks and shopkeepers in coalmining districts conform to the local high fertility pattern, for instance, or did they behave like others in similar employment elsewhere in the country? Was there a difference between, say, school-teachers who came from local mining families and those who were of middle-class origin, or who moved into the district from elsewhere? To what extent did the family background of the wife influence matters? Or work opportunities for married women outside the home? And so on.

The ramifications of this topic are intricate and fascinating, and there are many similar topics. Yet the essential point is simple. The understanding of historical change depends upon using an appropriate framework within which the evidence can be marshalled. Often the appropriate framework is the individual family or household. These can then be combined and re-combined to suit the task in hand. But whereas it is always possible to build up in this way from the primary record in the enumerators' books, it is not possible to reverse the process and adapt the printed tabulations by sub-division. Hence the importance of work based on the enumerators' books.

That each entry in these books concerns a named man, woman or child is also very important. Recent advances in historical demography are very largely due to the development of a logic of nominal linkage between records of baptism, burial and marriage which concern the same individual or family.² There is no reason why this logic should not be extended to a wider range of nominal sources (such as enumerators' books at successive censuses, or enumerators' books and other nominal sources like vital registration,³ wills, directories, tax lists, Poor Law records, etc.). The elucidation of some of the points listed above either requires the use of additional nominal sources or would be greatly helped by it. The enumerators' books provide an excellent central nexus from which to branch out in this way. For each person they give age, sex, occupation, place of birth, marital status, and relationship to head of family. In addition there is information about each household, its size, presence or absence of kin, number of servants living-in, and so on. Nominal linkage between enumerators' books and vital records may add such details as age at marriage, rank of birth in the family

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of orientation, father's occupation, information about earlier marriages, and occupation at a younger age. More complex operations may produce data about proximity of residence to that of kin by blood or marriage, or enable one to follow individuals through their successive life-cycle stages. Only a few substantive studies which illustrate the potential of work in this vein have been published as yet,⁴ but the success which has attended family reconstitution in a similar data environment promises well for the future.⁵

Every research opportunity has its attendant disadvantages. In this case the bulk of the data is the most obtrusive problem. Schofield's chapter on sampling historical material is directed to this issue since the use of a suitable sampling method may radically reduce the amount of work entailed in sifting through bulky sources without appreciable cost in loss of detail and accuracy. He is at pains to show how research may be planned with this point in mind and also to emphasise that sampling theory is a much more flexible instrument than is sometimes supposed, adaptable to historical data which may seem at first sight too cumbersome to be sampled easily. Clustered sampling theory, for example, may be very helpful where the units of population which one wishes to sample are approached indirectly, as in the case of individuals within households. When the population to be sampled is clustered in this way, the precision of sample estimates for any given size of sample is less, but by an amount that can be specified. There are many instances of historical sources where it would be extremely tedious and time-consuming to sample directly but where indirect sampling may save the day.

Some difficulties are common both to the use of printed census volumes and to work on enumerators' books. In one section of his chapter, for example, Armstrong describes the method of occupational classification developed by Charles Booth to enable comparison to be made of the numbers engaged in industrial groupings at successive censuses. The trades comprising the sub-groups varied from census to census, as individual trades, crafts or occupations were combined or sub-divided, or occasionally reallocated between the sub-groups. To achieve the greatest possible consistency over time some reworking of published census data is necessary. Armstrong's discussion is framed chiefly in terms of the census tabulations but the long lists of allocations of trades to industrial groups should prove equally valuable to those working on enumerators' books.

In the other section of his chapter, which is chiefly concerned with the enumerators' books, Armstrong explores a further aspect of a difficulty which is encountered by most historians who use census data – that the information is collected by census officials with one purpose in mind, whereas the historian wishes to use it for another. In this case the information given is a general classification of occupations, the object in mind is the study of social stratification. There are few easy or fully satisfactory 'answers' in a matter of such complexity, but, as Armstrong insists, even though each historian may devise *ad hoc* schemes

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tailored to his own needs, it is most important that he should also make a number of tabulations in a standard form to facilitate comparative work.

Each author where appropriate has tried to indicate the limitations of the available data, their dependability, common sources of error in handling them, and the methods which may be used to produce uniform results. Baines tackles the measurement of migratory flows in this vein, proposing a method which yields both a 'best' estimate of net migration between counties decade by decade, and sets upper and lower bounds to the size of the flow. He also discusses other methods of measurement and the vexed problems which follow on boundary changes, or arise from differences in mortality rates between residents and migrants.

Gatrell and Hadden's chapter is devoted to a description of the statistics of criminal behaviour which are available for the nineteenth century, and to the inferences which can properly be drawn from them. They suggest that the relationship between the trade cycle and rates of certain classes of crime has been misconceived in the past, and show how the comparison of regional and national crime rates may throw light on the varying local incidence of economic misfortune. Coleman's review of the sources which may be used in the study of educational provision is of a similar character. In both cases the statistics pose teasing problems. They were less accurate, less consistent and less detailed than most census tabulations (though the enumerators' books are themselves important in studying local schooling), and demand a judicious wariness if they are not to be misleading.

This volume is but a small beginning. Both within the context of the census and more generally in relation to state-collected data, many more topics might have been discussed (some indeed were planned for this volume but for various reasons proved stillborn). The authors share the conviction that the remark that Disraeli is alleged to have made about statistics, tells us more about Disraeli than about statistics. No doubt all tools can be misused and powerful tools will then produce more damage than weak ones. But this is not a good argument against using powerful tools. Quantitative studies whether of society today or in the past can be as elegant, penetrative and illuminating as any others. For some purposes they are to be preferred to other methods. To be successful they require a scrupulous knowledge of the sources to which they are applied. Often, indeed, the intrinsic rigour of some statistical concepts, like sampling, imposes a greater care and precision in using sources than would otherwise be the case. It helps to ensure, too, that the distinction between illustrating a hypothesis and testing it (not always well observed in the past) is better understood.

As with an earlier volume published by the Cambridge Group for the History of Population and Social Structure, *An Introduction to English Historical Demography*, very few results of research are published in this book. It deals with sources and methods of research rather than with the end product. Where substantive results are mentioned it is usually to illustrate a point of technique.

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The book is therefore a beginning in a second sense also. I hope that it will prove useful to those who are drawn to the study of the recent past, who are attracted by the vast bulk of information available about nineteenth-century society and its fascinating detail, and who are impressed by the opportunity it affords to study social, economic and demographic structure and behaviour. The Victorian age was not the first period in English history of which it can be said that there remains written evidence about every man who then lived. That had been true of many English communities since just before Elizabeth's reign when parish registers first came to be kept. But in the Victorian age the volume of information compiled for every individual mounted fast. This is a challenge to historical imagination as much as to historical technique. When the challenge is successfully met we shall know much more than we do now about the nature of industrialisation, urbanisation and rapid social change, and the response of men and women to them.

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1. The census, 1801–1891

M. Drake

INCIDENT OF THE CENSUS. The following specimen of womanly assumption was given in one of the census returns not a hundred miles from College Street, Portsea:

‘Jane – wife, head of the family, mangle woman
John – husband, turns my mangle.’

*Portsmouth Times*¹

How much a government should know about its subjects has long been a matter of controversy. There is, therefore, nothing archaic about the altercation given below, between a supporter and an opponent of a bill to take an *annual* census of England and Wales, a bill that was hotly debated in the House of Commons in the spring of 1753.

[A census], it is said, can answer no purpose but that of an insignificant and vain curiosity, as if it were of no consequence for the legislature to know when to encourage and when to discourage or restrain the people of this island, or of some particular part of it, from going to settle in our American Colonies. Do gentlemen think, that it can be of no use to this society, or indeed to any society, to know when the number of its people increases or decreases; and when the latter appears to be the case, to enquire into the cause of it and to endeavour to employ a proper remedy. . . Even here at home do not we know, that both manufactures and the number of people have in late years decreased in some parts of the Kingdom? Would it not be of advantage to us to know, whether this affects the whole, or if it be only a removal from one part of the island to another?

George Grenville²

It has been said, Sir, that an authentic knowledge of the number of our people, and of their annual increase or decrease, will instruct us when to encourage, and when to restrain people from going to settle in our American Colonies. Sir, our going or not going to America does not depend upon the public encouragement or restraint, but upon the circumstances they are in at the time. Let the number of our people be never so much increased, those who can easily find the means of subsistence at home neither will go, nor ought we to encourage them to go to America: and let that number be never so much diminished, we ought not to restrain those from going thither who can find no way of subsisting at home. . .

William Thornton³

The depth of feeling on this, and other issues, is reflected in the fact that at the Committee stage of the bill every single clause was debated and there were many

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divisions.⁴ Nevertheless the bill passed the House of Commons, only to be rejected by the Lords.⁵

The question of a census does not appear to have been raised seriously again until the closing years of the eighteenth century. The controversy at that time as to whether or not the population of the country was rising, together with the suffering associated with the harvest failure of 1795 were no doubt important factors in providing a climate of opinion favourable to a census. However, the more immediate steps leading to the first census appear to have been taken rather casually by John Rickman.

In 1796, while Rickman was still in obscurity at Barton, (he was living in his father's house near Christchurch), he wrote a paper entitled 'Thoughts on the Utility and Facility of a general Enumeration of the People of the British Empire', extracts from which are given in the memoir by W. C. Rickman (in the *Gentleman's Magazine*). These extracts set forth in a very dry manner, the economic advantages of ascertaining the number of the population, the probability of its being far higher than the usual estimate, and the facility of arithmetically deducing it from the parish registers. This paper was communicated by Mr (afterwards Sir George) Rose, the Member for Christchurch, to Charles Abbot, the future Speaker, who was also interested in the subject. Abbot introduced the Population Bill in 1800, and on its being passed offered to Rickman the supervision of the returns.⁶

It seems therefore that Rickman was the sponsor of the first census as well as its organiser. Certainly Rickman believed this to be the case. In a letter to the poet Southey, dated 27 October 1800, he writes, 'At my suggestion they have passed an Act of Parliament for ascertaining the population of Great Britain.'⁷ It is a rather interesting coincidence that at this time when Rickman, still without a career, was residing in his father's house, Malthus, also as yet without a career, was living in his father's house not sixty miles away as the crow flies at Albury in Surrey,⁸ preparing the occasion piece that was to make him the father of modern demographic studies.

The censuses which were taken at the beginning of each decade throughout the nineteenth century fulfilled a number of functions. The early ones, for instance, helped to boost morale during the struggle with France. *The Times* commented in 1811: 'These returns of increased population must afford high satisfaction to every patriotic mind as shewing that the radical resources of the country have not been affected by the war which has lasted so long.'⁹ Later, however, they provided the opportunity for a wry self-mockery. Thus *The Times* in 1850 noted: 'If it is a privilege to be born, and another privilege to be born an Englishman, the human race may be congratulated on the large increase of the privileged members which it has witnessed during the last half century.'¹⁰

On occasion the census results were received with a sense of shock. Take for example this comment which appeared in *The Times* on the return of the 1891 census of Liverpool. 'Liverpool still heads the list as the second city in these Kingdoms so far as population goes, with a population of 617,116 (we presume that five, the first figure in the printed returns should be six)...'¹¹

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On the census office confirming that the figure five was not a misprint, ‘Something like dismay’ was caused amongst the members of the Liverpool Municipal Authority, ‘for the figures’ made a ‘vast difference to the rate of mortality per thousand – making it over 27 instead of 23’.¹²

Just how wide of the mark ‘informed’ public opinion could be of population size is illustrated by *The Times* estimate on 18 June 1851 of the population of Ireland as not ‘much over 8,000,000’.¹³ On 4 July 1851, however, *The Times* had to report the ‘painful but authentic communication . . . that the population of Ireland is at this moment very little more than six millions and a half’.¹⁴ Thus, the report continued ‘it appears that the aggregate population of these islands is only about a half a million more than it was ten years ago, and that instead of increasing at the rate of a thousand a day, as is generally supposed, we have only increased at the rate of a thousand a week . . .’¹⁵

A sense of surprise, if not of shock, was also manifested by an 1811 commentator who compared the populations of some London parishes with those of leading provincial towns. ‘By such a reference’ he noted, ‘it will be seen that the inhabitants of Marylebone outnumber those of Birmingham by 5,000 souls; Shoreditch is equal to Bath; Bethnal Green to Nottingham; St Pancras has 10,000 more than Sheffield; Kensington is equal to Cambridge; St Giles contains only 1,200 fewer than Leeds; and Islington equals the population of Canterbury’.¹⁶ Shocks like this only served to strengthen the desire for more precise information of population conditions. True, there were those who still felt that the census served ‘the purposes rather of natural curiosity than public advantage’.¹⁷ ‘Masses of figures are by themselves of little profit, except to gratify the same curiosity which is pleased by reading the pages of a directory or almanack’.¹⁸ However, the case for a periodical census as a legislative aid was never strongly challenged.

Two-thirds of the political measures introduced into either House of Parliament are argued either with especial reference to the numerical divisions of the population, or at least upon the assumption that these divisions have been ascertained with sufficient accuracy for the purposes of debate.¹⁹

For want of such information as the census yields [our ancestors] legislated in the dark, so that our chief business of late years has been, not to make laws but to unmake them.²⁰

On the social bearing of such an investigation, it is hardly necessary to dwell; it is only by learning what, as a people, we have been doing that we can learn what remains for us as a people to do. The command of data is the one circumstance which separates our legislation from the legislative code or mistaken principles which even great men were compelled to accept in former times. It was the opinion of Bacon that the plough should be kept in the hands of owners; in other words the farm should be infinitely small. It was the opinion of Johnson that population always progressed in a tolerably even ratio. It was a common belief in the eighteenth century that the number of a people constituted their wealth. It is now scarcely fifty years since Pitt supported a state provision for every labourer’s child. It may be too much to say that we are guaranteed against similar or equal errors; but there is no doubt that in this case, as in

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others, knowledge is power, and that we acquire by our selfinquisition a larger grasp of the future.²¹

The only idea and object of such a roll-call is not that we may boast of our fecundity, which only the oriental views as in itself a subject for pride, nor that we may contrast the total of our bone and sinew with the resources of neighbouring peoples, but simply to acquire a series of facts which may illustrate the necessities and guide the legislation of a new lustrum.²²

These arguments it will be noticed are in marked contrast with the points made by opponents of the census in 1753 who among other things asked: 'Can it be pretended that by the knowledge of our number, or our wealth, either can be increased?'²³ When, as happened with increasing frequency, members of the public urged the Government to extend the range of the census, they did so on the ground of its utility. For example, a correspondent in *The Times* in suggesting that those provisions of the Scottish census of 1861, designed to ascertain the number of rooms in each house, the number of persons in each family and whether the houses had or had not windows, should be included in the census of England and Wales for 1871, argued that the data were 'not only instructive but [had] given a great impulse to social and sanitary reform in [Glasgow and Edinburgh]'. He went on: 'If similar details were now given for every city and town and empire, and if they were continued every ten years, we should not only lay a solid basis for social science in regard to disease, pauperism and other evils, but we shall be able to compare one town with another, and from time to time the Kingdom with itself. . .'²⁴

But it was not only the detailed results of the census that fascinated the Victorians; they appeared to be equally enthralled by the detailed mechanics of the operation itself. For as each census approached, the magnitude of the task the nation set itself was painstakingly presented to the public.

About 33,000 [enumeration books] of various sizes, each capable of holding from 400 to 3,000 names have been sent out from the Central Office. . . In addition to these books and forms various other returns have been dispatched, among which may be mentioned 100,000 special schedules for vessels, 1,200 enumeration books for the large institutions, and 3,000 special schedules for the small institutions of the country, 300 enumeration books for the Royal Navy, 33,000 instruction and memorandum books for the use of enumerators themselves. The weight of all these documents exceeds 55 tons. Before the 6,500,000 weekly executed household schedules – with which the public are now familiar – left the printers (Messrs Ford and Pilt of Long Acre), each of them passed through nine distinct processes – viz. printing (two at once), cutting in half, folding, tying, counting once, cutting again, checking twice, pressing with 150 tons of pressure and packing. The printed circular letters and elaborate books of instruction recently issued to various local offices, in order to set the gigantic local machinery successfully in motion, already number about 80 different kinds.²⁵

Once it was agreed that a periodic census was desirable, the question of what it should cover became a major issue and one which led to considerable debate throughout the century. The early censuses, from 1801–31 were organised by John Rickman at the centre and carried out by overseers of the poor and the