LOCAL POPULATION STUDIES

MAGAZINE AND NEWSLETTER

No. 3

Autumn 1969

LOCAL POPULATION STUDIES

MAGAZINE AND NEWSLETTER

No. 3 Autumn 1969

Published twice yearly in association with
Nottingham University Department of Adult
Education

LETTERS to the Editorial Board should be addressed to:-

COLIN BARHAM
SUTTON COTTAGE
EAST SUTTON
NEAR MAIDSTONE
KENT

SUBSCRIPTIONS

The Annual Subscription to Local Population Studies is 10/- for U.K. readers. For other subscribers an additional postage charge has to be made.

Subscriptions should be sent to the Subscription Secretary:-

MRS. A. BODEN,
TAWNEY HOUSE
MATLOCK
DERBYSHIRE DE4 3BT

Cheques should be made payable to Local Population Studies Magazine

Individual copies available from the Subscription Secretary 7/6d. each

CONTENTS

EDITORIAL

ACCESS TO GENERAL REGISTER OFFICE RECORDS

On 1 July 1837 the system of civil registration was introduced whereby all births, marriages and deaths were henceforward recorded in registers under the supervision of the Registrar General of England and Wales. For putting the system into effect the country was divided into regions and these in turn were subdivided into registration districts under superintendent registrars and sub-districts under registrars.

Every quarter the local superintendent registrars send copies of all registered events for the preceding three months to the General Register Office at Somerset House in London. On arrival these returns are bound into volumes and an alphabetical index is compiled. Thus two sets of these vital records (to use the demographic term) exist: one in London and one in the office of the local Superintendent Registrar.

For the historian doing work in the field of population studies, the advantages of the civil registration records over parish registers should be considerable. For example, civil registration should enable him to overcome the problems presented by non-conformity in a period when the growth of dissent resulted in parish registers recording an increasingly smaller percentage of events. Other advantages are obvious, especially in connection with family reconstitution: the birth record states when and where a child was born, as well as the name, surname and occupation of the father, and the name and maiden name of the mother; the marriage record gives the ages of both parties and the names and occupations of the respective parents; the death record provides the age, occupation and cause of death of the deceased person.

Yet this vast accumulation of source material is rendered useless to the historian by the restrictions imposed on its availability. Under the 1836 Act establishing the system of civil registration, the General Register Office is required to make the index to the returns accessible to the public, and members of the public are entitled to copies of specific original entries on demand, fees being payable in both cases. No public right to consult the original entries is given under the Act. These procedures are presumably satisfactory for people wishing to get information to enable them to apply for a passport

or claim an old age pension, or for genealogists tracking down a few known individuals. They are not, however, appropriate to the needs of those searching for vital registration entries of a large number of people, or for those searching generally for all entries in a specified area in order to uncover the population history of a particular community or group of people.

In fact, some local registrars permit their originals to be consulted by those engaged in historical research. Others (probably the majority) do not. The General Register Office seems to feel doubts as to whether there is any real demand by historians to be able to use these records, and there is not much possibility of access to them being made easier unless the contrary is demonstrated. We therefore suggest that any of our readers who is refused permission to consult the original civil registration records for his area by the local superintendent registrar should write to the General Register Office at Somerset House, London, W.C.2. explaining his need to consult the records and requesting permission. If this is refused by the G.R.O. then a letter of complaint should be sent back. In this way the Office will become aware of the degree of demand, and further voices will be added to those already urging revision of the regulations covering access.

CENSUS ENUMERATORS' SCHEDULES

The situation with regard to limitations on the use of census schedules is also one that needs re-appraisal. These rank with the civil registration returns in importance for the study of the nineteenth and twentieth century population history. Since its inception the General Register Office has published analyses of information contained in the schedule returns (as, indeed, it has for the vital registration returns). However, for most of the purposes of the population historian, especially one studying a small community, these analyses are not detailed enough.

For questions of migration, household structure, family formation and decay, the historian needs to be able to combine family reconstitution with census schedule analyses. He needs the use of a double-angled view on the population: a static snapshot every ten years from the census and a running film of change derived from vital registration.

Enumerators' schedules are now deposited for use by the public at the Public Record Office one hundred years after the year of the census. This means that the latest schedules available for use

by historians are those of 1861. When the 1841 and 1851 schedules were first deposited at the PRO in 1910 and made available for the public the closed period then stood at sixty years. During the last fifty years only one other set of census schedules (that for 1861) has been deposited for public use. Thus the closed period for these records has been increased to one hundred years at a time when there has been a trend to make government documents available for research after a shorter closed period. This hundred year rule for census material appears incongruous when contrasted with the recent thirty year rule for other documents.

The principal justification advanced by the General Register Office for inflicting this hundred year time lag seems to be that of security, for the information obtained in censuses is collected under the assurances of secrecy. For this reason it is unlikely that the GRO will ever agree to completely unrestricted public access to schedules less than one hundred years old. However, this is not a good reason to deny bona fide research workers access to post 1861 material. Although in demographic research individual names are vital for establishing links between entries in various records, it is not necessary in publishing the results to identify any individuals. Indeed, it is essential for demographic purposes that research results be expressed in statistical terms similar to those already employed by the Registrar General.

In any case there is little justification for the G.R.O's contention that the accuracy and confidentiality of future censuses is dependent on the protection afforded by the hundred year rule. Indeed, in Scotland census schedules are already public at least to 1891, yet no-one has suggested that the current censuses in Scotland are any the less accurate as a result.

Unless something is done to make the vital registration returns and the post 1861 census schedules accessible, a great deal of potentially valuable research work in the fields of demographic, local, social and economic history will be frustrated. We shall find ourselves in the paradoxical situation that the establishment of the General Register Office in 1836 has in some respects actually hindered the study of this country's population.

David Avery,
Colin Barham,
Christopher Charlton,
Roger Schofield.

NEWS FROM THE CAMBRIDGE GROUP FOR THE HISTORY OF POPULATION AND SOCIAL STRUCTURE

In addition to writing periodical reports on the progress of our research we shall be using our space in L.P.S. to communicate ideas and problems that have occurred to us in the course of our work. Our hope is that L.P.S. readers, who between them have a very wide experience of local conditions, will be able to help us by commenting on our ideas and suggesting answers to our problems in the light of their local knowledge.

In this issue Peter Laslett describes a new source of information for literacy studies and Dr. Wrigley discusses two problems: the possibility of a change in attitude towards marriage registration in the late seventeenth century, and the meaning of the description 'widow' in the parish registers.

Peter Laslett
R.S. Schofield
E.A. Wrigley

SCOTTISH WEAVERS, COBBLERS AND MINERS WHO BOUGHT BOOKS IN THE 1750's

It was pointed out in The World We Have Lost (page 196) that something more than the ability to read or to sign the name was necessary in order to permit a man or a woman to play a part in social, political or intellectual life, perhaps a great deal more, even in the 17th or 18th centuries. Evidence of everyday familiarity with the written and printed word is necessary, it was suggested, to bring out fuller literacy of this kind. Books, in fact, must have been actually owned by anyone capable of exercising power or influence in a society where government and business were themselves tied to the printed word, as well as religion, the most important concern of everyone.

There is one obvious and relatively convenient source of information on book owners, in the inventories attached to wills. If a yeoman, or a husbandman, or a joiner left books behind him, it can be claimed with a certain confidence that he was fully free of the literate world. Given enough instances of this kind, proportions of will making persons in the various callings with this attribute could be worked out. Roger Schofield, and those who have volunteered to help him in the

study he is carrying out on literacy in the past for the Cambridge Group for the History of Population and Social Structure, are concerning themselves with inventories post mortem. They have found mentions of books to be very rare, even rarer than the one inventory in ten suggested as probable for the 17th century in The World We Have Lost. What is more, will making cannot be supposed to have covered the whole population, even though a surprisingly large number of very modest people seem to have had their goods inventoried after death. Any new source of records of book ownership would obviously be most welcome.

Just such a source has in fact been found during the last few weeks. Its value to the social structural historian depends to a large extent on the number of examples which can be located, hence this early notice to every reader of L.P.S. The source consists of lists of subscribers, which appear in some books published in the 18th century, if they should happen to specify in detail the occupation of each subscriber.

I have in front of me as I write a copy of a book with the following title: Prima Media, or First, Middle and Last Things. By Isaac Ambrose, Minister of the Gospel at Preston in Lancashire. The Seventh Edition, Glasgow, Printed by James Knox, for Mr. James Tweedie, Student of Divinity. M,DCC, LVII [i.e. 1757].

After the author's note to his readers there appears a list of 398 subscriber's names, twelve examples of which are given below:-

Rev. Mr. John Bisset, Minister at Culsalmond.
Robert Barr, Farmer in Gorbals.
Robert Donaldson, Weaver in Anderstoun.
James Fillan, Gardener in Keithall.
James Greenlies, Weaver in Caltoun.
Mr. James Hay, Dyer at Fivie.
David Spense, Weaver in Glasgow.
Mr. Alexander Leslie, Merchant in Aberdeen.
James Baird, Coal-hewer at Lightburn.
Margaret Findlay in Pittlochrie.
Hugh Kerr, Weaver in Paisley
John Knox, Merchant in Bogbrae.

There are 61 descriptions in the list, covering 327 of the 398 persons names, that is 82%. As was inevitable at that time, none of the 12 women in the list is given an occupation, though one or two are

described as "Mrs.", the lowest title of quality. This leaves 386 persons who could have been expected to have occupations, and of these no less than 120 were weavers, that is 31%. A full list of persons by occupation is given below, and it will be seen that no other occupation approaches the weavers in numbers. The spread of occupations is remarkable, as well as the rough character of many of them. There were 2 coaliers, 2 coal hewers, 1 hillman (also a miner), 2 masons, 6 smiths, 8 shoemakers, a soapboiler, a blacksmith, 3 wrights, and a squarewright, whatever that may have been. Even more surprising, is the relative scarcity of educated persons in the list; only 28 parsons (7%). 31 merchants (8%, second to the weavers) and less than a dozen with any pretence to gentility.

Subscription lists are fairly common in classical or topographical books - or in dictionaries like that of Samuel Johnson - but the others I have seen are uninformative about the persons mentioned. They seem quite obviously to be clergy and the gentry of the kind usually reckoned to be likely bookowners. This subscription list of 1757 must therefore be regarded as something of a novelty, if only in the exactness of its description of persons.

It is noticeable that a careful distinction is made, for example, between a tradesman who was reckoned to have some claim to gentility ("Mr. Hay", the Dyer above) and an ordinary one with no right to a prefix. It may well be that this volume is quite exceptional in all these respects. No other copy has been traced since this one turned up at David's, the well known Cambridge antiquarian Bookshop, on 16th September, 1969. But it transpires that the document itself contains the evidence for the existence of another book published under precisely similar circumstances by the same Mr. James Tweedie, Master of Arts, from "his house at the foot of the Grammar School Wynd" in Glasgow.

There is an Advertisement on the back of the title page of 1757 which reads thus, in part:

> The Publisher of this book has published proposals for printing by subscription a neat and correct edition of WATSON's Body of Divinity Which will be published on a larger and finer paper. The price to subscribers will be only six shillings sterling; one shilling to be paid at subscribing, and the remainder at the delivery of the book, neatly bound and lettered on the back.

A copy of Thomas Watson, A Body of Practical Divinity, the Fifth

Edition, Glasgow 1759 does exist in the British Museum (press number 3557 f 16), and it is likewise, at the present time, the only one known to survive. The Rev. Tweedie's name appears as publisher, and this time his address is given too, though the printer is John Hall. The new subscription list is much longer, for it contains 606 names, and of these only 35 are given without indication of occupation, apart from the 11 women. There is some loss in fineness of social distinction; there are very few craftsmen called "Mr." here.

Apart from its greater completeness and length, there is one slight difference between this second list and the first. Shoemakers, so often thought to have been the best read and the most independent in outlook of the craftsmen of earlier times, are outnumbered by merchants in the first list, and equalled by gardeners and tailors. But in the second they move into second place in that group of occupations. But they are a very bad second indeed to the weavers. Little can be learnt from either list about the relative position of crafts as to book buying. It is a noteworthy fact that only ten or a dozen people appear in both lists, which means that between them these two books contain some 850 names of men of known occupation living in the Glasgow region, and elsewhere in Lowland Scotland in the later 1750's, everyone of whom was certainly a bookbuyer.

These two documents now make up the whole content of this fresh source of evidence on book-ownership in the 18th century. It is very much to be hoped that volumes other than Mr. Tweedie's can be located through the good offices of those who read this journal. But care must be taken not to exaggerate the usefulness of information of this kind. It cannot be used to tell us what proportion of land workers and craftsmen in the area reached by Mr. Tweedie's operations were book-owning at the time, nor can it tell us how many weavers, for example, belonged to this category. All that it does demonstrate with certainty is that miners, wrights, blacksmiths and weavers did acquire books at that time, quite expensive books, and went to some trouble to get hold of them. As far as I know this is all new information.

There are no less than 242 weavers in the second list, and when reckoned in the same way as above they make up 41% of the total subscribers. It is nevertheless possible that book-owning weavers formed only a small minority indeed of all those carrying on the trade in the Glasgow area, for these may have been in total tens of thousands of men. It does seem likely from this evidence that weaving was far and away the commonest occupation of the area at the

time, and this may be no surprise to the economic historian of Scotland. But even this inference is insecure, for it leaves out the possibility that being a weaver particularly disposed working men towards fuller literacy. We can at least be sure that weavers living in Lowland Scotland in the sixth decade of the 18th century could be persuaded in large numbers to acquire books containing reprints of 17th century English Calvinist divines, provided always that they were within reach of some such proseletysing entrepreneur as the Rev. James Tweedie.

There is a hint here at an even more difficult issue, which is that some of the subscribers, and especially the more ignorant, may have bought their books not to read, because perhaps after all they could not read, or read with any ease, but as possessions to be proud of and show off, or even to venerate for religious reasons. We all know that there are sets of the works of Charles Dickens, or of Shakespeare, which occupy very similar positions in the glass-fronted bookcases of innumerable households in both Scotland and England at the present day.

But even when this is recognised, and surely it cannot modify to any great degree the inference that most of the men on these two subscription lists must in fact be counted as fully literate, it raises the presumption that this particular habit had already appeared, which is itself something of a discovery. In order to gain prestige in your own eyes or in those of your neighbours by being able to show off your books, it must first be true that books are prestigious objects. Now this certainly does not seem to be so for the men who made the inventories post mortem in England in the previous century. There is some sort of confirmation that a mechanism of this kind was at work in the fact that Tweedie's Advertisement for his Watson mentions that "A few copies will be thrown off on a finer paper at eight shillings each". Most of the fine copies of Watson indicated as such in the subscription list seem to have been bought by weavers.

So far, we have had to confine our discussion to Scotland, and the most urgent need is to find a source of this kind which is English. It is a well-known fact that Scottish elementary education was already very much in advance of that of England by the 1750's, and there may be those who would say that this is precisely what should be expected of Scottish weavers, shoemakers, barbers, miners and even land labourers, of whom there is one in the second list. Nevertheless there are subscribers named by Mr. Tweedie from England and, especially for the first publication, from Lancashire, where no doubt the memory of Isaac Ambrose was still warm amongst the noncomformists in the 1750's. Manchester appears in the second list as well.

Perhaps we may hope to find similar publications from the sects of Northern England, rather than from the South. Some of the facts cited in this brief discussion of this new source could be used to show that the descriptions contained in these volumes were self-descriptions rather than appraisals by such outsiders as visiting Ministers and travelling pedlars. This is an important point for the student of social structure and of literacy, but it is one we can pursue no further here. Along with the light which these publications throw on the process of publication by subscription itself, which clearly bears upon the question of who could and did read and own books, these matters must be left for more detailed discussion elsewhere.

Occupation	Number of Subscribers	
	1757 List	1759 List
Minister of the Gospel	24	
Minister		7
Preacher of the Gospel	4	4
Schoolmaster	8	3
Schoolmaster and Merchant		1
Teacher	1	
Writing Master		1
Writer		1
Justice of the Peace		1
Advocate	1	
Baillie	2	1
Clerk	1	
Officer of Excise	6	
Collector of Excise	1	
Factor	2	
Overseer	1	
Student at Divinity	7	
Servant to the Univ. Glasgow		1
Operator to the Chymistry Class Univ. Glasgow		1
Reader	1	
Bookseller	1	1
Bookbinder	2	1
Printer	3	3
Merchant	31	19
Merchant and Overseer	1	
Merchant Weaver		2
Chapman		1
Travelling Chapman		8
Farmer	24	41

Occupation	Number of Subscribers	
	1757 List	1759 List
Gardener	8	2
Deacon of the Gardeners in Glas.		1
Portioner	2	3
Tenant		1
Land Labourer		1
Maltman	11	7
Maltman and Distiller	1	
Brewer	1	3
Vintner	1	
Mealman	1	
Miller	1	3
Baker	1	5
Flesher		2
Soapboiler	1	1
Coalier	2	
Collier		1
Coalgrive		1
Coalheaver	2	
Hillman	1	
Tanner	1	
Shoemaker	8	34
Cordener		1
Currier		1
Weaver	120	242
Weavers, present Deacon of N. Quarter Journeymen, Glasgow		1
Weavers, Deacon of Red Club, Glasgow		1
Jurniman Weavers, Late Collector		1
Journiman Weavers, Deacon of		1
Inkleweaver		2
Foreman to the Inkle Factory Glas.		1
Woolcomber	1	1
Bleacher	2	1
Dyer	1	1
Flaxdresser		2
Treed Twiner		1
Linen Manufacturer	1	
Stocking Maker	1	4
Taylor	8	23
Hatter (Hatmaker)	5	3
Combmaker		1

Occupation	Number of Subscribers	
	1757 List	1759 List
Cooper	3	6
Glazier		1
Mason	3	2
Smith	6	14
Blacksmith	1	
Hammerman	2	2
Present Deacon of the Hammermen		1
Wright	3	17
Late Deacon of the Wrights		1
Squarewright	1	
Turner		1
Slater		6
Ropemaker		3
Watchmaker	1	
Upholsterer	1	
Tobaccospinner	1	
Fitter		1
Dytter (?)		1
Innkeeper	4	9
Barber	1	10
Cook		1
Sailor		4
Servant	3	5
Carrier	1	
Workman		1
Customer	1	
Indweller - men	1	23
Indweller - women	2	3
No Occupation		
Esq.	2	
Mr. (M.A.)		1
Mr.	5	
Males	66	35
Females	12	8
TOTAL	398	606

Note: on List of Occupations

No comment is offered here on these occupational names, some of which like inkleweaver and coalgrive are new to the Cambridge Group, though doubtless well known to Scottish social historians, and those of Northern England. One of them (Dytter) is unintelligible to us and may be a misprint. Some of the descriptions, such as Present Deacon of the North Quarter Journeymen in Glasgow, or Deacon of the Red Club in Glasgow, both men being weavers, have an obvious interest for the development of friendly societies or even trade union organisations.

I should like to thank the following for help in this small piece of research: Mr. David Cressy, Mrs. Midi Berry, Miss Karla Oosterveen, all connected with the Cambridge Group; Mr. Philip Gaskell, Librarian of Trinity College, Cambridge and late of the University Library, Glasgow, Mr. Patrick Kelly, and Mr. H.M.T. Cobb of the British Museum.

Peter Laslett

BAPTISM/MARRIAGE RATIOS IN LATE SEVENTEENTH CENTURY ENGLAND

Baptism/marriage ratios are sometimes used as a rough measure of fertility in a parish or group of parishes. They may be calculated either in a straightforward manner by relating, say, the number of baptisms 1680-9 to the number of marriages in the same period, or the periods chosen may be staggered to reflect the fact that marriages in any one year contribute to baptism totals over a period of years (e.g. baptisms of 1685-94 and marriages 1680-89). In general the value to be expected for the ratio lies between 3 and 5, but in particular parishes, because of special local circumstances, the value may be well outside this range (e.g. because the church was unusually popular and attracted couples to marry there though neither partner lived in the parish). Even where there is no reason to suspect distorting circumstances of a special kind, the ratio is to be used with the greatest caution, since it may be affected by such things as

remarriage frequencies, local migration trends and the overall trends in total population.

In analysing late seventeenth century registers, to all the other caveats about the use of the ratio must be added a further caution, one which may make it necessary to abandon its use altogether, or rather to convert it into a rough measurement of something quite different. For in this period in very many parishes the ratio rises to a very high level indeed. Values between 6 and 8 are quite common and occasionally the ratio rises above 10. Total fertility rates very seldom approach these levels. A true value as high as 6 would be very remarkable in any society in which women married as late as in seventeenth century England.

The Cambridge Group has not as yet made a systematic study of this phenomenon, but it is clear that it is subject to wide regional variations, with some areas showing no unexpectedly high values, while in others most parishes seem to produce high ratios. In any one parish special local circumstances may account for a high ratio but it is most unlikely that this will serve to explain the frequency of the phenomenon in the total of 465 aggregative analyses now held in Cambridge. Moreover it is reflected in the material published in the 1841 census which was based on parish register data collected from incumbents at Rickman's behest in 1836. This covered a large but varying number of parishes and is difficult to use with precision because it was published in a compressed and transposed form. However, it suggests that the national baptism/marriage ratio increased by 16 per cent between 1600 and 1670 and by 9 per cent between 1630 and 1670, but that by 1700 the ratio was falling. In certain regions the changes were very much more striking, notably in the following groups of counties: Derby and Leicestershire; Middlesex, Surrey and Buckinghamshire; Durham and Northumberland; and Somerest, Dorset, Gloucestershire and Wiltshire.

That high ratios were common (they are most commonly found over the decades between 1660 and 1720) is the more surprising in that the population of England as a whole was not growing rapidly, and in certain areas was probably falling. It would occasion less surprise if the ratios observed has been generally lower in the late seventeenth century than before or after. The pattern seems sufficiently marked and widespread to call in question the completeness of marriage registration, (it is inherently improbable that over-registration of baptisms occurred, so that if the ratio attains exceptional levels it is natural to think in terms of under-registration of marriages.)

The purpose of this note is to invite those with intimate knowledge of local circumstances to suggest reasons for very high baptism/marriage ratios at this period, if this happens to have occurred locally. It should be borne in mind that until Hardwicke's Marriage Act of 1753 it was possible to contract a valid marriage without the celebration of the marriage taking place in church. Any man and woman who exchanged vows in the presence of witnesses (and who were free to marry) could establish a union recognised in ecclesiastical law. It is conceivable that the change in the ratio may be due to the frequency with which couples in some parts of the country decided to forego any church ceremony. Their offspring would be legitimate and would therefore, presumably, be recorded in the baptism register exactly as if their parents had married in church. There are some indications that the period in which baptism/marriage ratios were often so high was also a period when a particularly low percentage of children were registered as bastards at baptism. And it is possible therefore that the two traits are related, since the distinction between a legitimate and an illegitimate birth might be harder to draw. Many offspring of semi-stable unions, which in an age of universal church marriage would be registered as bastards, might be given the benefit of the doubt when their parents were not obviously less 'married' than many other couples.

Any comments upon this curious feature of late seventeenth century parochial registration would be most welcome. What we have suggested above is no more than a ballon d'essai. We should be equally happy to see it puffed up or pricked.

THE USE OF THE DESCRIPTION 'WIDOW' IN PARISH REGISTERS

Mr. D.J. Steel in Volume 1 of his new National Index of Parish Registers (London, 1968) notes (page 83) that 'the term Widow was often used in the eighteenth century, not only in the modern sense but also to indicate a woman past middle age who lived alone and was either of independent means or maintained herself by her own efforts'. We are greatly interested in this question since it may affect the interpretation of parish registers and listings of inhabitants both in demographic and social structure analysis. Accordingly, if any reader is familiar with the extent of this usage of the word 'widow' locally, we should be most grateful for information which would help to clarify the circumstances in which it occurred and the time period over which it was used in this sense.

E.A. Wrigley

EDITOR'S NOTE : Correspondence should be addressed to
E.A. Wrigley, 20 Silver Street, Cambridge.

SOME ASPECTS OF E.A. WRIGLEY's "POPULATION AND HISTORY" (1)

J.D. Chambers

David Chambers is Emeritus Professor of Economic and Social History at the University of Nottingham. He has devoted many years to the study of vital aspects of economic history, particularly agriculture, industry and population. His pioneer study The Vale of Trent (Economic History Review, Supplement No. 3 1957) demonstrates the vital role of demography in the economic history of a specific region. He is currently engaged in a study of pre-industrial population trends.

Dr. Wrigley achieved an assured place in the development of British historical demography by his article on Colyton, and his new book Population and History will go far to enhance it. Here at last is a cheap, well-illustrated and clearly presented study of the technicalities of population change from pre-industrial to contemporary societies, written with the author's well-known clarity and economy of style and mastery of detail. It is mainly concerned with the inter-relationship of fertility and mortality and various associated social and economic factors at different historical stages, but it also includes, as part of the explanation of the pre-industrial demographic situation in England, a theoretical element that Dr. Wrigley first developed in the famous Colyton article and that (I suggest) may prove to be the most interesting contribution to demographic discussion since Malthus.

He describes it as a process of "homeostatic adjustment" through control of fertility to achieve an optimum equilibrium between population and subsistence; and he also suggests that this is one of the factors that favoured the progress of England in her advance towards industrialisation. It will be seen that he has written a monograph that breaks new ground on the ideology as well as the technology of population study, and one that will prove of inestimable value to teachers and students everywhere, not only to those who are primarily interested in pre-industrial demography but to those who are trying to find their way through the intricacies of population change in the transition to industrial societies and through the intimidating problems of the modern world.

I do not propose to attempt to review a book of such scope and complexity even if I were capable of doing so: but I think that it may

be possible to indicate some of the issues it raises and sometimes the difficulties to which it gives rise, at least in regard to its treatment of pre-industrial population problems; but the section on the demography of modern industrial states and of the contemporary world must be left for separate treatment on some other occasion and to a more expert hand.

Perhaps the most noticeable feature of the earlier chapters is the author's penchant for disposing of some of the more familiar examples of mono-causal explanations of complex demographic events and situations. In his discussion of the factors that affected the size of pre-industrial population, for instance, he notes that "it is naive to treat the demography of a society as a result of its economic constitution, as a dependent variable which can be read off from the economic functioning of society once that is known [or] that population growth always waits upon an advance of technique". (p. 49). One can only hope that these weighty words will not go unheeded in those quarters where population growth is regarded as, of necessity, a function of food - and/or - employment opportunities.

Those who are tempted to speculate on the reason for earlier marriage and higher birth rates in the period of transition from modern demographic conditions should not omit to take into account Dr. Wrigley's warning on the complexity of the variables involved. He makes a brilliant analysis of the situation in the three German centres of Arnsberg, a coal area, Pomerania, entirely agricultural, and Berlin, primarily administrative, taking into account sex ratios and religious affiliations as well as the conventional factors of wages and conditions of work, and concludes "the whole argument from levels of wages to early marriage is too crude to be acceptable unless it is considerably amplified. It was the total environment in which men and women lived rather than the simple level of wages or even a combination of wage level and employment expectations which influenced decisions to marry". (p. 158).

It would be interesting, indeed the temptation is almost irresistable, to follow him through his references, direct and indirect, to Malthus; but I will content myself with two examples. He points out that Malthus chose to cast his argument with special reference to food supply, not to goods and services, which helps to explain why he is a less appropriate guide for the study of post Industrial Revolution societies than traditional ones; and secondly, that as a result of the new supply of goods and services made possible by the Industrial Revolution "the old cut-off which bedevilled industrial expansion in the

past when demand lost impetus as real wages fell due to population pressure and declining marginal returns in a land orientated economy was eliminated". (p.179). Whether there was such a "cut-off" in England after the crisis of the 13th century would form an interesting debate. Dr. Wrigley implies that a situation of this kind emerged in the late 16th and early 17th centuries, but, as his study of Colyton shows, the check to fertility that might have been expected did not come until later, and one wonders what are the criteria for deciding the character of a situation of this kind in the absence of acceptable figures of national income. However, I think he may be right in suggesting we have here a Malthusian situation even though demographic variables do not seem to have behaved in the prescribed Malthusian way.

He shows also that a sudden rise of mortality in pre-industrial populations is not necessarily evidence of over population, or a sign of Malthusian crisis; it may be simply the fortuitous effects of epidemic outbreaks. These, together with crises of subsistence, he suggests, account for the see-saw motion of pre-industrial population movements from mortality crises to baby booms with effects on age structure which are illustrated through a demonstration of Sundt's Law, a demonstration which readers of this journal may find particularly enlightening. (p.69-71).

It is the essence of Dr. Wrigley's case, however, that pre-industrial populations did not adhere strictly to any prescribed pattern "or law" of change, and Colyton, to which he refers from time to time, is a supremely interesting case in point.

It might have been expected that a baby boom, as required by the Sundt Law, would follow the attack of plague in 1645/6 in which one fifth of the people of Colyton died; on the contrary, the age of marriage rose, fertility and expectation of life fell, and Colyton faced a demographic depression for a period of 70 years. This is explained by Dr. Wrigley as an example of the insensitive adjustment between population variables and economic conditions involving a time-lag in the "lurch" that the population might be expected to make in its efforts to establish homeostatic balance between numbers and the means of life. If the population of Colyton had reflected sensitively the changes in real income "the average age of first marriage of women should have tended to rise during the 16th century as population grew. After the middle of the 17th century the average should have tended to fall again. In fact, matters turned out quite differently". This strange response to improving economic conditions was

accompanied by a rise in the death rate: "both the schedule of fertility and mortality in Colyton changed. They changed in a way that accentuated each other's effects on the balance of births and deaths". I should hasten to add that Dr. Wrigley does not suggest that this was anything more than a coincidence, but a reader who finds there is some ambiguity about this should be forgiven in view of the footnote to the article on Colyton (Economic History Review, April 1966, p.102), in which he says "several other [my italics] causes of child mortality can be envisaged. It may be, for instance, that smallpox was both more virulent and widespread than earlier". Elsewhere he refers to the suggestion of J.D.B. Durand that there was an exchange of infectious diseases between continents following the triumphs of European navigation and the subsequent rise in death rates everywhere (Daedalus Spring 1968), which is clear indication that Dr. Wrigley is in no danger of underrating the strength of epidemic disease at this time.

I think this factor is worth further elaboration, however, as it may have had wider repercussions than Dr. Wrigley is willing to allow. Creighton gives details of the deaths from smallpox and measles showing a marked rise in London in the 1630s and the still higher levels after 1647 (vol. 1, pp.465-6). The period also includes attacks of plague (though not apparently at Colyton), culminating in the crowning horror of the Plague of London in 1665; and what was happening in London could scarcely fail to happen elsewhere. It was the ideal breeding ground of every kind of infection; and it is well known that disease requires a specific concentration of the poison-carrying bacilli to reach epidemic proportions. London, with its nearly half a million inhabitants, could provide just this, and through its network of exchange along the inland trade routes it could also provide the ideal mechanism for infecting the greater part of the nation. Certainly Colyton was apparently free from plague; perhaps genetic immunity had done its work after the succession of onslaughts from the 1630's to 1647: but it would not be immune from the contents of the Pandora's box that were unloosed after the disappearance of the plague in 1666 - "an enormous increase of various fevers", to quote Creighton, "as well as smallpox ... a new kind of epidemic history which characterised England from the Restoration and the Revolution down to the end of the 18th century" (sic). It included besides smallpox: typhus, influenza, diptheria, malarial ague, spotted fever, relapsing fevers, dysentry. These were not new, of course; but in the 20 years after 1665 they came down "like rain through a leaky roof" as the author of Piers Plowman wrote of the successive epidemics after the Black Death. Some villages lay off the trade

routes, like Hartland (which was also "surrounded on two sides by the sea, and almost entirely agricultural") (p.71), and therefore were relatively free from these attacks. But there is no reason to think that Colyton was so fortunate: certainly Exeter - 30 miles away - was not, as Mr. Pickard's much neglected study of epidemics in Exeter shows; and from 1664 to 1676 the pattern of mortality of the two centres is suggestively close, though Colyton appears to have escaped the fierce onslaught of typhus which afflicted Exeter in the 1680's.

No doubt Dr. Wrigley would have reason to complain that this is beating at an open door and that there is no need to remind him of the fortuitous effects of epidemic disease as a factor in rising mortality at Colyton as elsewhere. I wish to give it greater emphasis, however for another reason: namely because I think it could conceivably have effects which help to explain the strange phenomenon of the fall of fertility when the physical conditions of life were improving. This suggestion is perhaps not so bizarre as it sounds. In the century after the Black Death the phenomenon of a high death rate side by side with a low birth rate has long been noted; and we do not have to go further than the leading contemporary writers for a clue to the explanation. Not only plague but dysentry and fevers of all kinds fell upon the people of the time; "fevers and fluxes, agues and frenzies, boils, botches, foul evils, pokkes and pestilence", to quote Creighton's summary of the author of Piers Plowman. The writer of the English Chronicle is quoted as saying that "women who survive remain for the most part barren during several years", and there is talk of a general demoralisation. Professor Sylvia Thrupp in an important article some years ago perhaps rightly ignores these reports when she turns the clinical eye of the demographer on the scene, but through the stark figures of replacement rates, she can discern a mood that may reflect them. "To the extent that [post-plague] migration was aimless, or motivated by fear, despair, desire to enter the Church or otherwise evade facing responsibilities, we have a cultural" [as distinct from a Malthusian] "interpretation"; and she closes her remarkable article on the fall and recovery of replacement rates in the century following the Black Death with the suggestion "now that medical science is learning so much about bacterial and viral mutation, historians should be prepared to consider this as a factor in the situation. New types of infection are always dangerous ... The period from 1349 to the 1470's, if it was a golden age, was the golden age of bacteria". (Economic History Review, August 1965, p.118).

That fertility can be affected by psychological conditions - above all conditions of insecurity - has been demonstrated by the experience of

the 1930's when the threat of unemployment (and Nazi bombing) hung over the lives of parents and their present and future children, but that it can be advanced as a factor in the situation in the later middle ages is one of the more remarkable manifestations of the new demography. M. Chevalier would go further. He writes of "the generally recognised effects" [of political events]" and even of revolution on fertility" and cites with approval Tocqueville's view that the French Revolution was a cause of lasting social and demographic disturbance in France (Population in History, Glass and Eversley, p.74 passim)(2). That is not to say that the control of fertility was never used to raise the margin between subsistence and the food base under conditions of static agricultural techniques; Professor Herlihy in his article on Pistoia has given a remarkable demonstration of it in action. (Economic History Review, August 1965). But on this occasion it was applied at the height of the Malthusian crisis before the Black Death; and the fall of the birth rate as a result of its application after the Black Death was even more dramatic. But in the case of Colyton "there is no reason to think that in England living standards had reached a nadir in the late 17th century" as Dr. Wrigley himself says; on the contrary it was steadily moving away from it. The crisis in public health, however, might well have reached a nadir; the years following the fearful outbreak of plague (and spotted fever) of 1625 in London were particularly fatal in Plymouth and along the south coast of Exeter; and as Creighton says "we are now coming to the period of the beginning of ship's fever, i.e. typhus". It helped to ruin Buckingham's expedition to Cadiz and spread in the wake of the disease-ridden sailors along the coast. In 1626 the plague also was rife in Devon. It broke out again in 1630 and again in 1635, 1636, 1637: at the same time attacks of typhus and spotted fever were reported from Hampshire to Wales including "a very epidemical attack in Somerset so that many whole families died". Then came the crowning disaster of 1645-7 when Colyton itself was under attack, and a quarter of the people died. Have we here a parallel to the situation described by Professor Thrupp when fertility failed to respond to the opportunities of rising living standards "in the golden age of bacteria"? Is it a response to insecurity and despair rather than to prudential calculation related to the standard of living, as Dr. Wrigley assumes, which was already rising?

One further question suggests itself. It will be remembered that Dr. Hollingsworth also found a similar tendency towards falling fertility among the wives of the aristocracy over much the same period, and a rise in death rate of those under 50. Are we to suppose, by analogy, that they too were acting under Dr. Wrigley's rubric of "homeostatic

adjustment" to bring about a favourable balance between population and available resources? Hollingsworth himself describes the phenomenon as "beyond historical explanation"; but he notes that the French aristocracy were doing much the same thing. Until we know more about the psychological effects of insecurity brought about by incessant attacks of disease I think we should not close our minds to the possibility that Colyton belongs to the same category.

One of the most pleasing and also most pregnant aspects of the book is the treatment of English and continental patterns of growth on the eve of the great population breakthrough in the late 18th century. He brings out clearly the much neglected fact that both England and the Continent were equally affected by the surge of population growth in the second half of the 18th century and that it was not until the end of the period and the early part of the 19th century that England was, as he puts it, "at the head of the pack". He moves easily from Eastern Europe to the village of Hartland in Devon and notes that, in both, the mid-years of the 18th century were equally significant in marking a turning point in the upward movement. Of Hartland, he says, it was not until many years after the sudden appearance of a surplus of baptisms that the village underwent any noticeable change, an example which, he says, makes it less easy to accept the view that "nascent industrial growth preceded population change even in areas close to the new centres of population " (p.156): a further nail in the coffin of the economic determinism of population growth.

Dr. Wrigley also goes on to say that the rise in fertility which he notices in the late eighteenth century was usually preceded by a fall in mortality, a fact which he attributes to the almost complete elimination of the crises of the old type, whether brought about by harvest failure or the independent operation of epidemic disease. The responsibility for this fundamental change in the underlying pattern of mortality he attributes to the widening of the food base through the development of agriculture (including potato culture) and transport; but two questions immediately present themselves for consideration to those who have studied this aspect of the problem: (a) was not the food base even wider per head in the earlier part of the century when England had a substantial surplus of grain for export and for the manufacture of gin but also a stagnant population? (b) are we to presume that Eastern Europe was as advanced both in terms of agricultural progress and in transport facilities to distribute agricultural products as was England? The astonishing rate of growth in East Prussia and Pomerania (not to mention the incredibly high rate of growth of Hungary, far higher than that of England), calls for explanation. In the absence of a

demonstration that these areas were similarly fortunate in the widening of the food base we must presume that the essential factor in these cases was "the independent operation of epidemic disease".

Here Dr. Wrigley touches on an area that few have so far ventured to explore. Why did epidemic disease enter on its decline from 1750, independently of any extraneous environmental influences? One lead has been given which we could wish he had followed up. In the Conquest of Plague, L.F. Hirst presents a learned discussion on the subject of mutation as a factor in the decline of plague, and after discussing the importance of the ecological situation represented by the emergence of the brown rat as the predominant species he goes on to talk of the mutation in the flea (Xenopsylla Cheopis) which carried the plague bacillus: "The change of rodent species by itself (i.e. from black rat to brown rat) therefore cannot account for the failure of the disease to spread actively among the rural and urban European rats. When however the change of rat species is associated with the change of flea species we have an adequate explanation of the relative immunity of Western Europe from plague in modern times". (L.F. Hirst, Conquest of Plague, 1953, p. 338).

We may presume that this example of biological mutation in the flea species would affect the population of Eastern as well as Western Europe, and that it can hardly be irrelevant to the phenomenon of population growth wherever the plague had left its mark in earlier years. Perhaps M. Henry had this beneficient natural process in mind when he wrote "we still do not know whether the reduction in [demographic] disasters was produced by man, the result of economic progress, or whether it was just a piece of good luck, the continuation of which was made possible by the undeniable progress of a later period". (Glass and Eversley, Population in History, p. 448). The element of "good luck" does not play any part in Dr. Wrigley's elegant system of model building, but the subject of genetic immunity and mutation in human beings as well as in the animal and insect world is, I would suggest, of profound significance in shaping the pattern of demographic history and is worthy of more attention than it has yet received.

After all, it was nature, not man, that turned the tide of mortality by the reduction of plague to quiescence through the mechanism of mutation. Man's contribution was more indirect: through enclosures and drainage he diminished malarial ague as a side-effect of raising the food base; through the substitution of brick and tile for stud and mud and thatch, he contributed to the departure of the black rat;

through the improvement of domestic utensils that could easily be washed, and above all through the substitution of cotton clothes that could be boiled, for quilted woollens and leather stays that were worn until they dropped to pieces, he contributed to the defeat of the typhus bug. More directly, he contributed by imitating the immunising processes of nature in the form of inoculation and vaccination. Without knowing it, man was working in conjunction with the forces of nature to bring the great killers under control; but the greatest of all, plague, had been dealt with before man took a hand. As M. Henry says, "it may have been just a matter of good luck". Indeed, it could be argued (in the style of Boserup: The Conditions of Agricultural Growth) that widening the food base may have been the result rather than the cause of the general change in the rate of population growth.

Finally there is one area of doubt on the factual side that only time and the data lying in embryonic form in the belly of the computer at the Cambridge Centre will eventually remove. In his diagram of population movement in England Dr. Wrigley has only one period of sheer stagnation: roughly 1650-1750 (see Dia. 3.3, p.78). This is a remarkable state of affairs in view of the upward movement of the economy and above all of agricultural output and improvement of transport. Are we to imply that the Colyton model of homeostatic adjustment is applicable to the country as a whole during this period? This involves a radical departure from the usual assumption of high birth rates in the first half of the century, and it would have been helpful if Dr. Wrigley could have found space in his tightly packed book to take this discussion a stage further. Certainly we have to note some substantial exceptions to the assumption of stagnation especially in the Midlands and the West. A student of the various parish register series that have appeared has expressed astonishment at the evidence of the growth of population in the last years of the 17th and the early years of the 18th century which they provide, and he concludes "either that the English population increase was very rapid in the early years of the century ... or that the localities on which the series are based diverged in an extraordinary manner from the general pattern". (H.C. Pentland, Population and Labour Supply un-published paper given to the Economic History Conference at Munich in 1965, p.7). He especially draws attention to the remarkable growth in the Nottinghamshire villages and to the observation of Dr. Eversley that in regard to the Worcestershire villages the years 1695-1705 "exhibited the highest baptism rate of the whole series and the largest absolute natural increase of any period before 1775" (quoting Eversley, Population Studies, March 1957, p.263). There is reason to think that urban growth was also taking place on a considerable scale, e.g. in

Nottingham, Leicester, Birmingham, Manchester, Liverpool; and since urban growth at the time was mainly a function of migration rather than of natural increase, it may be presumed that we must look to the surplus of the countryside as the source from which this expansion - like that of London - was fed. That this was the case in the Midlands appears to be established by the published parish register series; and a "spot-check" of 16 Lancashire parishes made possible by the kindness of Dr. Wrigley himself[3] reveals a similar pattern of surpluses beginning in the late 1690's and ending about 1720.

We are reminded that Dr. Tucker has raised the possibility of a "rate of natural increase at the beginning of the 18th century already [his italics] nearly as high as that obtaining during the vital revolution itself". (G.S.L. Tucker, English Pre-Industrial Population Trends, Economic History Review 2nd series, XVI 1963, p.218) and Professor Youngson has argued forcefully for raising population estimates of England during the period (Population Studies, 15.1961). In the light of these deviations from the Colyton model, I feel Dr. Wrigley's assumption of a general stagnation between 1650 and 1750 is open to question and that the national pattern may have taken a very different course. Until the computer at Silver Street has delivered its portentous progeny we cannot be sure. We can only hope that in the competent hands of the resident mid-wives, Dr. Wrigley and his colleagues, the delivery will be safe and not too long delayed.

In any case, the significance attributed by Dr. Wrigley to the pause in population growth after 1650 remains unimpaired. He regards it as a "lurch" to slower growth which was characteristic of the pattern of population growth in pre-industrial England, and which performed an important role in preparing the ground for the Industrial Revolution. It provided a period of growing per capita saving and rising standards: he quotes Professor John's statement that "expectations [of improved standards] of most classes in England increased permanently in the century after the Restoration", and adds "certainly population increased very little in the period while living standards were rising". In other words, the potential of the domestic market was rising and providing a stimulus for the expansion on all sides that came with the upturn of population and agricultural profits after 1750.

With this general thesis there can be no quarrel. The only modification I would suggest is that the period of stagnation was broken by a substantial compensatory surge of population following upon the period of epidemic crises in the post-plague years - "a new kind of epidemic history", as Creighton says. The "compensatory surge" appears to

have been followed by another check as a result of the epidemics 1720-40 followed by another upward movement to 1770-1780 when the demographic revolution really got under way, owing, I would suggest, to the taming of the great killing diseases. Dr. Wrigley has strengthened the hands of those who see the Industrial Revolution as a response to potential demand made actual by the return of demographic growth and agricultural prosperity; but he has left the problem of the actual pattern of population movement during the crucial period unresolved. As an unrepentant disciple of the Tucker thesis of compensatory cycles, including a powerful one at the beginning of the 18th century, I think it would be unfortunate if Dr. Wrigley's omission to consider it should be taken as a signal to consign this fruitful idea to limbo in the discussion of pre-industrial patterns of population change; but the gratitude of all students of the subject must go out to Dr. Wrigley for keeping the subject so vibrantly alive.

This, of course, is a wholly inadequate treatment of Dr. Wrigley's masterly survey. His book is deceptively small in size but encycloaedic in content; and to do it justice would require an expertise in demographic study which I do not possess. For those interested in the earlier phases of demographic history - as I imagine most of the readers of this journal are - it is replete with vital ideas and indispensable data, and for this alone the book will stand as a landmark in English demographic history. As for the study as a whole, it will probably put English demographic historiography at the head of the field, a pre-eminence that it has not enjoyed for a very long time.

Perhaps I may add that this article is intended rather as the beginning of a discussion than a review, and I hope readers will take it up, correcting its errors and supplying shortcomings where these are necessary in future issues of this journal.

NOTES

(1) E.A. Wrigley, Population and History, World University Library, Weidenfeld and Nicolson, London, 1969, 16s.

(2) Dr. Wrigley puts a different complexion on this argument by relating it to comparative living standards at different social levels. (see p.191) but whether this interpretation would be wholly compatible with Mr. Chevalier's view seems to be debatable.

(3) I would like to take this opportunity of expressing my sincere thanks to Dr. Wrigley for placing facilities and resources of the Silver Street Centre at my disposal for this purpose.

MULTIPLE BIRTHS IN SHROPSHIRE, 1601-1800

L.C. Lloyd

Editors' Note: It is with great regret that we have to announce the death of the author of this article. Mr. Lloyd was a part-time Tutor for the Birmingham Extra-Mural Board in Shropshire; his death will be a great loss to local population studies in that area. We are publishing his article on twins posthumously, firstly because it is about a subject which interests many people, but secondly, and more importantly, because it shows how a local population historian can make a significant contribution to a comparatively neglected field of demography.

The work described in this paper was an offshoot of the aggregative analysis of certain Shropshire parish registers which was undertaken in co-operation with the Cambridge Group for the History of Population and Social Structure. In the course of this work it was suggested that it might be interesting to investigate the frequency of multiple births, which has also, of course, a bearing on the problem of fertility. Four areas were selected for examination, two representative of urban communities and two of predominantly rural character. These were:

(1) The parish of St. Chad, Shrewsbury, the largest and most populous of the five ancient parishes of the town;

(2) the parish of Oswestry, in the north-west of the county;

(3) the parish of Much Wenlock, twelve miles south-east of Shrewsbury;

(4) the three contiguous parishes of Alberbury, Cardeston and Ford, on the western edge of the county.

The period covered by the enquiry was dictated by the availability of parish registers.

TABLE A

Numbers and percentages of twins baptised in six Shropshire parishes, compared with total baptisms, 1601 - 1800

	1601 - 50			1651 - 1700			1701 - 50			1751 - 1800			1601 - 1800		
	Twins	Total Baps.	%	Twins	Total Baps.	%	Twins	Total Baps.	%	Twins	Total Baps.	%	Twins	Total Baps.	%
Shrewsbury: St. Chad	38	3394	1.2	55	5442	1.0	77	5769	1.3	58	6730	0.9	228	21335	1.1
Oswestry	68	4566	1.5	67	4186	1.6	72	5641	1.3	63	5737	1.1	268	20130	1.3
Much Wenlock	17	1654	1.0	24	2120	1.1	19	2886	0.7	33	3326	1.0	104	9986	1.0
Alberbury) Cardeston) Ford)	14	1248	1.1	15	2016	0.7	23	2124	1.1	16	3258	0.5	68	8648	0.8
	137	10862	1.3	161	13764	1.2	191	16420	1.2	170	19051	0.9	668	60097	1.1

The procedure adopted was simply to go through the baptismal registers of the parishes concerned (1), noting the occurrences of multiple births, which, so far as these six parishes are concerned, almost invariably mean twins. I have found only one possible instance of the birth of triplets. This occurs in a somewhat cryptic entry in the register of St. Chad, Shrewsbury.

> "1651 Dec. 22. 3 children of Thomas Griffithes, sharmon, and 2 C. buried (2).

This would appear to record the baptism of triplets, of whom two were buried on the same day.

In only a minority of entries is the term "twins" employed; sometimes, at Shrewsbury and Oswestry in the early 17th century, it appears in the rather charming form of "twindells." But although many pairs of twins are not specifically so described, there can be little doubt that they were in fact twins. The usual form of entry is a date followed by "John and Margaret, son and daughter of James and Mary Smith" or "Mary and Martha, daughters of Thomas and Jane Williams"; often with the added information that they were born the same day or a day or two previous to their baptism.

Frequency

Dealing first with the frequency of twin births, the numbers recorded are given in Table A, together with the percentages of total baptisms for ease of comparison. In each 50-year period and in all areas, the proportion hovers around 1.0 per cent. Taking the six parishes as a whole, the maximum is 1.3 per cent., the minimum 0.9 per cent., and the average 1.1 per cent. The data, then, are reasonably consistent among themsleves. Obviously it would be absurd to attempt to deduce any general conclusions from such limited data, but it may be worth pointing out (a) that the figures seem to indicate some small falling-off in the frequency of twins during the two hundred years covered by this enquiry; and (b) that there may be some slight indication that more twins are born in an urban environment than in essentially rural surroundings. (3).

But these data refer only to the six Shropshire parishes chosen for examination, and to bring out any wider significance they may possess, they need to be set beside comparable statistics from other areas. And here we meet a difficulty. Widespread search and enquiry for such material had produced only very meagre results, and comparable

historical data seem to be non-existent. An appeal to the Registrar-General brought as helpful a response as possible, but even he and his staff could not refer me to what, apparently, does not exist. The earliest statistics I have found date from the mid-19th century, and even these are little more than fragmentary. They relate to the three years 1845, 1846 and 1852, and are to be found in the Registrar-General's annual reports for those years. After 1852 he seems to have lost interest in twins, and did not record them again until 1938, since when the records are complete. These 19th century figures are summarised in the following table:

TABLE B

Frequency of twins in England and Wales and in Shropshire 1845, 1846, 1852 (4)

	Total Births	Twins No.	Twins %
England and Wales	1,740,158	16,125	0.93
Shropshire	20,219	185	0.92

In the period from 1938 to the present, the Registrar- General has not published separate figures for the counties, but I have calculated the proportion of twins (live births) to the total number of live births in England and Wales for the twenty years from 1940 to 1959. During that period there were 14,131,159 live births and 160,584 pairs of twins, which gives a percentage of 1.14 (5). This may perhaps be taken as a standard of frequency for England and Wales in the 20th century, and it is very similar to the proportions previously arrived at. In the United States the average frequency is said to be 1.15 per cent., but it varies from one country to another: in Belgium it is given as 1.79 per cent., in Finland as 1.65 per cent., and in Japan as only 0.69 per cent. (6).

Classification by Sex

Two kinds of twins are recognised by biologists. They are variously known as (1) identical, monozygotic, or monovular: and (2) non-identical, dizygotic, or binovular. Identical twins result from the splitting into two of a single ovum after fertilisation; they are always of the same sex and usually show a close resemblance to each other.

TABLE C

Twins baptised in six Shropshire parishes, classified by sex, 1601-1800

(Twins whose sex is not recorded have been omitted)

Parishes	1601-50				1651-1700				1701-50				1751-1800				1601-1800			
	MM	MF	FF	T	MM	MF	FF	T	MM	MF	FF	T	MM	MF	FF	T	MM	MF	FF	T
Shrewsbury St. Chad	17	9	9	35	22	16	15	53	18	37	22	77	19	17	22	58	76	79	68	223
Oswestry	19	31	18	68	16	28	19	63	20	22	28	70	23	20	17	60	78	101	82	261
Much Wenlock	5	2	9	16	9	7	6	22	3	9	7	19	13	8	12	33	36	29	36	101
Alberbury, etc.	6	1	7	14	6	4	3	13	6	9	8	23	4	5	7	16	22	19	25	66
	47	43	43	133	53	55	43	151	47	77	65	189	59	50	58	167	212	228	211	651

TABLE D

Twins classified by sex, 1601-1800: Percentages

	1601-50			1651-1700			1701-50			1751-1800			1601-1800		
	MM	MF	FF	MM	MF	FF	MM	MF	FF	MM	MF	FF	MM	MF	FF
Shrewsbury: St. Chad	48.6	25.7	25.7	41.5	30.2	28.3	23.4	48.1	28.6	32.8	29.3	37.9	34.1	35.4	30.5
Oswestry	27.9	45.6	26.5	25.4	44.4	30.2	28.6	31.4	40.0	38.3	33.3	28.3	29.9	38.7	31.4
Much Wenlock	31.3	12.5	56.3	40.9	31.8	27.3	15.8	47.4	36.8	39.4	24.2	36.4	35.6	28.7	35.6
Alberbury, etc.	42.9	7.1	50.0	46.2	30.8	23.1	26.1	39.1	34.8	25.0	31.3	43.8	33.3	28.8	37.9
	35.2	32.3	32.3	39.1	36.4	28.5	24.9	40.7	34.4	35.3	29.9	34.7	32.6	35.0	32.4

Non-identical or binovular twins are the product of two ova fertilised at the same time; they may be of the same or different sexes, and they are no more alike than other members of the same family. (7) In the present enquiry the distinction between monovular and binovular twins obviously cannot be maintained for lack of evidence. All that can be said is that boy-girl twins must necessarily be binovular.

But this material can be classified in another way, by distinguishing three kinds of twins - boy-boy, boy-girl and girl-girl. The results of this operation are presented in Tables C and D. From these it will be seen that in the six Shropshire parishes taken as a whole, the three classes of twins are roughly equal, with a small predominance of boy-girl pairs. This agrees with the American figures for the period 1890-1900. (8), and with those for England and Wales in the twenty years 1940-59. (9). It may be worth pointing out that in the Shropshire data the proportion of boy-girl pairs is distinctly lower than the average in both Much Wenlock and the Alberbury area. This looks unusual, but whether it has any significance cannot be decided until more comparative statistics are available. (10)

The 19th century figures given in the Registrar-General's reports may be summarised as follows:-

TABLE E

Twins born in England and Wales and in Shropshire, 1845,1846 and 1852, classified by sex

	Twins born	MM		MF		FF	
		No	%	No	%	No.	%
England & Wales	16,125	5,169	32.2	5,938	36.8	5,018	31.1
Shropshire	185	59	31.9	64	34.6	62	33.5

20th century data from the Registrar-General's annual statistical digests show that the comparable figures for England and Wales, together with those from the U.S.A., 1890-1900, are as follows:-

TABLE F

	Total twin births	MM No	MM %	MF No	MF %	FF No	FF %
England and Wales, 1940-- 59	177,033	52,085	32.4	58,258	36.3	50,241	31.3
U.S.A., 1890-1900	717,912	234,500	32.7	264,100	36.8	219.312	30.5

Inheritance

There is a widely-held view - probably justified - that the tendency to bear twins is hereditary. But the way in which this tendency is inherited - whether through the father, or the mother, or both - is uncertain (11), and so far as I have been able to aseertain the problem has never been investigated statistically. I have made some attempt to see whether the Shropshire data throw any light on the matter by trying to trace the antecedents of the parents of twins, but with no positive result. Something in the nature of the family reconstitution techniques described by Dr. E.A. Wrigley (12) seems to be necessary in an investigation of this kind, and the material at my disposal was not amenable to such treatment.

It was possible, however, to obtain some evidence bearing upon another point related to that of inheritance - namely, the tendency of some parents to produce more than one pair of twins. It was found that in the six Shropshire parishes, during the entire period 1601-1800, twenty couples had two pairs of twins, and three couples had three pairs each. The figures are set out in Table G. Here, it seemed, was a promising field for the investigation of inheritance, and an attempt was made to trace the genetic background of both fathers and mothers, but again it was unsuccessful. These particular registers do not provide the information required in such an enquiry.

TABLE G

Six Shropshire parishes: Two or more pairs of twins born to same parents, 1601-1800

	Pairs of twins baptised	Born of same parents			
		Two pairs		Three pairs	
		No.	%	No.	%
Shrewsbury: St. Chad	228	7	3.1	-	-
Oswestry	268	10	3.7	2	0.7
Much Wenlock	104	2	1.9	1	1.0
Alberbury etc.	68	1	1.4	-	-
	668	20	3.0	3	0.4

Other Aspects

There are other aspects of the subject which would be worth pursuing statistically but which I have not been able to undertake. There is the question of the survival of twins; it is generally recognised that the children of multiple births are less viable than those of single births, and they are particularly vulnerable during the actual process of birth. I have no accurate figures on survival, but there is no doubt about the large proportion of the twins whose baptism is recorded in these six registers who died within a few days of birth.

Another point on which there is, so far as I can find, no historical evidence, is the relationship between multiple births and the age of the mother. There are some recent American statistics on this, showing that twin births become more frequent as the age of the mother advances, reaching a peak when she is between 35 and 39 (13). Since 1938 similar evidence for England and Wales has been recorded annually by the Registrar-General, and presents an approximately similar picture. I have been unable to deal with this point in the six Shropshire parishes because deficiencies in the registers prevent one from ascertaining the ages of the mothers. (14)

Summary and Conclusion

To summarise the results of this enquiry, it would appear, first, that

the frequency of twin births in the six Shropshire parishes investigated remained more or less stable at a little over 1.0 per cent. of all births during the two hundred years covered by this enquiry; and that this percentage frequency agrees closely with the frequencies recorded both in England and Wales and in the United States during the 19th and 20th centuries. Secondly, when twins are classified by sex, it appears that in the six Shropshire parishes the proportion of boy-girl pairs exceeds the proportion of boy-boy and girl-girl pairs by something like 2 to 4 per cent; and this also is in general agreement with the 19th and 20th century figures from both England and Wales and the U.S.A.

In some ways this has been a disappointing enquiry, partly because of the incomplete information provided by the parish registers, and partly because of the absence of comparative historical data. It is my hope that one or two other workers in the field of historical demography may think it worth while to pursue the subject in their own areas. I am sure they would find it productive of interesting results.

NOTES AND REFERENCES

1. The printed registers, published by the Shropshire Parish Register Society, were used, except at Much Wenlock, where a MS transcript was employed. At Oswestry and Much Wenlock I was helped in searching the registers by members of historical research groups meeting under the auspices of the Department of Extra-Mural Studies of the University of Birmingham.

2. Printed register, p. 229.

3. Both these conclusions are amply supported by the figures in the tables. The risk that such figures could have arisen by chance from a situation where there was no falling off in the frequency of twins and no difference between urban and rural parishes in less than one in a hundred. (Editors' Note)

4. Data from Registrar-General's Annual Reports for 1845 (pp. 156, 161), 1846 (pp. 92, 97) and 1852 (p. 83).

5. Registrar-General's Statistical Review, England and Wales, Part 2, 1940 - 59, Tables B, DD.

6. H.H. Newton in Ency. Brit., 1947 Edtn., s.v. Twins.

7. C.D. Darlington, Genetics and Man, Penguin Books, 1966, pp. 242 ff.; H.H. Newton, loc. cit.; M.F. Myles, Textbook for Midwives, 5th edtn., 1964, pp. 355-59.

8. A.M. Srb, R.D. Owen and R.S. Edgar, General Genetics, 2nd edtn., San Francisco and London, 1965, p. 537.

9. Percentages calculated from data given in Registrar-General's Statistical Review, England and Wales, Part 2, 1940-59, Table DD.

10. It would indeed be dangerous to accept this difference as established beyond reasonable doubt. The risk that this result could have arisen by chance from a situation in which there was actually no difference in the proportion of boy-girl pairs as between the areas is about one in twenty. (Editor's note)

11. H.H. Newton, loc.cit.; R.A. Fisher in Ency. Brit., 14th edtn., 1929, s.v. Twins and Twinning.

12. E.A. Wrigley (ed.). Introduction to English Historical Demography, London, 1966, pp. 96-159.

13. U.S. Deskbook of Facts and Statistics, 1964-65, p. 54; H.H. Newton, loc. cit.

14. If the average age of women at marriage fell in these parishes during the eighteenth century, then this relationship between the frequency of multiple births and the age of the mother might explain the observed decline in the number of multiple births in these parishes in the eighteenth century.

    In the same way the greater frequency of twins observed in the urban parishes might possibly be a reflection of a higher average age of marriage in these parishes as against the rural parishes. (Editor's Note).

THE POPULATION OF STEPNEY IN THE EARLY SEVENTEENTH CENTURY; a report on an analysis of the parish registers of Stepney, 1606-1610, by the East London History Group, Population Study Group (Mr. A.H. French, Miss Marybel Moore, Miss Jocelyn Oatley, Mr. M.J. Power, Mrs. D. Summers, Mr. S.C. Tongue).

Introduction

Parish registers are one of the most important sources for local history. East London is fortunate in having a particularly good series of registers for the parish of St. Dunstan, Stepney. Baptisms, marriages and burials all begin in 1568, and continue with few breaks to the present day. All these registers, except the most recent, are kept in the Greater London County Record Office at County Hall and can be easily consulted on application to the archivist.

Historians can use registers in two ways. In the past, registers have been searched to find biographical and genealogical information about famous inhabitants of a parish. More recently historians have begun to count the entries in registers to try to learn something about the population of England before the nineteenth century. By recording the names of all the baptised and tracing them among the marriages 15 - 50 years later, and among the burials up to 105 years after baptism, it is possible to build up a figure of the number of people alive in a parish at a particular date, the size and extent of families, at what age people married, died, and so on. This exercise is termed 'family reconstitution'.

Such an exercise takes a great deal of time. There is a simpler method of collecting information from the registers involving a count of all the entries. This exercise is termed 'aggregative analysis'. It does not tell us as much about the population as family reconstitution can, but the study group thought it should be tried first because it is simple to undertake.

We chose a five year period, 1606-1610, for analysis. In collecting information from the register we noted the sex of each person baptised and buried, the hamlet of each person baptised, married and buried, and the occupation of the father of each child baptised. The results of the analysis are set out in the sections below. Most of the conclusions are tentative because of the nature of aggregative analysis. We are attempting to learn about the total population of

Stepney from a source which tells only about baptisms, marriages and burials. Our conclusions should not be accepted uncritically. That said, we hope that this Report may indicate what the population of Stepney was like at the beginning of the seventeenth century. And, equally important, it will give an example of the technique of aggregative analysis and the difficulties of the exercise.

1. The total population of Stepney

In order to estimate the total population of Stepney we counted the burials in each year. The average number of burials per year was about 525. If we omit the number of burials due to plague, the average number of burials per year falls to about 415. Seventeenth century demographers suggest burial ratios by which this figure can be multiplied to a population figure. John Graunt, writing in the 1660's stated that one burial represented 32 living people (1). Sir William Petty gives a similar figure. He thought, in 1682, that one burial represented 30 living people (2).

Graunt: $32 \times 415 = 13,280$

Petty: $30 \times 415 = 12,450$

Thus the total population of Stepney was probably about 12,000 to 13,000 at the beginning of the seventeenth century. This assumes that the burial ratios of Graunt and Petty give accurate population figures for Stepney. We have no more reliable way of estimating the population.

2. The relative size of the population in the hamlets of Stepney

Stepney was a large parish in the early seventeenth century. It extended from Whitechapel on the west, to the river Lea on the east, and from Hackney on the north, to the river Thames on the south. A large number of hamlets made up the parish; Wapping, Shadwell, Ratcliff, Limehouse, Poplar and Blackwell lay by the river; Spitalfields adjoined Whitechapel and Shoreditch; and three inland hamlets, Mile End, Bethnal Green and Bow, filled the centre and north of the parish. Inhabitants of all these hamlets, except Bow, are mentioned in the registers of Stepney. Bow is excluded from this Report because it has its own church and kept its own registers, although it was still a hamlet of Stepney parish at this date. The size of Stepney prompts us to ask where its population was concentrated.

The registers note the area lived in by most of those baptised and buried in the church of St. Dunstan between 1606 and 1610. By counting the register entries by hamlet, we hoped to gain an idea of the relative size of the population in each hamlet. This analysis was complicated because the area given in the register entries was sometimes only a street or an alleyway, not a hamlet. The number of entries in the register which could not be assigned to a hamlet was very small, never exceeding 5% in any year. Such a small percentage is not sufficient to invalidate the hamlet analysis. We assumed that the total of baptisms and burials for the five year period would indicate the relative size of the population in the hamlets. The totals are set out in the table below:

Hamlet	Baptisms 1606-10	% of total baptisms (approx)	Burials 1606-10	% of total burials (approx.)
Bethnal Green	74	4%	106	4%
Limehouse	423	24%	444	17%
Mile End	86	5%	162	6%
Poplar and Blackwall	166	10%	229	9%
Ratcliff	576	33%	664	25%
Shadwell	171	10%	353	13%
Spitalfields	58	3%	227	9%
Wapping	157	9%	338	13%
unplaced	41	3%	97	4%
TOTAL	1,752	100%	2,620	100%

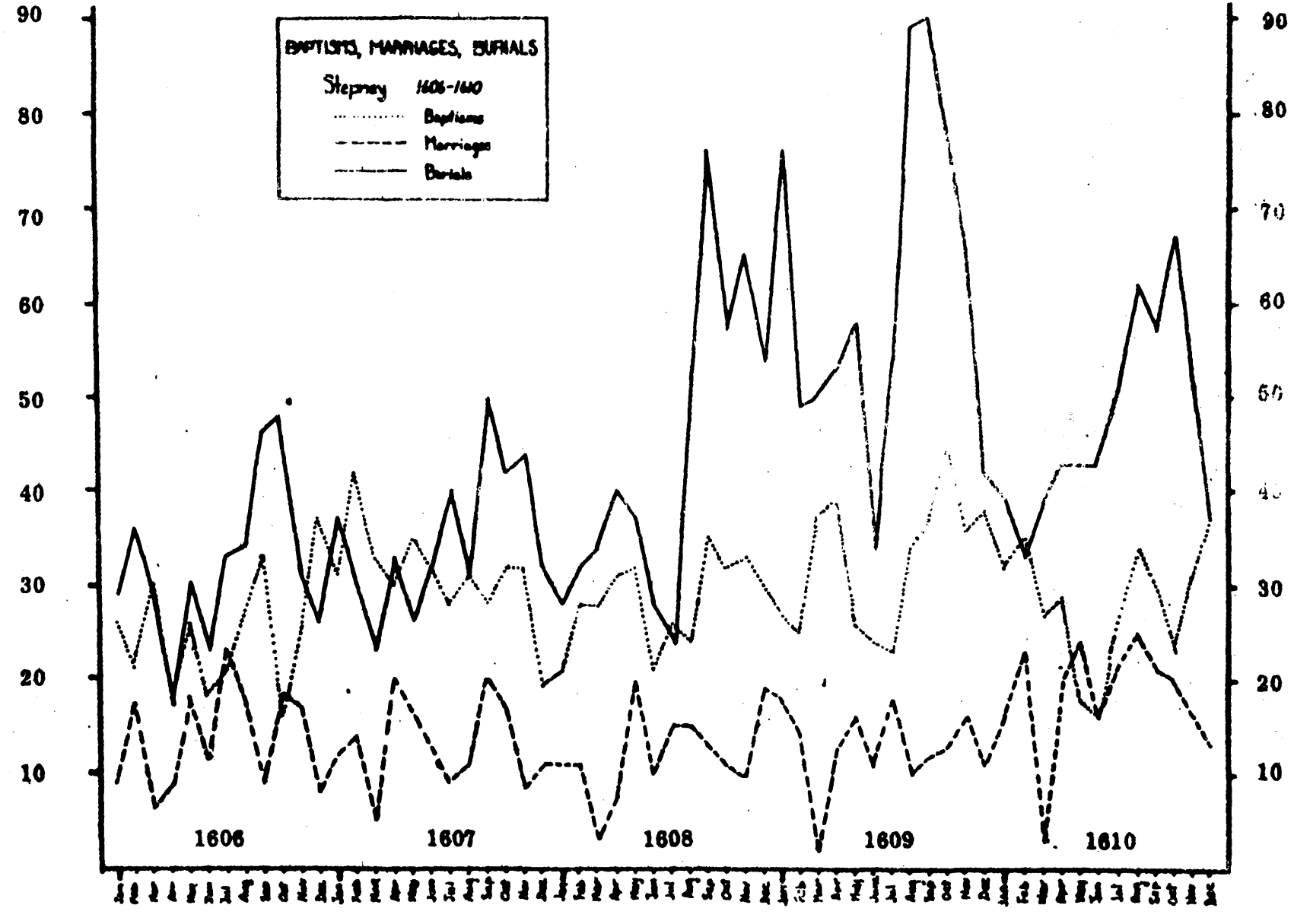
Two hamlets, Ratcliff and Limehouse, have very large baptism and burial figures. They account for 57% of the total baptisms and 42% of the total burials in Stepney. Shadwell, the third most populous hamlet, has figures which are much smaller than those of Ratcliff or Limehouse. The two remaining riverside hamlets, Poplar and Blackwall, and Wapping, have figures a little smaller than Shadwell. The hamlet of Poplar and Blackwall was larger than Wapping, judging by the baptism figures, but smaller than Wapping, judging by the burial figures. The five riverside

hamlets claim 85.5% of the total baptisms and 77% of the total burials. Clearly the population was heavily concentrated along the riverside. The three inland hamlets, Bethnal Green, Mile End, and Spitalfields, have comparatively small baptism and burial figures. Bethnal Green and Mile End have similar figures. They account for 9% of the total baptisms and 10% of the total burials. The Spitalfields figures pose a problem, also met with in the Wapping figures. The burial figures make both hamlets seem more populous than the baptism figures do. The Spitalfields burial figure suggests that it had a population almost as large as Poplar and larger than Bethnal Green or Mile End; but the baptism figure suggests that it had the smallest population of the eight hamlets. Which figure, the baptism or the burial, should be used as an indication of the size of the population?

To answer this question the baptism and burial figures of the hamlets must be looked at more closely. In all eight hamlets there are more burials than baptisms. In Limehouse, Poplar and Blackwall, and Ratcliff, the discrepancy is not great; in two hamlets, Shadwell and Wapping, there are over twice as many burials as baptisms, and in Spitalfields there are over four times as many. A great excess of burials over baptisms suggests an unhealthy area where there was an unusually high death rate. Spitalfields, Shadwell and Wapping seem to have been particularly unhealthy hamlets judging by the heavy incidence of plague in them. Between 1606 and 1610 27.3% of the burials in Spitalfields were of plague victims; in Shadwell the percentage was 28, in Wapping 27.8. In the other hamlets the percentage of plague deaths was much lower, 18.2% in Limehouse, 15.5% in Ratcliff, 11.7% in Poplar, 17.9% in Bethnal Green, and 17.2% in Mile End. Since a burial figure inflated by plague deaths gives an inflated idea of the population in each hamlet, it would be wiser to trust the baptism totals as indicative of the relative populousness of the hamlets. Baptisms tend to fluctuate less than burials under the influence of disease. We can conclude that Spitalfields, with the smallest number of baptisms, was the least populous hamlet.

3. The fluctuation of baptism, marriage and burial statistics

The graph shows these three sets of figures. The preponderance of burials is striking. There were 2,620 burials compared with 1,752 baptisms in the five years. This discrepancy indicates a natural decrease of population. It was particularly marked in 1608, 1609 and 1610, when burial figures were abnormally high due to plague. In 1606 and 1607, when burials were not unduly inflated by plague, baptisms sometimes outnumbered burials, notably in winter 1606 and spring 1607.


BAPTISMS, MARRIAGES, BURIALS
Stepney 1606-1610
Baptisms
Marriages
Burials
90
80
70
60
50
40
30
20
10
1606
1607
1608
1609
1610

But even discounting plague burials there were more burials than baptisms. A total of 2,078 people, who died from causes other than plague, were buried, compared with 1,752 who were baptised.

Also obvious are the seasonal fluctuations. Each summer and autumn the burial figures rise spectacularly to a peak, due to plague. The number of plague burials each month is shown on the following table:-

	1606	1607	1608	1609	1610
January			1	25	8
February				20	2
March	1	1		16	
April	1	3	1	15	5
May		1	1	24	5
June		2		3	3
July	1	12	9	13	11
August	1	10	25	36	13
September	2	25	25	37	16
October	10	14	13	23	11
November	2	13	29	16	4
December	3	2	14	8	6
TOTAL	21	83	118	236	84

The attacks of plague in summer had several possible causes, most important the spreading of infection by the increased breeding activity of the plague carrying fleas (Xenopsylla Cheopis) which normally lived on rats. In winter, plague normally died out and burials slumped. There is one exception to this trend. The burials remained abnormally high in the winter of 1608/9, possibly because the winter was a particularly severe one (3). But another reason, as the table shows, was the continuance of plague, which may well have entered a pneumonic phase, which occurs in colder weather when people crowd together in ill-ventilated rooms and spread the disease through airborne infection.

How plague spreads is a problem which deserves further study. Sometimes it struck only scattered individuals, as in the springs of 1606 and 1608. At other times the disease spread more quickly, among people living closely together. One example of the spread of disease within a family is provided by the unfortunate Clements family of Limehouse. In February 1609, the wife and daughter of

Thomas Clements, a schoolmaster, died of plague; in March two sons died; and in May a second daughter died, all of plague.

The annual plague and its effects, and the influence of Lent upon marriages, are some more obvious explanations of fluctuations in the statistics plotted upon the graph. It would be unwise to interpret other minor monthly fluctuations too closely. All kinds of unknown factors might have caused them.

4. The Structure of the Population

Aggregative analysis cannot tell us much about how the population was composed but certain characteristics of the population are hinted at by analysing baptisms and burial entries by sex and status:-

Baptisms:	Male	Female	Total	Sex Ratio (Male: Female)
	887	865	1,752	102:100

Burials:	Infant/ Child	Man	Son	Woman	Daughter	Widow	Total
	224	626	605	467	591	107	2,620
		(Male total) 1231			(Female total) 1165		

The first interesting fact is that there were more men than women, shown by the preponderance of males being born and dying. A second striking fact is that only about 42% of the population was married at the time of death; about 8.5% of those buried were described as 'child' or 'infant' (the majority being 'infant'), about 45% were described as 'son' or 'daughter', and about 4% were widows. We cannot conclude from these figures that these were the proportions of married and unmarried people in the population for they include only those who died, not those who remained alive. But we can learn something about the cross-section of the population that died. 'Infants', 'sons' and 'daughters' account for almost 54% of those dying. These three categories combined represent the younger section of the community. The 'sons' and 'daughters' would be either still dependent upon their parents, or young people not yet married. Few of them should have been old people described as son or daughter since their parents would probably be dead by then. It seems that the younger section of the community was either a majority of the population or had a particularly high death rate, highest of all among infants. Infant

mortality cannot be measured precisely, using our statistics, but a rough idea of its severity can be gained by comparing the number of infant deaths with the number of baptisms during the period. The number of infants and young children who died between 1606 and 1610 amounted to between 12 and 13% of those born during the same period. One other point deserves mention, the small proportion of widows that died. There is no doubt that there were a considerable number of widows in the population. No less than 41% of the women marrying between 1606 and 1610 were widows. But it seems that women rarely died widows. The great number of widows remarrying indicates that women did not remain widows for long. It is probable that the men they married would be younger and thus tend to outlive their wives. The erstwhile widow would thus die a wife.

5. Immigration

(i) Evidence from the baptism and burial registers

We have noted that Stepney suffered a natural decrease in population in the early seventeenth century, i.e. more people died than were born. The population should have grown smaller. Instead it increased. This increase was due to large scale immigration from surrounding areas, a phenomenon which affected the whole of London at this time. We hoped that the registers would shed some light on this movement. In fact, evidence of immigration in the baptism register is meagre. In only 13 of the 1752 entries in the five years are the baptised or their parents noted as strangers to Stepney. Six were from the London area; five were from nearby counties; one was from 'Gaunte'; and one was a vagrant, origin unknown. Two of the infants baptised, from London, were illegitimate. This suggests a possible reason for the parents leaving their own parishes to have the infant baptised in Stepney.

The burial register yields more information. Of the 2620 entries in the five years, 84 relate to people who were strangers to Stepney. These 84 burials do not give the number of immigrants to Stepney between 1605 and 1610, but only how many immigrants the register records as having died in these years. They do, however, indicate where these strangers came from. This information is set out in the table overleaf.

Not all the deceased were actual immigrants to Stepney. Two were described as, 'the daughter of a Mercer of London', and 'a Draper of London'. In both cases it is possible that the deceased lived in

Area		Number of burials	Approximate % of immigrant burials
London city and suburban parishes		43	51%
Home counties(i.e. within a 50 mile radius of London)		17 (including Essex 6 Kent 6)	20%
Distant counties (i.e. outside a 50 mile radius)		9	11%
Aliens	Scotland 8) Ireland 1) Guernsey 1) France 4)	14	17%
Unplaced		1	

London, and had a country house in Stepney. These entries would then refer not to immigrants but to occasional inhabitants. In some cases the strangers were merely visiting Stepney when unforeseen accidents ended their life. For example, plague accounted for a man from Cumberland, one from Lancashire, and two Scots. Often it is quite clear that the buried stranger had not intended to settle in Stepney. One of the Scots died on his ship. And a west country man had been hanged for piracy at Wapping. The number of immigrants who died in Stepney was thus less than 84.

Nevertheless, the figures indicate the most common origins of immigrants who died and may be taken as a rough guide to where most of the immigrants came from. Of the total number of immigrants or visitors buried, 71% came from London and the home counties. This indicates that the majority of immigrants did not move far from their original home to settle in Stepney.

A second kind of immigrant is noted in the burial register, the vagrant. Fifty-five vagrants died in Stepney between 1606 and 1610. In only five cases is the place of origin mentioned, Essex, Herefordshire, Cambridgeshire, Hampshire, and Scotland. The register is more informative about the place of death. A significant number, 26 of the 55, died in Spitalfields. Was Spitalfields already assuming its role as the last refuge of the social misfit? Of the remaining vagrants, seven died in Wapping, three each in Limehouse, Mile End,

Poplar, Bethnal Green and 'the fields', and one in Shadwell. From this scanty information it seems that most immigrants came from a relatively small area around Stepney, and that there was a large number of vagrants among them.

(ii) Evidence from the marriage register

Marriage often causes people to move home. The Stepney marriage register gives the place of origin of most marriage partners and by studying these we can learn who moved into Stepney and married, and how far they moved. In our five year period there were 841 marriages. Of this total 63%, 527 marriages, were between partners from the same hamlet in Stepney, and 16%, 134, were between partners from different hamlets within the parish. Over three-quarters of the people married in Stepney thus found partners within the parish. The tendency of East London people to marry locally existed in the seventeenth century, as the studies of Willmott and Young have shown that it exists today. Only 180 marriages, about 21% of the total, involved partners from outside Stepney. Of these 180 marriages, 87 involved one stranger and one local partner; in 74 cases the stranger was the groom and only in 13 was the stranger the bride. There are two possible reasons for this imbalance. More men than women might have migrated to Stepney to seek employment and thus there would be more chance of marriage between immigrant men and local girls. Or, it may be that marriages usually took place in the bride's parish. In this case Stepney registers will record marriages of Stepney girls to men from other parishes. But the marriages of Stepney men to girls from other parishes would take place in other parishes and will be recorded elsewhere. In 83 of the 180 marriages both partners were strangers to Stepney; in five other marriages the place of origin of one partner was unknown or unstated and the other partner was a stranger; in two marriages the place of origin of neither partner was known or stated; and three marriages were between Negroes.

The number of strangers and immigrants whose place of origin was stated, was 259. The areas they came from are as follows:-

Area	Number of marriage partners	Approximate % of strangers whose origin is known
London city and suburban parishes	194	75%
Home counties (i.e. within a 50 mile radius of London)	48 (including:- Essex 18, Kent 15, Middlesex 6)	18%
Distant counties (i.e. outside a 50 mile radius)	16	6%
East Indies	1 (a negro)	
	259	

It seems that people did not usually move far to marry, just as they did not move far before they died. Of the total strangers marrying, 93% came from London and the home counties.

It is impossible to assess the reliability of these statistics for measuring immigration to Stepney. There is no guarantee that the strangers who married in Stepney stayed in the parish after marriage. What we can say with certainty is that many people came into Stepney and were married and that few of them came from outside a 50 mile radius.

6. The occupations of Stepney people

From about 1600 the Stepney baptism register records the occupations of the fathers of baptised children; the burial register notes the occupations of the deceased from about 1605. We analysed the occupations mentioned in the baptism register because its record of occupations was more complete than in the burial register. Five half-year periods, each January to June, 1606 to 1610, were analysed and the occupations divided into seven groups shown in 'The Table of Occupations'. The percentages show how important each occupation group was within each hamlet.

If we look first at the total figures for Stepney the varying importance of the occupation groups can be seen. The river and sea occupation

TABLE OF OCCUPATIONS

	Bethnal Green		Mile End		Spital-fields		Poplar		Lime-house		Ratcliff		Shadwell		Wapping		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Agricultural	12	32	1	3			9	11	2	1	2	1					26	3
River and Sea	1	3	1	3			41	50	100	53	119	46	48	72	35	44	345	45
Shipbuilding					1	6	4	5	23	12	29	11	6	9	12	15	75	10
Land Crafts	8	22	19	54	11	65	12	15	29	15	51	20	8	12	18	23	156	20
Provisioners	1	3	4	11			9	11	14	7	32	12	4	6	5	6	69	9
Middle Class	3	8	4	11			4	5	9	5	7	3			1	1	28	4
Miscellaneous	12	32	6	17	5	29	3	4	13	7	19	7	1	2	8	10	67	9
TOTAL	37	100	35	100	17	100	82	100	190	100	259	100	67	100	79	100	766	100

is by far the largest. Of the 345 in this group, 320 were mariners; there were a few watermen and lightermen, and a small number of fishermen from Poplar. The second largest group is the land crafts, which includes 36 tailors and shoemakers, 29 carpenters, 27 weavers and 15 smiths. The shipbuilding group comprised 51 shipbuilders, and various other associated craftsmen, ropemakers, sailmakers, pulley-makers and so on. The other occupation groups are small by comparison. Provisioners, most of whom were suppliers of food and drink, bakers, butchers, grocers, victuallers, vintners, and so on, account for 9% of the total. The 27 middle class people include knights, gentlemen, members of London companies, and professional men, lawyers, ministers and so on. Agricultural occupations include yeomen and husbandmen. Occupations which could not be easily categorised were included in the miscellaneous section. The large percentage of this group in Bethnal Green included five labourers, two porters, two 'moniers', a player, a gardener and a hackneyman.

The occupation structures of the hamlets vary considerably. The three inland hamlets stand out because they have scarcely any river and sea occupations. Bethnal Green has a higher percentage of agricultural occupations than any other hamlet. Mile End has the highest percentage of middle class people, and a high percentage of provisioners, perhaps explained by middle class demand. One feature which all three inland hamlets share is the size of their land craft groups. In Bethnal Green and Mile End this is explained by the number of weavers: five of the eight land craftsmen in the former were weavers, and six of the nineteen in the latter, more than any other single occupation in the group, were weavers. In Spitalfields the land crafts were more diverse; the eleven in this group included two weavers, two basketmakers, two threadmakers, two carpenters, a bricklayer, a brickmaker and a smith. Of the five miscellaneous occupations in Spitalfields which make up the only other substantial group in the hamlet, four were labourers. Clearly Spitalfields was, at this date, dominated by craftsmen and unskilled labourers, and was not the stronghold of a weaving industry it was later to become.

The five riverside hamlets are all dominated by their river and sea occupation groups. This dominance is marked in Shadwell, which has a particularly one-sided occupation structure. Limehouse and Ratcliff, the two most populous hamlets have similar percentages of river and sea, shipbuilding, and land craft occupations. Limehouse, in addition, has a higher percentage of middle class people than any other riverside hamlet except Poplar. And Ratcliff has a higher percentage of provisioners than any other hamlet. The supplying of

ships probably accounts for some of the 32 provisioners; eight were victuallers and five were chandlers. Six bakers, three millers and four brewers probably also shared in the ship supply trade. Wapping is notable for having the highest percentage of shipbuilders and a higher percentage of land crafts than any other riverside hamlet. But Poplar has the most remarkable occupation structure of all the hamlets. It has a high percentage of river and sea occupations in common with its riverside neighbours. It also has an agricultural group second only to Bethnal Green. And, in addition, it has substantial percentages of land crafts and provisioners, and not inconsiderable percentages of middle class people and shipbuilders. It was a hybrid hamlet, having an occupation structure which was amalgam of a riverside and an inland hamlet.

Conclusion

The sections of this report have shown some methods of analysing statistics from a parish register. We have been able to make an estimate of the total population, compare the relative populousness of the hamlets of Stepney, learn something about the behaviour of baptism, marriage and burial statistics and the structure of the population, learn a little about immigration, and compare the occupations in different hamlets. But our picture of the population is a very imperfect one. Most of our conclusions are tentative because our figures are not of the population as it was during the five years which was studied, but of a certain section of the population, those being married, having children and dying. At best our figures give only an indication of the size and nature of the population in the early seventeenth century. Even so, the parish registers give an insight, however imperfect, into the population, which no other source would provide.

NOTES

1. Natural and Political Observations on the Bills of Mortality. 3rd edn. 1665. 141.

2. Another Essay in Political Arithmetick Concerning the Growth of the City of London. 1682. Reprinted in C.H. Hull, The Economic Writings of Sir William Petty. 1899. ii. 459.

3. Information of Dr. D.J. Schove.

ENQUIRIES AND PROBLEMS

Dear Sir,

The Squire-less Village

Some observations on the Social History of Ampleforth

In the sixteenth century, following the dissolution of neighbouring Byland Abbey, the manorial system began to collapse, and the farms in Ampleforth parish passed into the hands of many owners, either on a freehold or copyhold tenure. Thus, there was never a squire in Ampleforth, though there was a strong squirearchy in all the surrounding villages. People who crossed their landlords in other villages, and had to leave their tied houses, naturally gravitated to Ampleforth. This meant that through the years vagrants, scoundrels, poachers, and ne'erdowells, unacceptable on other estates, tended to gather in the village too. There were two flourishing common lodging houses in Ampleforth until the 1914 war.

An important consequence of the lack of a squire was the development of a strong spirit of independence among the local trades people. For example, stonemasons and carpenters on neighbouring estates were employed by the landlord and worked only on estate property. In Ampleforth this was not so, and such tradesfolk were free agents, able to seek their business regardless of estate boundaries or privilage. They had to fend for themselves, and in so doing, prospered, because there were always plenty of skilled workmen needed to do private work.

Another important consequence of the absence of a squire can be seen in the religious field. In the seventeenth century, Quakers, who were not acceptable on many estates, found refuge here, and there was quite a sizeable settlement of them, complete with their own meeting house. All the Quakers required was complete freedom to order their lives as they believed best, and this they were able to do in Ampleforth. For the same reasons, Roman Catholics, who were equally unacceptable on many estates, found a refuge here too, and the present day Ampleforth Community of Benedictines, with their famous public school, owe much of their success to their freedom to live unmolested in the parish. In the same way, both the Wesleyan Methodists and the Primitive Methodists flourished in Ampleforth, and both built chapels in the village, whilst in the neighbouring villages it would not have been allowed by the squire.

Ampleforth was also noted, as might be expected from the situation outlined above, for its poachers, and many of the villagers in earlier times made part of their living out of poaching on neighbouring estates. It is said that no gamekeeper from the neighbouring estates came to Ampleforth if he could help it, because he would not be welcome, and was quite likely to be mobbed or cheated!

In earlier days, up to the Great War, there was a noticeable literary bent among the Ampleforth villagers. Not only were people given to writing poems - some of them printed privately - but there was the 'Ampleforth Play', which was an annual event, in which a group of actors with a band slowly progressed down the village street, all the while reciting the time-hallowed words of the play, with actions and music. None of it was ever written down, and tragically no one is alive today who can remember the words, and so the play has been lost to posterity.

I shall be very interested to hear from any readers who know of other villages which have had no squire: or from anyone who can throw light on this interesting subject.

Yours faithfully,

Patrick Rowley (The Rev.),
The Vicarage,
Ampleforth,
Yorks.

Dear Sir,

Marriage Seasonality - May Marriages

In connection with an enquiry into techniques for investigating seasonality, I have calculated the monthly totals of baptisms, burials and marriages for each decade recorded in the registers of a number of parishes. With the co-operation of members of the Matlock and Burton Joyce Population Study Groups and in particular Mrs. Janet Young of Nottingham, I have been able to collect figures from eleven Nottinghamshire and six Derbyshire parishes. The figures relating to marriage throw some light on Mr. E.W. Smith's query whether folk-lorists are right to assert that May was traditionally avoided as an unlucky month for marriage (L.P.S. No. 2 p. 67).

The table below shows that:-

1. **In 10 of the 17 parishes, the number of decades in which the number of May marriages fell below the average for all 12 months was less than half, and in most cases, substantially less than half, of the total number of decades recorded.**
2. **There were only 5 parishes in which the number of decades particularly unfavourable to May marriages reached a quarter of the recorded decades.**
3. **On the other hand, there were 12 parishes in which decades particularly favourable to May marriages reached a quarter of the recorded decades.**
4. **There were only 4 parishes in which the unfavourable decades exceeded the favourable decades.**

I could see no pattern in either the unfavourable or the favourable decades. It would seem, then, that in only one parish (Fledborough) was there any real sign of a disinclination to marry in May, and many of the decadal totals for this parish are so small as to make any conclusion at all extremely hazardous.

I have come across interesting evidence of a favoured month for baptisms (and to a lesser extent for marriages) appearing in some Derbyshire parishes about the middle of the eighteenth century and disappearing towards the end of the century and I hope to submit this evidence to the editors for their consideration for a later issue.

Yours faithfully,

L. Bradley,
Sheldon Cottage,
Elton,
Matlock, Derbyshire

May Marriages

A Number of decades covered (ending 1830).

B Number of decades in which May marriages are below monthly average.

C Number of decades in which either no or only one month is less favoured than May.

D Number of decades in which either no or only one month is more favoured than May.

Nottinghamshire Parishes	A	B	C	D
Arnold	25	11	4	6
Burton Joyce	25	10	4	7
Cropwell Bishop	25	14	6	4
Edwinstowe	16*	3	0	5
Gedling	27	8	1	4
Oxton	26	16	1	7
Feldborough +	20	17	17	2
Darlton (chapelry) +	26	11	9	8
Dunham	18	4	2	8
Ragnall	13	7	6	6
Hoveringham	13	9	4	3
Derbyshire Parishes				
Ashover	17	3	2	6
Bradbourne	12	3	2	5
Brailsford	18	9	4	5
Brassington	11	5	3	3
Matlock	19	10	1	6
Wirksworth	21	4	1	9

* ending 1800

\+ in these parishes, decadal totals are frequently so small as to make statements as to order of preference almost meaningless.

Dear Sir,

Census and Census-type Documents (L.P.S. No. 2)

Valerie Smith's exhortation that all presumptions should be clearly stated is admirable, but she fails to follow her own advice. At the foot of page 20 she states "it is clear that James Green has married twice". It is not clear - there could be two (or more) James Greens. Again, on the next page she states "James Green Junior must be James' Son". Maybe, but there is no must about it. The genealogist continually meets pitfalls of this sort and coincidence is surprisingly frequent. No doubt, Mrs. Smith has other evidence for her statements, but she does not quote them.

Mr. Tillott is in error when he says that the 1841 census gives the County of birth of the individuals recorded. In fact, all it does is to give Y (for yes) or N (for no) to the question - was the individual born in this County? A 'Y' is useful, but an 'N' is almost valueless.

Like other records, census returns are not free from errors. A useful account of this subject is given in Genealogical Research in England and Wales by David E. Gardner and Frank Smith, 1956.

Yours faithfully,

Robert Dickinson,
Lancashire Parish Register Society,
1 Lawton Road,
Rainhill,
Liverpool, L35 OPL

Valerie Smith Comments

Dr. Dickinson is quite right in stating that I have not stated all my presumptions and for this I offer an unreserved apology; however, I would like to make it quite clear that I was dealing with the analysis of a parish register only in relation to the use of a list of inhabitants, and that I am well aware that more stringent tests of identification are necessary for the recovery of information using the register as the sole source.

In using a register in conjunction with a list, one fundamental assumption is necessary in order for it to be possible to undertake this type of work at all; this is that the basic residential unit in England has always been the nuclear family consisting of a man, his wife, and their children (or the step-children of one of them) who are still young enough to be dependent on their parents for support. It follows logically from this, that the order of listing the members of a household would be to put the members of this conjugal family at the head of the list. All the available information supports this view. In view of this, the researcher dealing with an example such as that given in my article would have all the evidence both of logical expectation and of past results to lead him to expect that the most probable relationship of the four persons surnamed Green would be that of husband, wife and children.

I have stated that all information from the register which could relate to the person in question must be entered on the card. In the light of this limitation it may be allowed that there were in the register only two entries concerning the marriage of a man named James Green and that only one of these concerned a woman whose Christian name was Margaret. It may also be allowed that the only male child born to James and Margaret Green is the [illegible] of this couple, since not only is this the more probable explanation from the register evidence alone but also she is included in the list in a position in the household most likely to be occupied by a dependent child. If this much is allowed, then one has the situation of another person, James Green junior, being present in a position on the list between a married couple and their child; given the order in which these lists are compiled, this is in itself strong evidence in favour of his being also a dependent child; but he is not the son of James and Margaret, who were not married at this date. At the date in question, a man named James Green was married to a woman named Jane Smith. There is no mention in the register of

this woman after the marriage of James and Margaret, and therefore no obstacle to presuming that she was the first wife of James Green and the mother of his son, James.

I do not wish to claim that this is the only possible explanation of the events found in the parish register, and I would not be prepared to make all these suppositions if working from the register alone. I would say that in the light of the evidence of the list, such a chain of deduction as I have outlined is the only one which will fit all the facts without involving reliance on highly improbable coincidences.

This is not a full answer to the problem of ambiguity; such a full answer would demand an article of its own. In order to illustrate the point I wished to make, I have deliberately constructed my example to include little ambiguity; in a large parish with a common name the problem could be much more complicated than I have suggested here, and it could well be impossible to find a solution which would be acceptable. I have merely tried to point out that, given the basis of English household structures as the nuclear family, and given the order in which names are placed on a list in accordance with this, the presumptions illustrated in my original article are adequately supported by the evidence available.

P.M. Tillott writes:

Dr. Dickinson is perfectly right; my sentence was misleading. The subject of errors and inconsistencies in the enumerators' books will be treated in a chapter of the forthcoming Cambridge Group publication mentioned in the article.

By a printing error, a line was omitted at the end of the article. Armstrong's chapter in An Introduction to English Historical Demography comments only upon analysis by punch cards; there are comments on both punch card and computer methods in Armstrong's and Dyos' chapters in The Study of Urban History.

One other matter, apparently trivial but the cause of much confusion must be referred to. Some misprints in the first substantive paragraph in the article have transposed the underlining of Census Reports and Census Enumerators' Books. The Reports (i.e. the printed and published statistics compiled by the census office) should always be referred to by italics (or by underlining where italics are not available); the enumerators' books should never be referred to in this way since they are, of course, a manuscript source material.

MISCELLANY

VIRGINITY TEST

Mr. David Cressy (of 65 Swaynes Lane, Comberton, Cambs.) has sent us a photocopy of an entry in the diocese of London Vicar-General's book for 1681. (Greater London Record Office, reference DL/C/345, f 210.) It is concerned with the examination made of a thirteen year old widow to ascertain whether she was (as she claimed) still a virgin, in which case she would be legally free to marry her former husband's brother on the grounds of non-consummation of her first marriage. This application for a testimonial from the church certifying the girl's virginity would appear to be a fairly late example of an ancient practice. The examination was made on the 13th May 1681 under the supervision of Sir Thomas Exton, Vicar-General and principal official to the Bishop of London, in Harpe Lane, near Tower Street, London. The record was made by Richard Newcourt, notary public and Deputy Register.

"A Business of the Inspection of the Body of Dorothy Dicer alias Harvey the relict of Elias Harvey late of Chigwell in the County of Essex, Esq., and Diocese of London, deceased; whether she is now a virgin not carnally knowne by any man or noe. That there may be a marriage solemnized between William Harvey, Esq., the son of Sir Elias Harvey, Knight, and brother of the said Elias Harvey, Esq., deceased and the said Dorothy Dicer otherwise Harvey..

"This day appeared personally the said Dorothy Dicer alias Harvey widdow and alleadged herselfe to be the Relict of the said Elias Harvey Esq., deceased, that she is of the age of thirteen years or thereabouts, that she is a virgin uncorrupted never carnally known by man and a pure virgin, and she prayed a Lycense for a marriage to be solemnized between herselfe and the said William Harvey, and in order to the proofe of her said Allegation she desired, and made it her request and offered herselfe willing, and ready to undergoe, and submitte to the Inspection and Judgement of any Matrons or Midwives to be nominated and appointed by the said Judge. Whereupon the said Sir Thomas Exton did decree an inspection to be made of the Body of the said Dorothy Dicer otherwise Harvey ..... by Alice Cranwell, Mrs. Elizabeth Best and Mrs. Susan Carey experienced midwifes ... Then the said midwifes and the said Dorothy Dicer retiring themsleves into a private Chamber or Roome of the said house, the said midwifes did view and inspect the body of

the said Dorothy Dicer otherwise Harvey and did returne theire Judgements, signed and sealed with theire respective hands and seales in the Tenor of these words following (viz) Wee whose names are hereunto subscribed ... doe by virtue of our said Oaths certifie that we have according to the best of our skill and knowledge inspected the body of the said Dorothy, And doe find that her said deceased husband never had the Carnall Knowledge of her body, but that she is a pure and uncorrupted virgin and hitherto untouched by any man, as far as wee can know or perceive ... The said Judge at her request did minister an oath unto her upon the holy Evangelists truely to answer to such questions as he should aske her ... and he being fully satisfied by the midwifes and the oaths she had taken and the severall questions proposed unto her ... ordered a Lycense to be granted to her when demanded."

CORRESPONDENCE

Dear LPS

The Tottenham Moniers

In my article on male occupations in a rural Middlesex parish, 1574-1592, I referred to the moniers recorded in the burial register of Tottenham High Cross, and hazarded some guesses at the nature of their work. A number of readers have written to me making suggestions and, in particular, Tom Lewis of the Edmonton Hundred Historical Society has drawn my attention to some interesting material.

During the period covered by the article, Richard Martyn a London goldsmith (b.1543, d.1617) had a house in Tottenham, (though not himself the subject of any entries in the Tottenham parish registers, he occurs as the employer of certain servants who were.) His wife was Dorcas Ecclestone, the daughter of a Tottenham parishioner and this may have influenced his decision to have a house in the parish as well as in London. (Brian I'Anson, The Martin Family, 1935; Harl.Soc.65,22). In 1572 he was appointed Warden of the Royal Mint by letters patent as a result of a re-organisation scheme providing for dual control under a warden and a master. The latter was overseer of the moniers, whose work was to shear the blanks to size and stamp them with the dies. (M.B.Donald, Elizabethan Monopolies, 1961,44.)

It seems, therefore, quite likely that the Tottenham-moniers were employees of the Mint, perhaps recruited from Tottenham men known personally to Martyn. Presumably they commuted daily to London (some 5 miles distant), though there is the possibility that they may have been on the strength of the Mint but worked at Martyn's Tottenham premises.

By the beginning of the seventeenth century the Tottenham moniers had ceased to be mentioned in the parish registers. In August 1602 Martyne (who had been Lord Mayor in 1589 and made a knight) was dismissed from his office of alderman on account of bankruptcy. An examination of his affairs showed that at Tottenham he was £174 in debt and his fifteen employees had been reduced to four. Donald, op.cit. quoting B.M. Add. MSS 38170, F282).

Martyn's bankruptcy and the disappearance of the Tottenham moniers may thus be connected.

Yours sincerely,

David Avery,
11a Kingly Street,
LONDON, W.1

Pre-1841 Census Enumerators' Schedules

Dear Sir,

I noted with interest the enquiry about pre-1841 Census Enumerators' Schedules, on p.53 of LPS.2.

There is in my keeping an 1831 census for the Parish of St. John-at-Hackney. This covers the present districts of Hackney, Homerton, Clapton and Dalston. The Schedules have been bound and are in good condition; they can be seen here during normal library hours (9-7; Sats. 9-6).

Yours faithfully,

S.C. Tongue,
Archivist,
London Borough of
Hackney,
Libraries Department

Enquiries should be addressed to:

Shoreditch Central Library,
Pitfield Street,
London, N.1.

Buried Alive

Dear Editors,

Mr. M.E. Speight's letter in LPS No. 1 concerning the burial alive of a girl at Enfield reminds me of the precautions taken by a Stoke Newington man prior to his death. This was John Wilmer, born at Ealing 13th September 1696, died Stoke Newington 22nd January 1764, who, because he was a Quaker, refused to be buried in the churchyard and insisted on burial in the garden of his house, the present 187 Stoke Newington High Street. Fearing that by mistake he might be buried alive, he ordered that a wire be attached in a loop around his wrist, passed by means of a tube through the coffin and the earth above, and then attached to a bell in his nearby coach-house, so that if he revived after burial he could ring for assistance. The story is told in C.W. Foster and J. Green, History of the Wilmer Family (London) 1886. The house, which in the nineteenth century was for a time a rest home for respectable housemaids, not unnaturally became the subject of local ghost stories.

The garden is now detached from the house and is part of Wingcropp's Wood Yard, the entrance of which is in Stoke Newington Church Street. The foreman at these premises is happy to show the grave to visitors, though the wire is now disconnected.

Yours sincerely,

D.O. PAM,
Edmonton Reference Library
Fore Street,
London, N.9.

SOME RECENT PUBLICATIONS

Books

Wrigley, E.A. — Population and History World University Library Weidenfeld & Nicolson (1969) 16s.

This excellently printed and illustrated book gives a very clear account of the methods of analysis used by the historical demographer. The way in which positive and negative checks lead to an equilibrium, an 'optimum' population, in any given set of social and economic circumstances is applied both to industrial and pre-industrial societies. There is a useful bibliography.

Hollingsworth, T.S. — Historical Demography
Hodder & Stoughton (1969) 63s. (paper 35s.)

The major part of this book consists of a critical survey of the very wide range of sources available to the historical demographer. The way in which these sources can be used in demographic analysis is explained with copious examples. Particular and critical attention is given to the use of parish registers. In the final appendices, the author discusses the demography of plague and the estimation of replacement rates in mediaeval England in a way which should rouse controversy. There is a most useful bibliography.

Spencer, W.M. (ed.) — Colne Parish Church Burial Register 1790-1812 from 130 Keighley Road, Colne, Lancs.

The Colne register for this period is exceptional in giving age, cause of death, occupation etc. These have been transcribed by a local history class. The sequence is, unfortunately, alphabetical, which creates difficulties for the demographer. The transcription is followed by a statistical analysis of family size, population change and occupations, and by a 'medical appraisal'. This latter contains useful analyses of causes of mortality but the method of calculation of some of the rates is not clear and some may well be faulty.

LOCAL RESEARCH IN PROGRESS

The following lists (continued from our last issue) contin information about work on local population history that is know to the Cambridge Group for the History of Population and Social Structure. We publish it here in the hope that it will be of interest to subscribers.

We should be grateful to receive information of any other research in progress.

* Denotes analysis completed

COUNTY	PARISH	NAME	ADDRESSES
DEVON (continued)			
Reconstitution			
	Modbury	Revd. L. B. Hutchings & Modbury Local Hist. Soc.	The Vicarage, Modbury, Ivybridge, Devon
	Colyton *	Dr. E. A. Wrigley	Cambridge Group
	Hartland *	Mrs. S. Stewart	45 Trafalgar Road, Birmingham 13.
DORSET			
Aggregative			
	Corfe * Castle	Mrs. V. Smith	Cambridge Group
	Langton Matravers*	Mrs. M. Cowley	Bladon, Worth Matravers, Nr. Swanage, Dorset
	Swanage *	Mrs. M. Cowley	
	Symonds-bury	Miss M. Cory	County Record Office, Dorset
	Thorncombe*	A. H. Noble	1 Vale Court, London, W. 9

Worth Matravers*	Mrs. M. Cowley	

Literacy

Allington *	R. S. Schofield	Cambridge Group
Almer *	R. S. Schofield	
Bettiscombe *	R. S. Schofield	
Bradford Abbas *	R. S. Schofield	
Fifehead Magdalene *	R. S. Schofield	
Sydling St. Nicholas (Hillfield) *	Miss E. Scott	Homerton College Cambridge
Tarrant Hinton *	R. S. Schofield	
Turnworth *	R. S. Schofield	

Listings

Beaminster 1775*

Corfe Castle 1790 *

Horton 1821 *

Lyme Regis 1694 * 1697 * 1699* 1701* 1702* 1703*

Marnhull 1821 *

Melbury Osmond 1800 *

Poole 1574 *

Puddletown 1724-5, 1729 1769 *

Sturminster Newton 1801 *

Woodlands 1821 *

Reconstitution

CO. DURHAM

Aggregative

Darlington *	Miss R. Willan	Homerton College, Cambridge

	Long Newton *	A.F. Pallister	1 Station Road, Middleton St. George, Darlington, Co. Durham
	Middleton St. George *	A.F. Pallister	
	Whitburn *	R.L. Stevens	26 Cambridge Road, Linton, Cambs.
Literacy			
	Staindrop *	R.S. Schofield	
Listings			
	----------	----------	
Reconstitution			
	----------	----------	
ESSEX			
Aggregative			
	Ardleigh *	F.H. Erith	Vinces Farm, Ardleigh, Colchester, Essex
	Asheldham *	Mr. K.J. Bruce	The Poplars, Downhall Beach, Bradwell on Sea Essex
	Bradwell-juxta-Mare *	F.G. & M.G. Emmison	Bibury, Links Rd., Chelmsford, Essex
	Burnham-on-Crouch	Mr. W.S. Smith	12 Granville Terrace, Burnham on Crouch, Essex
	Coggleshall	P. Weinrich	45 Balliol Street, Appt. 202, Toronto 7, Ontario, Canada
	Dengie	Mr. K.J. Bruce	
	Dedham *	F.H. Erith	
	East Hanningfield *	Mrs. A. Shelley	332 Perry St., Billericay, Essex

ESSEX (Contd.)	Great Baddow *	Mrs. L. McWilliam	3 Middle Cloister, Billericay, Essex
	Great Burstead *	D.G.Ward & Mrs. Y.Welsh	Shard, Laindon Rd., Billericay, Essex
	Great Yeldham *	F.G. & M.G. Emmison	
	Hadleigh *	Dr. H. E. Priestly	Hathaway, 8 Loton Rd, South Benfleet, Essex
	Maldon, All Saints *	E.G.Thomas	46 Washington Rd., Maldon, Essex
	Rayleigh	J.M.Boreham	Sandalwood, 19 Avondale Rd., Rayleigh, Essex
	South Benfleet	Dr. H. E. Priestly	
	South Weald	Miss N. Crofton-Savill	Heron Cottage, Herongate, Nr. Brentwood, Essex
	Stanford Rivers *	F.R. & M.G. Emmison	
	St. Lawrence	Mr. K.J. Bruce	
	Stow Maries *	Mrs. Beryl Board	Old School House, Stow Maries, Purleigh, Chelmsford, Essex
	Thaxted	Miss C. Howden	Homerton College, Cambridge
	Thundersley *	Mr. & Mrs. R. Chambers	31 Templewood Court, Hadleigh, Benfleet, Essex
	Waltham Holy Cross	J.T.A.Burton	5 Quendon Drive, Waltham Abbey, Essex
	White Notley *	F.G. & M.G. Emmison	
	Wickford	Mrs. L. McWilliam	

ESSEX (Contd.)

Literacy

Ardleigh*	F.H.Erith	
Bradwell-on-Sea	W.S.Smith	12 Granville Terrace, Burnham-on-Crouch, Essex
East Donyland *	R.S.Schofield	
Little Bentley *	R.S.Schofield	
Little Horksley *	R.S.Schofield	
Sible Hedingham *	R.S.Schofield	
Tolleshunt D'Arcy *	R.S.Schofield	
Tullingham	W.S.Smith	
Writtle *	J.P.Martyn	7 Home Mead, Writtle, Essex

Listings

Ardleigh 1796, 1811, 1821 *

Booking 1793, 1807 *

Braintree 1821 *

St. James' Colchester 1839 *

Halstead 1827 *

Harlow 1797 *

Horndon-on-the-Hill 1811, 1821, 1831 *

Terling 1775, 1778 *

Wakes Colne 1809 *

Reconstitution

GLOUCESTERSHIRE

Aggregative

Bishops Cleeve *	Miss S.T.Percy	15 Meads Close, Bishops Cleeve, Cheltenham, Glos.

GLOUCESTERSHIRE (Contd.)

Chipping Camden	P. Card	Thriding, Collin Close Willersey, Nr. Broadway, Worcs.
Frampton Cotterell	C.J. Spittal	The Shieling, 162 Church Road, Frampton Cotterell, Bristol BS17 2ND
Dymock *	F.W. Baty	May Hill, Long Hope, Glos.
Fairford *	Mr. Jacques	London Street, Fairford, Glos.
Horsley	Miss M.J. Willis	The Homestead, Horsley, Stroud, Glos.
Stroud	P. Dickenson	334 Westward Road, Ebley, Stroud, Glos.
Tetbury	Mrs. J. Jacobs	The Bursar's House, Royal Agricultural College, Cirencester, Glos.
Winchcombe *	Rev. R. Appleton	The Vicarage, Winchcombe, Cheltenham, Glos.
Westbury-on-Severn	Mrs. M. Adams	Westbury House, Westbury-on-Severn, Glos.
Westbury-on-Trym *	Mrs. P. Crabbe	248 Ashton Drive, Bristol 3

Literacy

Ashton-sub-Edge *	Mrs. M.J. Clarke	Cambridge Group
Churcham	F.W. Baty	
Colesborne *	Mrs. M.J. Clarke	
Evenlode *	Miss F. Mills	Homerton College, Cambridge
Winchcombe *	Miss F. Mills	

GLOUCESTERSHIRE (Contd.)

Listings

Abinghall 1662 *

Barnsley 1808-21 *

Bibury 1808-21 *

Arlington 1808-21 *

Winson 1808-21 *

Daglingworth 1676 *

Forthampton 1752 *

Hewelsfield 1662/2 *

Little Deane 1662 *

St. Brevills 1662 *

Reconstitution

HAMPSHIRE

Aggregative

Abbots Ann	B. Mackay	The School of English & American Studies, Univ. of E. Anglia, University Plain, Norwich
Aldershot *	Rev. J. W. Branson	15 Upper St. Michaels Rd., Aldershot, Hants.
Boldre *	R. M. B. Hackman	5 Tadfield Crescent, Romsey, Hants.
Crondall	A. L. Beier	21 de Freyville Ave., Cambridge
Ellingham *	R. H. Rose	Heather Cottage, Beech Lane, St. Leonards, Ringwood, Hants.
Exton *	Miss F. B. Collins	Mill Cottage, Meonstoke, Hants.

HAMPSHIRE (Contd.)

COUNTY	PARISH	NAME	ADDRESSES
	Fordingbridge *	R.H. Rose	
	Headley *	Mrs. P. Smedts	Green High, Froxfield, Petersfield, Hants.
	Kimpton *	R.M.B.H. Hackman	
	Litchfield *	R.M.B.H. Hackman	
	Medstead *	R.M.B.H. Hackman	
	Meonstoke *	Miss F.B. Collins	Mill Cottage, Meonstoke, Hants.
	Michelmersh *	R.M.B.H. Hackman	
	Petersfield *	Mrs. P. Smedts	
	Ringwood *	R.H. Rose	
	Romsey *	R.M.B.H. Hackman	
	Selborne *	R.M.B.H. Hackman	
	Southampton, St. Michael's	A.L. Beier	
	Sparsholt	Mrs. F. Yaldon	Knowles Garstons, Sparsholt, Nr. Winchester, Hants.
	East Tytherley *	R.M.B.H. Hackman	
	West Tytherley *	R.M.B.H. Hackman	
	Wield *	R.M.B.H. Hackman	
Literacy			
	Avington	R.M.B.H. Hackman	
	Holdenhurst	R.M.B.H. Hackman	
	Romsey *	R.M.B.H. Hackman	
	Wickham	R.M.B.H. Hackman	
	Worting	R.M.B.H. Hackman	

HAMPSHIRE (Continued)

COUNTY	PARISH	NAME	ADDRESSES
Listings			
	All Saints within Barr, Southampton 1695, 1696, 1697*		
	All Saints without Barr, 1695, 1696, 1697 *		
	Exton, 1801, 1811, 1821 *		
	Holy Rhood, Southampton, 1696, 1697 *		
	Portswood, Southampton, 1695, 1696, 1697 *		
	St. John's " 1695, 1696, 1697 *		
	St. Lawrence " 1696, 1697 *		
	St. Mary's " 1605, 1696, 1697 *		
	St. Michael's " 1696, 1697 *		
Reconstitution			
	Odiham	B. Stapleton	9 Cheriton Close, Honrdean, Hants.
HEREFORDSHIRE			
Aggregative			
	Bromyard *	I.M.Slocombe	Broomead, Wellington, Hereford
	Eaton Bishop *	I.M. Slocombe	
	Ledbury	M.L. Waller	16 Dunstall Road, Wimbledon Common, London, S.W.20.
	Leinthall Starkes *	Mrs.M.Tonkin	Chy an Whyloryon, Wigmore, Leominster.
	Lugwardine	I.M. Slocombe	
	Shobdon	I.M. Slocombe	
	Wellington *	I.M. Slocombe	
	Wigmore *	Mrs.M.Tonkin	
	Yarkhill *	I.M. Slocombe	

HEREFORDSHIRE (Continued)

COUNTY	PARISH	NAME	ADDRESSES
Literacy			
	Almeley	Mrs. M. Tonkin	
	Bodenham *	Mrs. P. M. Slocombe	Brookmead, Wellington, Hereford
	St. Devereux *	Mrs. M. Tonkin	
	Shobdon	Mrs. P. M. Slocombe	
	Weston-Beggard*	Mrs. P. M. Slocombe	
	Wigmore *	Mrs. M. Tonkin	
	Ullingswick *	Mrs. P. M. Slocombe	
Listings			
	Stoke Edith 1674 *		
Reconstitution			
	---	---	
HERTFORDSHIRE			
Aggregative			
	Abbot's Langley	G. Cornwall	105 Springfield Close, Croxley Green, Rickmansworth, Herts.
	Aldenham *	W. Newman-Brown	11 Scott Court, Craigshill, Almond South, Livington, W. Lothian
	Barley *	J. C. Wilkerson	Homestall, Barley, Nr. Royston, Herts.
	Berkhamstead St. Mary *	P. C. Birtchnell	195 High Street, Berkhamstead, Herts.
	Berkhamstead St. Peter *	P. C. Birtchnell	
	Elstree	W. Newman Brown	
	Hemel Hempstead*	A. L. Wood	Dolbadern, 30 Hillfield Rd., Hemel Hempstead, Herts.

HERTFORDSHIRE (Continued)

COUNTY	PARISH	NAME	ADDRESSES
	Hitchin	Mrs. B. Crawley	189 Handside Lane, Welwyn Garden City, Herts.
	Hunsdon *	Mrs. I. M. Woods	Dunstone Cottage, Widecombe-in-the-Moor, Newton Abbot, Devon
	Rickmansworth*	G. Cornwall	
	Watford *	J. Wakelin	Brookside, 27 West End, Brampton, Hunts.