Local Population Studies

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EDITORIAL

The three articles included in this issue of LPS all have a strong methodological emphasis, dealing with—respectively—the London Bills of Mortality, Anglican parish registers as a basis for local population estimates and the reliability of Anglican burial registers.

Bob Woods’ discussion of the London Bills of Mortality focuses on the period 1728–1830, for which the age structure of burials is available, and demonstrates how new estimates of early-age and overall mortality can be derived from them, in particular examining the potential use of two distinctive cause of death categories—‘abortions and stillbirths’ and deaths in ‘childbed’—in facilitating calculation of rates of stillbirths and maternal mortality. The derivation of these measures, of course, depends upon assumptions about the reliability of the Bills and how this changed over time, as well as the demographic model (in this case Princeton Model North) chosen to reflect general demographic relationships. These caveats notwithstanding, the new infant mortality series derived from the Bills produces lower figures than both existing series for the 1730s to the 1760s, but higher figures than the one previous estimate for the late eighteenth and early nineteenth centuries. Nevertheless, the picture remains one of improvement in mortality in comparison with other towns and the nation as a whole—explained here as a product of the suburbanisation of London out to the west—although a less dramatic improvement than previously thought, and largely a phenomenon of the early nineteenth rather than the eighteenth century. Both London childbed mortality and English maternal mortality rates also show distinct downward trends from the middle of the eighteenth century. From the Bills and other fragmentary sources it is estimated that the stillbirth rate in eighteenth-century London fell in the range 30–50, with 40 offering a credible approximation. Similar comparisons with other calculations for the early nineteenth century, however, suggest that the stillbirth rate derived from the Bills may be too low for this period.

In our second article Janet Hudson, who has recently joined the LPS Editorial Board, conducts an ‘experiment’ in the reconstruction of the population of the parish of Stonehouse in Gloucestershire between 1563 and 1811, by applying the ‘national’ correction factors used by Wrigley and Schofield in The population history of England 1541–1871: a reconstruction (London, 1981) to the number of baptisms and burials recorded in the parish’s Anglican registers. The annual totals are converted to births and deaths by, first, correcting for periods of deficient registration, and then correcting for nonconformity, delayed baptism, and those factors described by Wrigley and Schofield as ‘residual’—factors such as clerical absence or evasion. Taking the birth and death totals for each available year from 1558 to 1842, two population series are calculated by applying the estimated national crude birth and death rates, and a population base series is established by taking the higher figure of the
two calculations, expressed as a short moving average (11-year) and a long moving average (51-year). The resultant series is then compared with population estimates calculated at fixed points in time, derived from ecclesiastical records, visitations, muster rolls, tax returns, surveys and censuses in 1551, 1563, 1603, 1608, 1650, 1672, 1676, 1680, 1709, 1735 and 1743, plus two parish history estimates for 1712 and 1779, as well as the Stonehouse ‘resiant’ lists created in connection with the view of frankpledge which survive for various dates between 1622 and 1779. These comparisons suggest that ratios of 0.85 to 1.15 of the long moving average describe a range within which the population might normally be expected to lie, with extremes up to ratios of 0.8–1.2. Sources which produce figures outside these ratios should be regarded as suspect in terms of population information. A parish estimate is prepared by merging the selected sources with the long average developed from registration. In the absence of other sources, however, it is suggested that the long moving average will serve as an approximate population estimate, though one that might vary within the normal range. Evaluation of this method against results derived from other parishes will, however, be necessary to confirm or deny its general validity.

Anglican registers are again under scrutiny in Peter Razzell’s examination of the standards of adult burial registration using nominal record linkage to compare census, parish register and probate records, which builds upon a number of similar studies by the same author. The returns generated by the Marriage Duty Act of 1695 are compared for Lyme Regis in Dorset and Swindon in Wiltshire to establish the probable deaths of those listed in earlier returns compared with later ones, and these in turn are compared with burial registers. In Lyme a large discrepancy (35 per cent) was discovered, although this may partly be explained by burial at sea and the ‘traffic in corpses’ across parish boundaries, whereas in Swindon only 3 of 25 deaths did not appear in the register. When seventeenth and early eighteenth-century probate records are compared with burial registers in Lyme, 37 per cent of deaths were not found in the burial registers. To test to see whether a ‘traffic in corpses’ might have been responsible a further comparison is made, for 13 Bedfordshire parishes, between a digital transcript of Anglican and nonconformist burials in the county and a published index of wills proved or administered in the Archdeaconry of Bedfordshire church court, both of which cover the period 1538–1851. The average rate of omission was found to be 17 per cent, and this varied very little over time. Variations between parishes appear to be related to population size, but occupational identity had no effect, although those too poor to leave a will would be more likely to have been omitted from burial registers than those included in the present sample. Nonconformity was found to be a major cause of under-registration of burials only in the town of Bedford, and was insignificant elsewhere. The most important general cause was clerical negligence, sometimes associated with non-payment of fees. Notwithstanding the small sample of parishes upon which this conclusion is based, it is thus suggested that under-registration of burials was marked in all periods between 1538 and 1851, and was not—as is often suggested—only a problem from the later seventeenth century forwards.
Having contributed an article on the 1812 Parish Register Act in the last issue of *LPS*, Stuart Basten provides a short research note on late-Georgian maternity charities in this. He examines four such charities in Buckinghamshire and Hertfordshire, and finds a range of strategies in terms of both provision and scope. Further research is clearly needed, but it is already clear that both medical and moral considerations were involved in the provisions made, as well as concern to provide assistance in a cost effective manner.

The additional items included in this issue are the second of our new ‘Sources and methods’ feature, and the regular round-up of journal articles published on local population history and related subjects in 2005. For ‘Sources and methods’ we have decided to concentrate upon basic demographic techniques for the first few issues, and hence here we offer guidance on estimating local population sizes from sources that provide (often partial) population listings at particular points in time—tax returns, ecclesiastical censuses, musters, censuses and so forth. When we started preparing this piece, it quickly became clear that unless we were very selective there was far too much material to include in one article, so we decided to divide it in two. In this issue we will be covering general principles, and in the next issue we will focus upon specific sources from the Domesday survey forwards. The ‘Review of recent periodical literature’ this year has been compiled by a new team of Andrew Hinde, Tom Nutt and Jon Stobart, and continues to survey a very wide range of journals—local, national and international—to produce, according to the feedback we receive, a very useful item indeed.

**The Almshouse Project**

The Almshouse Project, which has been adopted by the Family and Community History Research Society and is being led by Anne Langley, was introduced in my editorial in *LPS 75* (2005). As noted there, this is one aspect of the ‘mixed economy of welfare’ which is very poorly served in research and publication completed to date, and provides an excellent opportunity for teamwork. In June this year a briefing meeting was held in St Albans, attended by 22 volunteers, where the key concerns of the project were discussed, ideas were exchanged on sources, and a template for recording data on Excel spreadsheets was demonstrated. We have also been successful in securing £1,000 in seed-corn funding from the Conferences and Initiatives fund of the Economic History Society, whose support we are pleased to acknowledge.

At the time of writing we have 48 volunteer researchers involved in the project who are researching in record offices across the country, using on-line census returns and making site visits, and exchanging ideas and advice via e-mail. Coverage of the country remains incomplete, however. Counties and areas as yet without a volunteer are: Cambridgeshire, Cheshire, Cornwall, Cumbria, Devon, Durham, Hereford & Worcester (apart from Ledbury), Humberside, Lancashire, Lincolnshire, Northumberland, Staffordshire, East
Suffolk and West Sussex. We would particularly welcome new recruits for the above counties. However, other counties, particularly large ones, could also make use of extra help, while large towns replete with almshouses are also proving difficult to cover comprehensively. Anyone who is interested in joining the project, however small their potential time commitment might be, is encouraged to contact Anne Langley (almshouses@fachrs.org.uk). Counties fairly well provided for (that is, with two or more researchers—though more might be welcome) are: Berkshire, Dorset, Gloucestershire, Norfolk, Northamptonshire, Surrey and Sussex. We also have a few researchers working in Wales and Scotland; others would be welcome to join us, though it seems unlikely that we will be able to provide comprehensive coverage of these areas.

The occupational structure of Britain 1379–1911

In LPS 71 (2003) we featured a report on an important project aiming to map the changing occupational structure of Britain before 1851. The following report, written by the project leader Leigh Shaw-Taylor, is an update on progress and findings to date, and future directions.

This Cambridge Group project, run by Leigh Shaw-Taylor and E.A. Wrigley, and aimed at reconstructing the occupational structure of Britain over as long a period as feasible, has recently been awarded further funding by the Economic and Social Research Council. The new phase of the project, The changing occupational structure of nineteenth century Britain, began in March and will run for three years. This follows on from the earlier project, Male occupational change and economic growth in England 1750–1851, also funded by the ESRC.

The first project has led to some important findings. It is widely supposed that the industrialising regions of north-west England (Lancashire and the West Riding) experienced a rapid increase in the relative importance of secondary sector employment between 1760 and 1830. However, the large-scale analysis of occupational data for the period 1750–1881 shows that in fact the rise in the relative importance of secondary sector employment in the north west took place in the early modern period, and it actually declined slightly in relative terms during the classic ‘industrial revolution’. After 1815, the rest of the country experienced the rapid increase in secondary sector employment usually assumed to have characterised the industrial districts between 1760 and 1830. In contrast, the growth of service sector employment, especially transport, was dramatic and continuous in all regions of England from the late eighteenth century onwards. Preliminary analysis of the data suggests that nationally there was more growth in the relative importance of the secondary sector between 1500 and 1750 than there was between 1750 and 1850. Furthermore, the occupational structure appears to have changed almost as much in the 20 years from 1850 to 1870 as in the one hundred years from 1750 to 1850. These findings necessitate some rethinking of the first industrial revolution, its causes and its consequences. Not least, they finally resolve the
long-standing controversy as to whether the first industrial revolution was a relatively short dramatic event or a more protracted process, for the evidence in favour of the latter view is now overwhelming.

The new project will produce parish level occupational data for c.1817 (from Anglican parish registers) and 1881 (from Census Enumerators’ Books) together with a large body of population and occupational data at other spatial levels from the published census, most of which will be made machine-readable for the first time. These data will be used to examine the changing occupational structure of Britain during the nineteenth century, and a historical atlas is planned (for example maps see the project website). In due course all these datasets will be available from the Arts and Humanities Data Service (AHDS) and will form a very valuable resource for local historians.

The project website http://www.geog.cam.ac.uk/research/projects/occupations/ provides much detailed information on the first project including downloadable draft papers and reports and a selection of maps showing occupational structure and population change 1750–1851. Further material will be added as it becomes available. Information on other research projects at the Cambridge Group can be found at http://www.hpss.geog.cam.ac.uk/.

**LPSS conferences**

The Society is expanding its conference operations, and next year we will be holding a spring (April) and an autumn (October) conference. The first will take place at our accustomed venue in St Albans on Saturday 21st April, on the theme of ‘The New Poor Law 1834–1908: regional and local perspectives’. Speakers are Andrew Hinde, Nigel Goose and Tom Nutt from the _LPSS_ editorial team, Eileen Bowlt of Birkbeck College Faculty of Continuing Education, Jacquie Fillmore of the Bedfordshire Local History Association, Christine Seal of Leicester University and Dick Hunter of the Family and Community History Research Society. Topics to be covered include the management of pauperism in southern England; age, gender and locality in the Poor Law reports; newspaper reports of death from starvation in the Uxbridge Union; poor relief in mid-Victorian Belper and Cheltenham; bastardy and the New Poor Law; researching the vagrant experience; and adult female vagrancy in the Bedford Union. The full programme, with a cut-off slip for booking, is enclosed with this issue of _LPSS_. The fee for registration, lunch, tea and coffee is again held at £25, so book early via the General Office to avoid disappointment.

The second conference will take place at the University of Central Lancashire, Preston, on Saturday 20th October, on the theme of ‘Agricultural labour and agrarian society, 1700–1970’. The conference programme is not yet finalised, so if you would like to offer a paper please get in touch with the conference organisers, Andy Gritt and Eilidh Garrett (e-mail: agritt1@uclan.ac.uk and eilidh.garrett@btinternet.com). Confirmed speakers to date include Steve Caunce, Andrew Hinde and Peter Park. Topics will include the diverse nature
of northern agriculture and the place of farm servants within it, the
demography of farm labourers and sponsored migration of southern
agricultural labourers in the 1830s.

LPS publication projects

Working women in industrial Britain: regional and local perspectives

The more astute observers among you will have noticed that this title was not
published in early summer 2006 as promised in LPS 75, nor in summer/early
autumn as promised in LPS 76. The present situation is that we await
finalisation of one chapter, and then it will be ready to go to press.

Agricultural labour and agrarian society in England and Wales, 1700–1970

This project was adopted at the last LPSS AGM and introduced in the last
issue of LPS. Discussions are currently underway with regard to the precise
areas to be covered in this title, and possible contributors. The Preston
conference to be held in October 2007 is on the same theme, and will hopefully
contribute towards the evolution of the volume. Provisionally, however,
topics to be addressed might include: the impact of industrialisation; common
rights and enclosure; labour productivity and the impact of mechanisation;
characterisations of the agricultural labourer; farm service; child, female and
family labour; casualisation; farmworkers and politics; poverty, poor relief
and living standards; and migration. Potential authors, who feel able to
contribute substantial chapters examining these themes, from a broad but
regionally informed perspective, are invited to get in touch with Nigel Goose
and Andy Gritt (e-mail: n.goose@herts.ac.uk and ajgritt1@uclan.ac.uk).

The New Poor Law and English society 1834–1908: local and regional perspectives

An outline proposal for this new publication project was approved at the LPS
Editorial Board held in June this year. Although a handful of books have been
published on various aspects of the poor law in recent years, there is no study
that looks at local and regional variations in the operation of the New Poor
Law and its consequences for local populations. The one explicitly regional
study, Steve King’s Poverty and welfare in England 1700–1850: a regional
perspective (Manchester, 2000), focuses very largely upon the Old Poor Law. In
that book King argued for a fundamental contrast between the north and west
of England where the relief regime under the Old Poor Law was relatively
harsh, relief payments were low and a culture of self-reliance existed, and the
south and east where the regime was more accommodating, more generous
and where ready recourse to the poor law in times of life-cycle stress created a
‘raft of “welfare junkies”’ (p. 268). This is, of course, a characterisation of the
Old Poor Law that invites further research, but King’s provisional conclusion
about the New Poor Law—that there was no serious discontinuity in 1834 nor
fundamental change to the regional pattern of welfare culture—is one that
also deserves closer scrutiny (see also the report on recent articles by Hurren
and King in the ‘Review of recent periodical literature’, printed below).
Among the topics that we would wish to include in this book are the interface between the poor and the new Boards of Guardians; the ‘local’ and ‘central’ under the New Poor Law; the New Poor Law and the local economy; workhouse populations; migration and the New Poor Law; sickness, death and the New Poor Law; the New Poor Law in relation to children and the elderly; and ‘economies of makeshifts’. This is, of course, a provisional and probably incomplete list at this stage, and further suggestions are welcome. But each of these topics can be examined from a local and regional perspective, and should allow insight into the extent to which the New Poor Law—which has so often been characterised as a new, bureaucratic and monolithic national relief structure—in practice possessed or developed local and regional variants. The editors of this volume will be Nigel Goose, Andrew Hinde and Tom Nutt, all of whom have current research and publication interests in aspects of the New Poor Law.

Digitisation of the 1911 census: the LPS Editorial Board view

The National Archives is currently conducting discussions regarding the proposed digitisation of the 1911 census returns. From the point of view of demographic historians, as well as social and economic historians, the 1911 census provides the richest data for analysis of any early surviving census, the range of questions posed to individual householders being the most comprehensive. The digitisation of any individual-level historical census data for genealogical purposes provides a considerable opportunity for historians both within and without the academic community. The opportunity now arises to digitise all of the information contained on the surviving census schedules, including that data which would not be traditionally seen to be of value to the casual genealogical user.

The argument in favour of capturing all of the information, rather than a selection which would simply aid genealogists in finding individuals, is that the additional marginal costs would be considerably lower than having to capture this information at a later stage. Making all of the data available to the academic community might also assist in the production of enhanced versions of the data which can be fed back into the ‘genealogical’ site. For example, it would be possible for new ‘standardised’ variables to be added to the dataset which would improve searching for genealogical users.

The LPS Editorial Board strongly recommends that in the proposed digitisation of the 1911 census materials, not only are the census schedules digitised completely, but that all of the information recorded on the schedules is captured for both searching and quantitative analysis. Thus questions relating to the fertility of marriage, including the numbers of years a marriage has lasted and the numbers of children born alive, should be included in the data capture process, as well as information relating to overcrowding. Similarly, responses to all the questions relating to occupation and industry should be recorded, including those concerning economic status and home-working. Furthermore, along with the occupational title any additional
information entered by the coding or abstracting clerks in the preparation of statistical material should also be recorded. The final question on the schedule relating to infirmity should be transcribed fully, and we would also suggest that the questions relating to language in Wales and the Isle of Man should also be collected. Each of these variables used in conjunction with other information from the census schedules will provide a valuable opportunity for research into areas of demographic history which could not be analysed before. For example, marital fertility could be studied at levels of geography hitherto impossible; the influence of home-working on the local economy could be researched, as well as the relationship between work and disability. Taking all of the information from the census schedules together, a machine-readable version of the whole of the 1911 census will provide a considerable research tool for researchers of all forms of early twentieth-century social and economic history.

It is important that the rules given to the transcribers should be published along with the data, to assist in its interpretation. No standardisation or interpretation should be applied to the raw data recorded on the schedules, so that the transcription is an accurate reproduction of the information contained within them. One exception to this rule would be to provide additional standardised information relating to the geographical location of any household, institution or ship, for this information—which is on the front of the schedule—will be important both for those searching for individuals, as well as for those carrying out area studies.

In terms of the publication of these data, we suggest that the whole database, along with accompanying documentation, be deposited with either AHDS History or ESDS at the UK Data Archive at the University of Essex, so that sub-sets of the data could be disseminated freely to registered users from institutions of higher and further education. Arrangements could be made with these organisations to ensure that no income is lost from the sale of these data.

Editorial matters

We owe profuse apologies to Tanya Evans and Hera Cook for confusing their respective books in the ‘Reviews’ section of LPS 76. Unfortunately, Tom Nutt’s review of Tanya Evans’ book Unfortunate objects was published under the header of a review of Hera Cook’s The long sexual revolution. There is a lesson here for review editors that like to get ahead of the game by preparing templates in advance of the receipt of reviews, but this editor should of course have noticed the error before going to press. We will be publishing both reviews, under their correct headings, in the next issue of LPS.

My thanks go as usual to Ken and Margaret Smith for typesetting this issue.

Nigel Goose
October 2006
MORTALITY IN EIGHTEENTH-CENTURY LONDON:
A NEW LOOK AT THE BILLS

Robert Woods

Robert Woods is John Rankin Professor of Geography at the University of Liverpool. He is the author of *The demography of Victorian England and Wales* (2000) and *Children remembered: responses to untimely death in the past* (2006). His current research, involving work on *Fetal health and mortality*, is supported by the Wellcome Trust.

The London Bills of Mortality offer a tantalising challenge to historical demographers. Since they give the number of burials and baptisms, the causes of death, and the ages of those buried for various periods and combinations of parishes in the seventeenth and eighteenth centuries it has been tempting to use the data they provide as a basis for the estimation of mortality rates. This contribution focuses on the period 1728 to 1830 for which the age structure of burials is available. It employs the compendium of Bills material compiled by John Marshall and published in 1832 as *Mortality of the Metropolis*. The paper has little to say that is new about the considerable failings that have been recognised in the Bills as a demographic source, although it does not ignore their potentially distorting effects, rather it illustrates the way in which new estimates may be derived especially for early-age and overall mortality, and it examines the potential use of two distinctive cause of death categories: ‘Abortions & Stillbirths’ and deaths in ‘Childbed’. These data might allow versions of the stillbirth rate (SBR) and the maternal mortality rate (MMR) to be derived for the general London population (that is, background mortality measures) against which rates from other sources, such as the lying-in hospitals, could be compared.

First we must make a few comments on the supposed quality of the London Bills of Mortality as a demographic source and the methods used to derive existing estimates of mortality rates that have been based on the Bills. In his *Observations on the Increase and Decrease of Different Diseases, and Particularly Plague* (London, 1801) William Heberden gave the following judgement.

People have fallen into two opposite errors concerning the Bills of Mortality. Some have considered their authority as too vague to be made the foundation of any certain conclusions; and others have built upon this foundation, without sufficiently considering its real defects. Both parties are equally in the wrong. (p. v)

His point is still valid. Heberden himself outlined four particular defects in the Bills. First, only those baptised according to the rites of the Church of England
were included; Roman Catholics, Jews, Quakers and other dissenters were excluded. Second, even among members of the Church of England, ‘a very large proportion’ were buried in the country, or adjacent to London ‘but without the Bills’. Third, ‘many abortives and still-born, making together about 700 in the year, are noticed in the deaths, but not in the births’. Fourth, mistakes and misrepresentations were numerous; ‘yet it deserves to be repeated, that even in their smaller divisions of the subject, the correspondence of one year, and of one week, with another, is such, as must convince every attentive observer, that a considerable degree of credit is due to their report’. When Dr William Ogle, the second Statistical Superintendent at the General Register Office, London, turned to the subject of the ‘old’ Bills he largely echoed Heberden’s points, but went considerably further by proposing estimates of the short-falls, especially between burials and deaths. Ogle believed that for the eighteenth century, burials needed to be inflated by from 1.39 to 1.44 to allow for those burials ‘carried away’ and the nonconformists; and that, in general, ‘a very inadequate idea of the mortality of London in the eighteenth century is furnished by the number of burials as given in the Bills’.²

Twentieth-century opinions on the Bills have tended to be rather more optimistic, however, whilst recognising the obvious shortcomings.³ Several attempts have been made to derive estimates of infant mortality using the age at burial data available in the Bills and to approximate maternal mortality from the number of burials recorded as due to childbed causes. It is generally recognised that the numbers of burials and baptisms recorded in the Bills both need to be inflated and that this should be done on a differential basis, one that allows for the worsening of parish registration, on which the Bills were based, through the eighteenth century and especially into the nineteenth. Alongside the well-known nonconformist and ‘carried away’ to be buried elsewhere problems, it is also clear that certain parishes normally included in the Bills area were omitted for various periods and that several districts to the north and west were growing rapidly so that ‘Bills London’ was becoming less representative of the full ‘urban London’. Despite these problems (perhaps because of the challenges they provide) historical demographers and quantitative historians have persisted. In Death and the Metropolis (1993) John Landers gives a set of inflation factors (Table 5.3, 166). The maximum decadal inflation factors (for the 1810s) are 1.3109 (burials) and 1.2870 (baptisms), but for most of the eighteenth century the inflation factors are far lower (1–4 per cent) and certainly much less than anything proposed by Ogle. Landers’ inflation factors are still the best we have. They will be used in the following to derive ‘inflated burials’ and ‘inflated baptisms’.

Landers also set out a procedure for deriving infant mortality rates from the Bills using estimates of the number of burials aged under one year (proxy for infant deaths, the numerator) derived from the reported number of burials under age two, and ‘inflated baptisms’ less ‘Abortions & Stillbirths’ (proxy for live births, the denominator).⁴ Landers assumed that of the reported number of burials aged less than two years, a constant proportion (0.75) is likely to
have been aged less than one year (that is, infants aged 0 in completed years). Laxton and Williams used essentially the same procedure, but they allowed for possible variations by deriving estimates of the infant mortality rate using 0.66 and 0.72 as the minimum and maximum proportions of burials under age two that were also under age one. They were also more circumspect about the inflation of baptism numbers, providing a table of possible factors but not selecting ones themselves. The estimates of Landers and Laxton and Williams are summarised in Figure 2 and discussed later.

Let us begin again. Table 1 shows the survival functions \( l(x) \) for a collection of 11 early-age life tables (ages 0 to 10). Most are for urban populations, including three for London, but they are of varying reliability. The last five (numbers 7 to 11) were derived by Dr William Farr, the first Statistical Superintendent at the General Register Office, London, using civil registration data for age at death (numerator) and population census data for the ‘at risk’ population (denominator). The first five life tables (1 to 5) rely on age at death data from Bills of Mortality, or their local equivalents, and the assumption that the living ‘at risk’ population can be derived therefrom. Only if the population is stationary can this procedure be justified. Despite this problem, the resulting life tables and the mortality patterns they appear to reflect are consistent with the other examples in Table 1.

This consistency of mortality structure, if not of level, is further illustrated in Figure 1. Here the infant mortality rate (IMR) and the life expectancy at birth in years \( e(0) \) are plotted against the percentage of all deaths that occurred to those aged under 10 years. The 11 example populations from Table 1 are shown. Figure 1 also employs Princeton Model North as a way of summarising the relationships. While Model North does not give a perfect fit, it certainly provides a broad generalisation sufficient to support the argument that, given knowledge of the percentage of deaths under age 10, it should be possible to make a fair estimate of the likely levels of early-age and overall mortality. To illustrate this point further, although not to test it formally, we can use the example of the Chester Bills of Mortality which were compiled by Dr John Haygarth for the three years 1772–1774. In these years Chester had a population of about 15,000 and according to the Bills approximately 46 per cent of all burials were of those aged under 10. This implies that \( e(0) \) was about 28 years and IMR around 230 via Model North and Figure 1. These are plausible estimates confirming Chester’s ‘middling’ position in the urban mortality gradient. They also help to cast more doubt on the rather low level of mortality said to have been enjoyed by Carlisle in 1779–1787.

In Table 2 we use Princeton Model North and the percentage of burials under age 10 to derive estimates of \( e(0) \) and IMR for London between 1730 and 1830. Alongside these we set the comparable measures provided for England by Wrigley et al. in *English population history from family reconstitution, 1580–1837*. Table 2 also shows stillbirth mortality (SBR per 1,000 total births) and deaths in childbed (MMR per 10,000) for London, 1700–1830. The London series for infant, stillbirth and childbed mortality are also illustrated in Figures 2 and 3.
Table 1  Early-age life tables for eleven populations

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</table>

Notes: The number of survivors to exact age x out of 1,000 (life table function \(l(x)\)) is shown, together with life expectancies at birth \((e(0))\) and age 1 \((e(1))\) in years, and the infant mortality rate per 1,000 (IMR).

Sources: (1) from Thomas Simpson, The Doctrine of annuities and reversion, deduced from general and evident principles: \(wth\) useful tables, showing the single and joint lives, \&c. (London, 1742), 4-5, and Thomas Simpson, Select exercises for young proficient in the mathematricks (London, 1752), Table 1, p.264; (2), (3) and (4) from Richard Price, Observations on reversionary payments (London, 1772), Table XIV, 333, Table IV, 317, and Table V, 318, also Table VIII, 326 for (1); (5) and (6) from Joshua Milne, A treatise on the valuation of annuities and assurances on lives and survivors (London, 1815), Volume II, Table II, 564, and Table VII, 571-73; (7) from William Farr, The Northampton Table of Mortality', in Letter to the Registrar General, Eighth Annual Report of the Registrar General for 1845 (Parliamentary Papers (PP) 1847-48 XXV), 318; (8), (10) and (11) from Fifth Annual Report of the Registrar General for 1841 (PP 1843 XXI), xxx-xxvii; (9) from Seventh Annual Report of the Registrar General for 1843 and 1844 (PP 1846 XX), 330.
Figure 1  Relationship between infant mortality (IMR), life expectancy at birth (e(0)) and the percentage of deaths aged under 10 years

Note: The 11 populations illustrated are given in Table 1. The curved solid lines (N) show the general relationship from Princeton Model North; in the top graph, the dashed curve (R) illustrates the best-fit statistical relationship (second order polynomial) and the short line (E) shows the relationship for England, 1700-1829 (13 decades).
The new infant mortality series (I in Table 2, Figures 2 and 3) is lower than both existing series (Iii, Landers; Iiv, Laxton and Williams, in Figure 2) for the 1730s to the 1760s, but higher than one (Iiv, Laxton and Williams) for the late eighteenth and early nineteenth centuries. The IMR series labelled Ii and Iii both employ ‘burials aged 0–1’; the former derives infant burials (proxy for deaths aged 0) which it relates to ‘inf lated baptisms’ (proxy for live births) while Iii uses Princeton Model North with mortality under age two (‘burials aged 0–1’ related to ‘inf lated baptisms’). The three series Ii, Iii and Iiv all have implausibly low infant mortality rates for the early nineteenth century and should probably be discarded, at least for this period. But what of the mid-eighteenth century: could infant mortality have been 400 and life expectancy less than 20 years, as Ii to Iiv suggest? Surely it is more likely that early eighteenth-century London was similar to the other towns shown in Table 1, but that by 1841 it had moved closer to a mean position between, say, Liverpool and Surrey. These mortality differentials are illustrated in Figure 4, which shows how the ratio of mortality in London changed in relation to that in England as a whole in terms of infant and overall mortality. The improvement in mortality was due in large part to London’s westward expansion, to its suburbanisation, and, although there certainly was a ‘catching-up’ in average mortality conditions, it was not quite so dramatic as was once imagined and appears to have been a phenomenon more of the early nineteenth than the eighteenth century.9

Table 2  Mortality estimates for eighteenth-century London based on the Bills of Mortality

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<tr>
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<td>35.2</td>
<td>36.6</td>
<td>37.3</td>
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<tr>
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<td>(E) e(0)</td>
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Note:  
Series (E) gives estimated life expectancy at birth in years (e(0)); (I), the infant mortality rate per 1,000 live births (IMR); (S), the stillbirth rate per 1,000 total births; and (C), mortality in childbed (maternal mortality) per 10,000 deliveries.

Sources:  
The derivation of the London series is explained in the text and illustrated in Figure 3; the England series are from Wrigley et al., English population history from family reconstitution, 1580-1837 (1997), Table 6.21, 295, and Table 6.3, 224.

The new infant mortality series (I in Table 2, Figures 2 and 3) is lower than both existing series (Iii, Landers; liv, Laxton and Williams, in Figure 2) for the 1730s to the 1760s, but higher than one (liv, Laxton and Williams) for the late eighteenth and early nineteenth centuries. The IMR series labelled Ii and Iii both employ ‘burials aged 0–1’; the former derives infant burials (proxy for deaths aged 0) which it relates to ‘inf lated baptisms’ (proxy for live births) while Iii uses Princeton Model North with mortality under age two (‘burials aged 0–1’ related to ‘inf lated baptisms’). The three series Ii, Iii and Iiv all have implausibly low infant mortality rates for the early nineteenth century and should probably be discarded, at least for this period. But what of the mid-eighteenth century: could infant mortality have been 400 and life expectancy less than 20 years, as Ii to Iiv suggest? Surely it is more likely that early eighteenth-century London was similar to the other towns shown in Table 1, but that by 1841 it had moved closer to a mean position between, say, Liverpool and Surrey. These mortality differentials are illustrated in Figure 4, which shows how the ratio of mortality in London changed in relation to that in England as a whole in terms of infant and overall mortality. The improvement in mortality was due in large part to London’s westward expansion, to its suburbanisation, and, although there certainly was a ‘catching-up’ in average mortality conditions, it was not quite so dramatic as was once imagined and appears to have been a phenomenon more of the early nineteenth than the eighteenth century.9
Figure 2  Infant mortality estimates for eighteenth-century London based on the Bills of Mortality

Figure 3  Mortality estimates for eighteenth-century London based on the Bills of Mortality

Note: A 9-point moving mean has been applied to the I series. See text and Table 2 for explanation.
The other two series in Table 2 and Figure 3 also require attention. The stillbirth rate \( S \) has been derived by relating ‘Abortions & Stillbirths’ to the sum of ‘inflated baptisms’ and ‘Abortions & Stillbirths’. The resulting decadal rates range from 40.0 to 21.6 per 1,000 with a tendency to be lower in the early nineteenth century than in the eighteenth. The rate for deaths in childbed comes from ‘Childbed’ in the Bills of Mortality related to the sum of ‘inflated baptisms’ and ‘Abortions & Stillbirths’ and, as is conventional with the maternal mortality rate, it is expressed in parts per 10,000. Childbed mortality and maternal mortality in general show downward trends from the middle of the eighteenth century in both London and England as a whole, as Table 3 makes clear.10

One of the most interesting aspects of this estimation exercise is that it provides the opportunity to establish the general, background level of mortality for London so that it may be compared with the experience of various sub-populations, which are often better recorded. The London Quakers have received such attention, as have the inmates of its foundling hospital and the patients at its lying-in hospitals.11 The records of the British Lying-in Hospital (Brownlow Street, London) appear to be especially valuable in this regard. Table 4 is based on the compilation of hospital statistics assembled by William Heberden and published in 1801. It shows that during a period of 50 years, 25,782 women were delivered in the hospital of whom 391 died, and that of the 25,034 live births some 794 babies died before leaving hospital. It also suggests that the stillbirth rate (stillbirths per 1,000 total births)
was about 40. Although the British Lying-in Hospital can have delivered little more than 3 per cent of all those born in London during the second half of the eighteenth century, its stillbirth statistics, at least, are remarkably consistent with what one might expect of a European population before 1940. Dr Robert Bland’s work on the midwifery records of the Westminster General Dispensary for 1774–1781 indicates a stillbirth rate of 43.8.\textsuperscript{12} William Farr believed that the stillbirth rate was around 40 in the 1870s and this was also the average rate for England and Wales in the 1930s; although for London during this first decade of registration it was 30–32.\textsuperscript{13} The estimates of late-fetal mortality given for London in Table 2, for the lying-in hospital in Table 4 and from other sources, both speculative and statistically based, seem to tell the same plausible story. The stillbirth rate in eighteenth-century London fell in the range 30–50 with 40 offering a credible approximation. By this argument, the stillbirth rates for the early nineteenth century derived from the Bills (Table 2) are too low.

It would be most helpful if a similar comparative exercise could be undertaken focusing on childbed or maternal mortality estimates in Tables 2, 3 and 4. Certainly, there is a good match between the estimates of maternal mortality for England, derived by Roger Schofield, and those for London, based on ‘Childbed’ deaths in the Bills (Table 3). The mortality experience of women giving birth in the lying-in hospital was substantially worse, however. Although the three rates are not strictly comparable, it seems likely that there was at least a 50 per cent extra risk of dying at the hospital. Since lying-in hospitals tended to attract some of the more complicated obstetric cases, although not necessarily emergencies because only recommended married women were admitted, this higher mortality rate should not be surprising.\textsuperscript{14}

There are still many aspects of eighteenth-century London’s mortality regime that remain impenetrable. The Bills are a truly demanding source that cannot be used without making several critical assumptions concerning their quality and how it changed over time. Much also depends on the demographic models chosen to reflect general relationships; other models would give

\begin{table}[h!]
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\begin{tabular}{|c|c|c|}
\hline
\textbf{Year} & \textbf{London Childbed mortality (1)} & \textbf{England Maternal mortality (2)} \\
\hline
1700–24 & 137 & 134 \\
1725–49 & 132 & 123 \\
1750–74 & 120 & 95 \\
1775–99 & 88 & 90 \\
1800–24 & 73 & 63 \\
\hline
\end{tabular}
\caption{Estimates of childbed mortality for London and maternal mortality for England, 1700-1824}

\textbf{Note:} Both rates are expressed in parts per 10,000.

\textbf{Sources:} (1) from Table 2; (2) from Wrigley et al., \textit{English population history from family reconstitution, 1580–1837} (1997), Table 6.29, col. (3), 313.
different results. The special sub-populations for which there are particularly good records (or just some data) also demand assumptions to be made if their experiences are to be compared with (even used to reflect) the general situation. And what of London itself? Did its inhabitants in 1750 face the same mortality risks as those living in a small town, but because London was considerably larger (population of 575,000 in 1700, 675,000 in 1750 and around 900,000 in 1800, perhaps) its impact on national demography was so much greater? 15 Finally, and rather unexpectedly, the Bills appear to offer a way of looking at late-fetal and maternal mortality, one that chimes rather well with the other fragmentary evidence that is available.

Acknowledgements

I should like to thank Chris Galley and John Landers for their comments on earlier drafts of this paper, as well as members of the LPS Editorial Board. The Wellcome Trust provided financial support.

NOTES


3. Landers, Death and the metropolis, especially 162–95; P. Laxton and N. Williams, ‘Urbanisation
11. Landers, Death and the metropolis, 169.


10. The term late-fetal mortality is now preferred to stillbirths. Both should apply to those fetuses that have survived to a particular gestational age (28 weeks in the past, but now 24 or even 20 weeks since the mother’s last menstrual period (LMP1) but are born without any vital signs. (e.g. respiration, pulse, crying etc). There are equivalent definitional problems in the measurement of maternal mortality, which should relate to the deaths of women during or immediately after giving birth and as a direct consequence of parturition. Here deaths of women in childbed (the Bills of Mortality burial category ‘Childbed’) are used as a rough guide, an alternative to the more sophisticated approach that is possible in family reconstitution studies based on parish registers.

11. Landers, Death and the metropolis, Table 4.3, 136, and Table 4.10, 158, gives early-age mortality estimates for the London Quakers. IMR and percentage of deaths under age 10 for three birth cohorts are: 1650–1699, 260 and 47.8; 1700–1749, 342 and 58.2; 1750–1799, 276 and 49.0. The IMR of 342 for the first half of the eighteenth century is especially high and has encouraged similar speculations on infant mortality among London’s population in general. However, R.T. Vann

12. R. Bland, ‘Some calculations of the number of accidents or deaths which happen in consequence of parturition &c.’, *Philosophical Transactions of the Royal Society*, 71 (1781), 355–71. The Westminster General Dispensary provided an out-patient midwifery service for poor, married women. Between 1774 and 1781, 1,897 women were delivered of 1,923 children, with 84 dead-born. Bland (363) explained: ‘By dead-born children I mean those that die after they have been perceived to move, that is, generally after four months. Abortions, or deaths before that period, may reasonably be estimated at double this number; so that, perhaps, 1 child in 8 dies in the womb, or in the act of coming into the world.’


14. It is difficult to reconcile this conclusion with that of L.F. Cody, ‘Living and dying in Georgian London’s lying-in hospitals’, *Bulletin of the History of Medicine*, 78 (2005), 309–48, who suggests that the ‘eighteenth-century lying-in hospital was statistically as safe or safer than a home delivery in some years’ (342). It may have been for the child, but not for the mother. I. Loudon, *Death in childbirth: an international study of maternal mortality, 1800–1950* (Oxford, 1992), especially 196-203, and *The tragedy of childbed fever* (Oxford, 2000), especially 58–74, argues that before the 1880s the lying-in hospitals were disastrous for maternal health.

PARISH POPULATION RECONSTRUCTION IN STONEHOUSE, GLOUCESTERSHIRE: AN EXPERIMENT USING WRIGLEY AND SCHOFIELD’S CORRECTION FACTORS

Janet Hudson

Janet Hudson is a former archivist active in local historical research. In 1998 she completed a PhD in social history at Bristol University upon which this article is based.

Introduction

Local historians working on the early modern period, before the introduction of a national census in 1801, have usually had to derive population estimates from such occasional sources as may survive for their locality. The Cambridge Group for the History of Population and Social Structure has developed a technique of ‘back projection’ (or ‘generalised inverse projection’) from the 1871 census to produce a model of national population change after 1541, described by Wrigley and Schofield. That model is the product of many complex interactions and assumptions, which are subject to continued debate, and which appear to make a local approach untenable. The Group introduced weightings to parish registration for population size, differences in period covered, and the influence of London, which must distort any attempt to recover local data. Further work on family reconstitution was intended to examine regional variation, but instead came to deal with national themes. This article describes an experiment to see how far Wrigley and Schofield’s national correction factors may be applied to parish registration, without additional weighting, in order to produce local population estimates from 1563 to 1811.

Anglican parish registers are the main source of population information for early modern England. They have been used to produce totals from numbers of families and from the analysis of life expectancy. However, parishioners may be registered elsewhere, or nowhere, for reasons of religion, family, work or travel, while temporary residents may leave no record at all. Correction factors are therefore required to convert the totals of baptisms, burials and marriages recorded in parish registers into a full record of vital events, and vital rates are needed to convert this data into population estimates. The factors and rates developed by the Cambridge Group are based on balances of probabilities, and may be, to some extent, arbitrary. However, they are part of a balanced template, and are therefore best used as they stand. A model based on a different balance might be constructed, but would have to demonstrate a similar internal integrity.
Stonehouse lies nine miles south of Gloucester, in the former cloth-producing district around the river Frome. The early modern parish virtually corresponded to the area covered by the early national censuses, beginning in 1801. The second census, taken in 1811, may be more reliable than the first, although all early census totals require augmentation for unlisted infants and members of the armed forces. The parish records survive from 1558, and continuous registration, which is desirable for the calculation of averages, runs from 1564, but data can also be constructed for 1563. The study limits have therefore been set at 1563–1811. There are four stages to the process: first, to build a description of the parish population trend from registration; secondly, to identify a reliable set of sources; thirdly, to compare the sources to the trend; and lastly, to construct an estimate. This model, if supported by further evaluation, could offer a self-reliant method of making local population estimates without depending on occasional sources.

Building a population trend

Annual change in a population could be observed by completing the ‘demographic accounting equation’. The natural increase, births minus deaths, would be added to the previous year’s total, and the net migration, the balance of all other gains and losses, taken into account. The following method proposes that the population at the start of a year may be regarded as the solution to this equation for the previous year. Parish registrations of baptisms and burials are inflated into births and deaths, and then used to estimate the starting population for each year from national rates. Marriages are not included in the calculations, as they have a looser connection to residence. These annual figures will be used to assess the population trend.

The parish registers are first examined for continuity. Those for Stonehouse begin on 25 March 1558, although until 1598 the surviving record is a transcript of that date of the original register, now lost. There are gaps in baptisms 25 March 1560 – 24 March 1564, marriages 25 March 1560 – 5 February 1566, and burials 25 March 1560–24 March 1564, apart from one important burial in July 1560. Some later gaps can be filled in from surviving bishops’ transcripts to give an almost continuous record from 25 March 1564, except for the year from 25 March 1669 to 24 March 1670. Accurate counts of baptisms and burials are taken, if possible from the original registers. The year began on 25 March until 1752, but Wrigley and Schofield’s national rates and correction factors are structured to apply to the January of each calendar year throughout the period. Totals are therefore gathered by calendar year, 1 January to 31 December. The counts for the incomplete calendar years 1669 and 1670 are amended to the annual average of the ten years 1664–1668 and 1671–1675, except for burials in 1670, which already total more than this average from nine months. The counts for the calendar years 1558 and 1564 are also incomplete, but there is insufficient data to amend them. There are no entries for January–March in the calendar year 1560, which is regarded as a gap in spite of the lone burial. In 1837 a district Anglican church was dedicated at Cainscross to serve the eastern part of the parish, with separate
registration, which is included in the counts for the whole parish, 1837–1842. The following method will require moving averages, running back as closely as possible to 1563, two from 1837 based on a period of 11 years, and another from 1811 based on a period of 51 years. The counts for Stonehouse therefore include 1558 and 1559, and extend to 1842. These averages will be explained as the method is developed.

The annual baptism and burial totals are next examined for deficient registration, that is, for years falling below normal levels. Wrigley and Schofield’s test for this may be summarised as comparing a forward search to a past reference period, derived from the average number of months generating 100 events in a parish. The length of the forward search period varies according to how many months might be expected to produce 20 events at the average monthly rate of the reference period. If the total in the search period falls below a threshold of 6.5 for baptisms, and 5.5 for burials, the registration is regarded as deficient, provided that the deficiency occurs in both baptisms and burials. Deficient months are identified and omitted from the reference calculations, and afterwards made up using values derived from surrounding months. However, because smaller parishes may provide low levels of monthly data, this study adopts a simplified form of the test, using whole calendar years. The search period is fixed at one year, and the total from it is assessed proportionally. The threshold minimum is expected for each set of 20 events found within the annual average of the reference period. The expected minimum for baptisms in a search year, for example, would be that average, divided by 20, and the result multiplied by 6.5. Each deficient year would be made up to the average of the previous and following five years in each series. This test is cruder than the original, but it observes the underlying rules, and should detect abnormal years. In Stonehouse, a few years fall below the expected minimum in either baptisms or burials, but none are deficient in both.

The totals are next augmented to compensate for three causes of under registration, that is, for events normally omitted from the registers. These are nonconformity, delayed baptism, and an assemblage of other residual factors such as absence or evasion. In each case, the annual totals are multiplied by the correction factor for that year, found by interpolation from the values supplied. Adjacent years are allowed the same value where necessary, and values for 1835 are assumed to continue until 1842. The correction factors for nonconformity remain very low between 1640 and 1685, reflecting the rarity of separate nonconformist registers before the Toleration Act of 1689. Nonconformists in Stonehouse probably attended nearby meeting houses, as there were no licensed chapels serving the parish before 1798. There are some nonconformist registers for Stonehouse dated before 1842 which could offer a partial local test of the national correction factors, but for this experiment these are used as given.

The totals reflecting the general effects of nonconformity are further adjusted to compensate for late baptism, as a child might die before baptism and
therefore be unrecorded in either baptism or burial registers. The risk increased as the length of the birth to baptism interval rose, and affected all religious persuasions except the Quakers. These results are then cumulatively raised to represent all residual causes of non-registration, converting baptisms and burials into an estimate of births and deaths. The correction factors are themselves estimates, and some births and deaths predating 31 December will be registered as baptisms and burials in the following year. The birth and death totals produced should therefore be regarded as elements in a series, not precise numbers of whole people. As an example, the figures for the year 1676 are as shown in Table 1. The correction factors and results are given to three decimal places as, when differences are small, too much rounding can remove them.

Taking the birth and death totals for each available year from 1558 to 1842, two population series are then calculated, from the national crude birth and death rates. These represent the populations required to generate the observed events during the year. These series will both show fluctuations, which can be extreme, although they usually become less so after 1750. The causes are very complex, and the two patterns will not be identical, although they may at times shadow or reflect each other. In order to respect the different fluctuation patterns an 11–year moving average is taken from each series separately. This strategy will retain trends, while reducing the impact of unusually high or low births or deaths. Averages for the years 1564–1568 are worked round the gap of 1560–1563 to include 1558–1559 in as many of 11 years as possible, although this is reduced to five years (1558–1559, 1564–1566) by 1564. The relative behaviour of these two series, from 1564 to 1811, is shown in Figure 1. It will be seen that the average from births is normally higher than that from deaths. The two averages are extended up to 1837, using the counts up to 1842, to provide data for the next stage.

These two series are next compared, and the higher figure for each year is taken to be the population required for the observed events to be generated at national rates. The smaller requirement, normally arising from the deaths, is contained within the larger, normally arising from the births. As the national birth and death rates are designed to apply in January, it is assumed that the

<table>
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<th>Stage</th>
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<th>B</th>
<th>CF/D</th>
<th>D</th>
</tr>
</thead>
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<tr>
<td>Baptisms/burials</td>
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<td>10</td>
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<tr>
<td>Nonconformity</td>
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<td>17.153</td>
<td>1.009</td>
<td>10.094</td>
</tr>
<tr>
<td>Late baptism</td>
<td>1.041</td>
<td>17.862</td>
<td>1.001</td>
<td>10.101</td>
</tr>
<tr>
<td>Other causes</td>
<td>1.022</td>
<td>18.249</td>
<td>1.009</td>
<td>10.187</td>
</tr>
<tr>
<td>Births/deaths</td>
<td>18.249</td>
<td>10.187</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 Compensation for under registration, calendar year 1676

Note: CF = correction factor, B = baptisms to births, D = burials to deaths. Sources: See text.
generating population is present in the January of the calendar year, and may be termed the ‘starting population’ for the year. The demographic accounting equation for the year should next be completed, by adding the natural increase, and taking net migration into account. A net migration figure could be calculated from the starting population by using the national rate, but the net national movement has been found to be always outwards, and is unlikely to reflect local complexities. Alternatively, the net migration during the year might be taken to be the difference between the starting population, plus the natural increase, and the starting population for the following year. This approach may be expressed more simply by assuming that all amendments to one year’s total produce that for the next. The starting population, rounded to the nearest person, is taken to be the solution to the equation for the previous calendar year, without any need to differentiate either the natural increase or the net migration. The starting population for 1677, for example, is 561.4, and therefore the population for December 1676 is taken to be 561. The December of a calendar year will end the third quarter of the old-style year before 1752, offering a reasonable comparison with sources compiled for years ending in March. These estimates for December of each calendar year from 1563 to 1836, which are the transferred starting populations for the calendar years 1564 to 1837, will be referred to as the population base series, or PB series.

The PB series offers estimated solutions to the annual population equations, but its fluctuations may represent discrepancies between national correction

**Figure 1** Eleven-year averages of estimates from births and deaths, 1564–1811

Source: See text.
factors, and vital rates, and their real local values, rather than population change. However, the series could indicate a trend, which might be seen more clearly from a long average. Extension of the population base series up to 1836 allows a 51-year average to be calculated back from 1811 to 26 years after 1563, which is 1588. Before this date the line is continued back with diminishing averages, 49 years for 1587, 47 years for 1586, and so on until an average of 11 years for 1568. For 1563–7 the population base figures are used directly. The long average is extended beyond 1811 in the same way as in the period before 1589, in order to allow comparison with the national censuses up to 1831. An average of 49 years is taken for 1812, 47 years for 1813, and so on up to an average of 11 years for 1831. These two forms of the PB series will next be compared to other sources.

Population sources

There are a number of sources giving population information for Stonehouse before the national censuses begin. Ecclesiastical records provide visitations, surveys and censuses in 1551, 1563, 1603, 1650, 1676, 1680, 1709, 1735 and 1743.23 There is a muster roll for 1608, and one intact Hearth Tax return for Michaelmas 1672.24 Two county histories, published in 1712 and 1779, give parish totals.25 However, there are no surviving Protestation Returns, Marriage Duty Act censuses or nominal poll tax lists.26 The sources earlier than 1801 do not describe the whole population, but they can be made to do so by using multipliers. Men and women over 16 may constitute about 65 per cent of the total population, and their total should produce 100 per cent from a multiplier of 1.54. Schürrer and Arkell suggest a range of 27 to 36 per cent for the proportion of men over 16. Equal proportions of men and women might be 32.5 per cent each, but adult populations tend to be female dominated. The average of the suggested range for adult men of 31.5 per cent is therefore adopted, represented by a multiplier of 3.17. As the age of confirmation for Anglican communicants was perhaps as low as 10 before 1600, although about 16 thereafter, and people over 10 may be about 75 per cent of the population, a multiplier of 1.33 is appropriate in 1551. A multiplier of 4.5 to estimate population from heads of household has been found to be applicable in Gloucestershire, and will be used throughout.27

Estimates from almost all the available sources are compared in Table 2 to the two forms of the PB series, with ratios given between the sources and the long average. The diocesan survey of 1735, which notes ‘about 1,000’ inhabitants for Stonehouse, is omitted as being too vague to provide a useful estimate. Annual figures in the PB series should not be regarded as individually accurate, but smoothing with an 11-year average would reduce the distinction between them and the long average. As a compromise, five-year averages are taken for each spot check in the PB series, except for 1563, when the annual PB value is used.

The same comparison is made in Figure 2, where the annual PB series is shown directly. The closest conjunctions are in 1563, 1603, 1650, 1676, 1680, 1709, and 1743, all resulting from ecclesiastical sources.
The next step should be to review the sources between 1563 and 1801, and to take out of consideration any which may give defective information. Comparative studies have done much to assess their various merits, but their differing structures make their relative accuracy hard to judge. In Stonehouse, however, manorial records can help to overcome this problem. In 1608 they provide valuable information, and after 1620 they contain an unusually long range of 'resiant' (or residents) lists, which can help to provide a comparative series.

Resiant lists analysis

The authority of the medieval English crown was expressed locally through the hierarchy of the shire, the hundred, and the tithing. A manor might contain several tithings under the supervision of a petty constable, who had to submit resiant lists to the hundred court. These were intended to include all the adult men expected to attend the manor court, to ensure that all were enrolled in a tithing. They have sometimes survived among the records, either of hundred courts, or of manors which had a court leet, where the lord exercised the hundred police authority through his own court in a 'view of frankpledge'. The resiants had to have lived within the manor for a year. All males over the age of fealty, which by 1600 was generally 16, up to the age of

<table>
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<tr>
<th>Date</th>
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<th>Number</th>
<th>PB5</th>
<th>PA</th>
<th>R/PA</th>
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</thead>
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<tr>
<td>1551</td>
<td>Diocesan visitation: 260 communicants (x 1.33)</td>
<td>372</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1563</td>
<td>Diocesan return: 52 households (x 4.5)</td>
<td>234</td>
<td>250</td>
<td>250</td>
<td>0.94</td>
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<tr>
<td>1603</td>
<td>Diocesan return: 284 communicants (x 1.54)</td>
<td>437</td>
<td>478</td>
<td>443</td>
<td>0.99</td>
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<tr>
<td>1608</td>
<td>Muster Roll: 97 men (x 3.17)</td>
<td>307</td>
<td>442</td>
<td>451</td>
<td>0.68</td>
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<tr>
<td>1650</td>
<td>Survey of church livings: 90 families (x 4.5)</td>
<td>405</td>
<td>415</td>
<td>454</td>
<td>0.89</td>
</tr>
<tr>
<td>1672</td>
<td>Michaelmas Hearth Tax: 65 households (x 4.5)</td>
<td>293</td>
<td>532</td>
<td>487</td>
<td>0.60</td>
</tr>
<tr>
<td>1676</td>
<td>Compton Census: total 384 (x 1.54)</td>
<td>591</td>
<td>557</td>
<td>509</td>
<td>1.16</td>
</tr>
<tr>
<td>1680</td>
<td>Parochial visitation: 120 families (x 4.5)</td>
<td>540</td>
<td>534</td>
<td>538</td>
<td>1.00</td>
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<tr>
<td>1709</td>
<td>Parish tithe census: 148 households (x 4.5)</td>
<td>666</td>
<td>737</td>
<td>639</td>
<td>1.04</td>
</tr>
<tr>
<td>1712</td>
<td>Atkyns, <em>Ancient History</em>: 'about 500'</td>
<td>500</td>
<td>704</td>
<td>644</td>
<td>0.78</td>
</tr>
<tr>
<td>1743</td>
<td>Diocesan survey</td>
<td>759</td>
<td>642</td>
<td>724</td>
<td>1.05</td>
</tr>
<tr>
<td>1779</td>
<td>Rudder, <em>New History</em></td>
<td>759</td>
<td>956</td>
<td>1,029</td>
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<td>1801</td>
<td>Census: 1,412 published, augmented</td>
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<td>1,230</td>
<td>1,372</td>
<td>1.08</td>
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<tr>
<td>1811</td>
<td>Census: 1,711 published, augmented</td>
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<td>1,578</td>
<td>1,672</td>
<td>1.07</td>
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<tr>
<td>1821</td>
<td>Census: 2,126 published, augmented</td>
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<td>1,888</td>
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<td>1831</td>
<td>Census: 2,469 published, augmented</td>
<td>2,527</td>
<td>2,504</td>
<td>2,474</td>
<td>1.02</td>
</tr>
</tbody>
</table>

Notes: PB5 = five-year average of PB series, PA = long average of PB series, R = ratio of source to PA.
Sources: See text.
60, were intended to be included. Where a manor coincided with a parish, the lists might therefore be expected to describe all but the most transient and aged adult male parishioners at each court date.

Stonehouse manor had a court leet, and its residents were those of the early modern parish. The view of frankpledge was normally held once a year, in October. Lists exist for 1622, 1632, 1657–1659 annually, 1661, 1663–1667 annually, 1675, 1676 (for one ‘leete’, or half the parish), 1683, 1685, 1691, 1709, 1714–1727 annually, 1729–1734 annually, 1736–1741 annually, 1743–1752 annually (one undated list attributed to 1745 or 1746), then 1772, 1784, 1788, 1793 and 1799. These lists have been analysed in a nominal record study of the parish, 1558–1804. Although they purport to include all adult men between certain age limits, the Stonehouse lists are too variable in coverage to be used directly as a demographic source. Their great merit, however, is that the men are listed according to an underlying geographical order of the houses they occupy. Comparative analysis, using many other types of local record, makes it possible to relate families to properties, and to assign households to parts of houses, including allowances for those headed by women. As a result, the population can be estimated, at various dates between 1620 and 1784, from calculated household numbers. These estimates will be referred to as the resiant lists analysis, or RLA. They cannot be continued beyond 1784, as the later lists lose track of increasing subdivision and sub-tenancy of properties.

Figure 2  Population base series and population sources, 1563–1811

Sources:  Table 2, and see text.
Identifying a source series

Most of the sources described in Table 2 can be reassessed against the manorial sources. In 1558, the manorial survey and other documents suggest that there were 59 households, which when multiplied by 4.5 produces a population of 266, falling from 372 in 1551 towards an estimated 234 in 1563. This drop may be related to epidemics, which caused high mortality throughout England in the later 1550s and early 1560s. The reduced figure of 52 households in 1563 may reflect some undercounting, and the resulting population estimate may therefore be at an extreme low. However, a reduction from 372 to 234 in Stonehouse, a fall of 37.1 per cent, is not unduly high in Stonehouse deanery, where the impact of the epidemics was especially severe. Unfortunately almost all the burial entries for 1560–1563 are missing for the parish, but the gap in all the registers indicates a general disruption. The depth of this crisis may be unclear, but the diocesan return of 1563 does appear to reflect a genuine drop in population at this time.

The muster roll of 1608 was a Gloucestershire initiative at a time when the national militia was in abeyance, and not all may have felt obliged to attend. In theory the muster included all able-bodied men aged 16 to 60 below the rank of baron, but had always had to deal with defaulters and refusals. The 1608 roll contains 97 male entries and three widows providing arms. After evidence from other documents has been considered it appears to give representatives for 54 of the 71 properties operational at that date. The manorial papers for 1608 include a default list, naming those who failed to attend the court, which has a geographical order similar to a resiant list. This adds 19 names, and other documents add 20. The total of adult men in this combined list is 136 (97 + 19 + 20), giving a population of 431 in 1608, using the multiplier of 3.17. This estimate indicates that the muster roll is indeed incomplete, but supports the proposed population for 1603.

It might be expected that the results from the survey of church livings of 1650 would reflect an uncertain situation after the civil wars, although Stonehouse suffered little physical disturbance, and local authorities, including the parish clergy, were encouraged to continue working as efficiently as local rivalries allowed. The RLA for 1632 suggests 96 households at that date, which give a total population of 432. Another two households are detectable before 1650, and these 98 would give 441 in 1650. If families are to be regarded as households, the source estimate for 1650 is indeed lower than the RLA result. The resiant list for 1657 indicates 90 households, echoing the 90 families mentioned in 1650, but the RLA suggests another 19 households in properties where there is documentary evidence of multiple occupation, and one in the vicarage shown by baptisms. These 110 households (90 + 19 + 1) would give a population of 495 in 1657.

The Michaelmas 1672 Hearth Tax return, with 65 entries, appears to be deficient, the RLA indicating 86 properties inhabited at this date. Those properties not connected to names on the tax list are all small, and probably exempt, although there are no exemption certificates either with the returns or
in the separate exemption sequence. There are 124 households in the RLA for 1672, giving a population of 558. The Compton Census in Gloucestershire is considered fairly certain to give a realistic figure for men and women over 16 for 1676 from the total of all categories, and this is supported by comparisons with the RLA estimate for the hearth tax year. The census estimate is 591, as compared to 126 households in the RLA for 1676, giving a population of 567. Richard Parsons, who became diocesan chancellor in 1677, included Stonehouse in his ‘parochial visitation’ in about 1680, and noted ‘about 120 families’, giving a population of 540. The RLA still suggests 567 in 1680, but there are 132 households by 1685, giving a population of 594.

The parish list drawn up by the new vicar in 1709 identifies 148 tithe-payers. Some are listed with households, and some alone, 18 are women, and some are known to be sharing houses. If they are all regarded as heads of households, although a few may not be so independent, they suggest a population of 666, as against 143 households in the RLA for 1709, giving a population of 644. The same RLA estimate applies in 1712, when Atkyns proposed a population of 500, in 110 houses. He is known to have used Parsons’ notes of 30 years earlier, and for some parishes he revised the population figures, but apparently not for Stonehouse.

The bishop required constant revisions of the 1735 diocesan survey from 1738 onwards, and in 1743 the 1735 figure of 1,000 was amended to 759, which was repeated in 1750 and 1752. The RLA for 1743 shows 168 households, giving a population of 756, and this pattern remained stable for 1752. Rudder took his total for Stonehouse of 759 in 1779 from ‘an accurate survey, taken a few years ago’, apparently this same document of 1743–52. It seems from subscription records that his book was 20 years in preparation, so he would have been collecting information from the 1750s onwards. By the time of publication in 1779 the RLA indicates 207 households, giving a population of 932.

The ratio of each source in Table 2, dated between 1608 and 1784, to a corresponding estimate developed from manorial records, is presented in Table 3 in descending order of ratio. The 1603 ecclesiastical return and the extended default list for 1608 are not exactly contemporary, but they are close enough in date for the ratio between them to be a useful addition.

Six of the ten ratios lie within a range of 0.9 to 1.1. The other four apply to the original 1608 muster roll, the 1672 Hearth Tax return, and the books of 1712 and 1779 by Atkyns and Rudder. These four have already been found likely to be deficient in terms of population information. The comparatively large divergence between these four and a coherent series strengthens this view, and they are therefore removed from the source list. The sources selected from Table 2 are now joined with the RLA to form a source series, which is strengthened by the close ratios seen in Table 3.

**Comparing the sources to the population base series**

The sources are next compared to five-year spot averages of the PB series, and to its long average. The form of the PB series which is most closely related to
the source series should be the one most likely to indicate the population trend. The comparisons are set out in Table 4, and in Figure 3, where the annual PB series is shown directly. Both forms of the PB series approach the sources, but the long average form has closer ratios.

Finding the range for a parish estimate

The long average of a PB series can only describe a trend within a range, not a set of specific values. As can be seen in Figure 3, the annual PB figures fluctuate about the long average, at a ratio range of between 0.79 and 1.23. The causes of variation in parish registration involve many environmental and seasonal factors, and will not be attributed here. The need is rather to assess how the data reflect different situations.

There are periods when the sources and the long average approach each other, but do not follow a PB series fluctuation. If the sources are reliable, it may be that the real local vital rates, and perhaps the local correction factors, differ from the national ones used to calculate the PB series.\textsuperscript{42} However, the effect may not be so severe that the long average of the PB series cannot correct for it. National vital rates, for example, reflect the impact of successive national mortality crises after 1586, yet the Stonehouse area apparently suffered only lightly.\textsuperscript{43} Burials do not rise in that year, but baptisms are the lowest of the decade. The long average of the PB series for 1742 approaches the population level in the diocesan survey of 1743, but the five-year average of the PB series for 1742 falls below both. The discrepancy with the source implies that the national vital rates used in the PB series may

<table>
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<th>Number</th>
<th>Manorial record</th>
<th>Number</th>
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</tr>
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<tr>
<td>1676</td>
<td>Compton Census</td>
<td>591</td>
<td>RLA</td>
<td>567</td>
<td>1.04</td>
</tr>
<tr>
<td>1709</td>
<td>Parish tithe census</td>
<td>666</td>
<td>RLA</td>
<td>644</td>
<td>1.03</td>
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<td>Diocesan return</td>
<td>437</td>
<td>Default list 1608 etc.</td>
<td>431</td>
<td>1.01</td>
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<tr>
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<td>Diocesan survey</td>
<td>759</td>
<td>RLA</td>
<td>756</td>
<td>1.00</td>
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<tr>
<td>1680</td>
<td>Parochial visitation</td>
<td>540</td>
<td>RLA</td>
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<td>1650</td>
<td>Survey of church livings</td>
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<td>RLA</td>
<td>441</td>
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<td>RLA</td>
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<td>0.78</td>
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<td>Michaelmas Heath Tax</td>
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<td>RLA</td>
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\textbf{Table 3} Estimates from sources compared to manorial records

Sources: Table 2, and see text.
### Table 4  Estimates from the source series compared to the population base series

<table>
<thead>
<tr>
<th>Date</th>
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<td>1551</td>
<td>Visitation of Diocese of Gloucester</td>
<td>372</td>
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<td></td>
<td></td>
<td></td>
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<td>1563</td>
<td>Return of Diocesan population</td>
<td>234</td>
<td>250</td>
<td>0.94</td>
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<td>Return to Archbishop Whitgift</td>
<td>437</td>
<td>478</td>
<td>0.91</td>
<td>443</td>
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<td>442</td>
<td>0.98</td>
<td>451</td>
<td>0.96</td>
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<tr>
<td>1632</td>
<td>RLA</td>
<td>432</td>
<td>479</td>
<td>0.90</td>
<td>445</td>
<td>0.97</td>
</tr>
<tr>
<td>1650</td>
<td>Survey of church livings</td>
<td>405</td>
<td>415</td>
<td>0.98</td>
<td>454</td>
<td>0.89</td>
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<tr>
<td>1650</td>
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<td>415</td>
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<td>454</td>
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<td>RLA</td>
<td>495</td>
<td>390</td>
<td>1.27</td>
<td>459</td>
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<tr>
<td>1672</td>
<td>RLA</td>
<td>558</td>
<td>532</td>
<td>1.05</td>
<td>487</td>
<td>1.15</td>
</tr>
<tr>
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<td>Compton Census</td>
<td>591</td>
<td>557</td>
<td>1.06</td>
<td>509</td>
<td>1.16</td>
</tr>
<tr>
<td>1676</td>
<td>RLA</td>
<td>567</td>
<td>557</td>
<td>1.02</td>
<td>509</td>
<td>1.11</td>
</tr>
<tr>
<td>1680</td>
<td>Parsons</td>
<td>540</td>
<td>534</td>
<td>1.01</td>
<td>538</td>
<td>1.00</td>
</tr>
<tr>
<td>1680</td>
<td>RLA</td>
<td>567</td>
<td>534</td>
<td>1.06</td>
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<td>1.05</td>
</tr>
<tr>
<td>1685</td>
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<td>594</td>
<td>480</td>
<td>1.24</td>
<td>572</td>
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<tr>
<td>1709</td>
<td>Parish tithe census</td>
<td>666</td>
<td>737</td>
<td>0.90</td>
<td>639</td>
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</tr>
<tr>
<td>1709</td>
<td>RLA</td>
<td>644</td>
<td>737</td>
<td>0.87</td>
<td>639</td>
<td>1.01</td>
</tr>
<tr>
<td>1712</td>
<td>RLA</td>
<td>644</td>
<td>704</td>
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<tr>
<td>1743</td>
<td>Diocesan survey</td>
<td>759</td>
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<tr>
<td>1743</td>
<td>RLA</td>
<td>756</td>
<td>642</td>
<td>1.18</td>
<td>724</td>
<td>1.04</td>
</tr>
<tr>
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<td>RLA</td>
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<td>835</td>
<td>0.91</td>
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<tr>
<td>1772</td>
<td>RLA</td>
<td>927</td>
<td>988</td>
<td>0.94</td>
<td>968</td>
<td>0.96</td>
</tr>
<tr>
<td>1779</td>
<td>RLA</td>
<td>932</td>
<td>956</td>
<td>0.97</td>
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<td>1784</td>
<td>RLA</td>
<td>945</td>
<td>1,002</td>
<td>0.94</td>
<td>1,085</td>
<td>0.87</td>
</tr>
<tr>
<td>1801</td>
<td>Census, augmented</td>
<td>1,475</td>
<td>1,230</td>
<td>1.20</td>
<td>1,372</td>
<td>1.07</td>
</tr>
<tr>
<td>1811</td>
<td>Census, augmented</td>
<td>1,782</td>
<td>1,578</td>
<td>1.13</td>
<td>1,672</td>
<td>1.07</td>
</tr>
</tbody>
</table>

|                | minimum      | 0.87       | 0.87   |
|                | maximum      | 1.27       | 1.16   |
|                | mean         | 1.03       | 1.01   |

**Note:**  
RLA = resilient lists analysis, PA = long average of PB series, PB5 = five-year average of PB series, R = ratio of source to PB5 or PA.

**Source:**  
See text.

be too high for the parish at that time, producing too low a population base. A similar situation is seen in 1657 and 1685, when five-year averages of the PB series are lower than both the respective long averages and sources. The fluctuations in the PB series may be partly an effect of using national correction factors, and vital rates, whereas its own long average, and the sources, may better represent local reality.
There are two main periods when a PB fluctuation is closely matched by sources, in the 1670s and 1780s. Five-year averages of the PB series centred on 1672 and 1676 are closer to the estimates from the RLA and the Compton Census than to the long averages. This may reflect a genuine population peak, observed at an extreme in the census, which is reduced by the long average. In the 1780s a similar situation is seen in reverse, perhaps showing a genuine dip. Five-year averages centred on 1779 and 1784 are closer to the estimates from the RLA than to the long averages. This is, however, at a time when the RLA is reaching the limits of its potential, and its evidence may therefore be at an extreme low. In both these cases, the fluctuation may be real, but the sources are probably indicating a maximum range.

Slow population growth in the late seventeenth century, followed by a sluggish increase in the early eighteenth, has been observed nationally. The rise in the PB series between 1695 and 1710 is an apparent anomaly, but may be partly due to the effects of the Marriage Duty Act. The parish registers between 1695 and 1705 include inserted baptism entries, and burials of parishioners elsewhere. Some of these might not normally have been included but for the law, and they raise the birth and death series, as seen in Figure 1. This diligence continues after 1705 and through a change of vicar in 1709, but
comes to an end after a local smallpox epidemic in 1712. The vicar's own tithe census of 1709 indicates that the population is closer to the long average than to the PB series. Again the long average and the sources appear to be closest to reality.

After 1790 the PB series is lower than the long average, while the augmented census totals for 1801 and 1811 are higher. The RLA is not reliable later than 1784, and there are no other comprehensive lists for the parish. The land tax returns for 1776–1832 do not describe households or residents. This leaves the early censuses themselves as the main sources of information. Those up to 1831 were compiled by parish overseers of the poor, rather than by the enumerators introduced in 1841, but they do become increasingly reliable, subject to augmentation. Their augmented totals are shown in Table 5, together with five-year averages from the PB series centred on the same years, and both are compared to the long average.

The censuses have ratios in the region of 1.1 to the long average until a reduction to 1.02 in 1831, well within the range between sources and long average in Table 4. The PB series approaches the long average ever more closely, and by 1831 sources, PB series and long average have almost converged. These results support the augmented census total for 1831, and suggest that the earlier augmented totals are more accurate than the PB series. The reasons are elusive, although they may include wider under-registration than has been allowed for, as well as war, nonconformity and turmoil in the cloth industry.

It would seem that the best population estimate for Stonehouse is almost always to be found from the relationship between the long average and the source series. During the 1670s the sources are closer to the PB series, but they still have ratios to the long average within the range shown in Table 4 for all sources, between 0.87 and 1.16. Only one, the estimate from the Compton Census, is at a higher ratio than 1.15, and that has been shown to be at a probable extreme. The fluctuations in the PB series have a ratio range to the long average of between 0.79 and 1.23, but they do not reliably define the range. They may be reflecting discrepancies between national correction factors and vital rates, and their real local values. Supporting analysis may indicate

<table>
<thead>
<tr>
<th>Date</th>
<th>PA</th>
<th>AC</th>
<th>R/AC</th>
<th>PB5</th>
<th>R/PB5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1801</td>
<td>1,372</td>
<td>1,475</td>
<td>1.08</td>
<td>1,230</td>
<td>0.90</td>
</tr>
<tr>
<td>1811</td>
<td>1,672</td>
<td>1,782</td>
<td>1.07</td>
<td>1,578</td>
<td>0.94</td>
</tr>
<tr>
<td>1821</td>
<td>1,985</td>
<td>2,183</td>
<td>1.10</td>
<td>1,888</td>
<td>0.95</td>
</tr>
<tr>
<td>1831</td>
<td>2,474</td>
<td>2,527</td>
<td>1.02</td>
<td>2,504</td>
<td>1.01</td>
</tr>
</tbody>
</table>

Notes: PA = long average of PB series, AC = augmented census, PB5 = five-year average of PB series, R = ratio of augmented census or five-year average to long average.

Sources: See text.
that some fluctuations are genuine, but in the absence of such evidence, a speculative range, which should be proportionally symmetrical, has to be set about the long average. As shown in Table 2, all the sources excluded after comparison with the RLA lie beyond the ratio range of 0.8–1.2 to the long average. It is therefore proposed that the normal ratio range within which the population may be expected to lie should be 0.85–1.15 to the long average of the PB series, but extremes could lie between the ratios of 0.8 and 1.2.

Constructing a parish estimate

A population estimate for Stonehouse, which respects these considerations, may be derived from Table 4. Reference points are first set for each source date, from 1563 to 1811, by taking a mean between the long average and all sources selected for that year. The augmented census totals, which have been accepted as reliable, are included as reference points without alteration. If the gap between two of these points is between one and 20 years exclusively, values for the intervening years are found by interpolation. If the gap is 21 years or more, each point is linked by interpolation to the long average value 11 years away, the long average remaining unchanged for any remaining years. The results are shown in Figure 4.

The normal range of variation about the long average, also shown in Figure 4, will apply to the parish estimate where it follows that average. Where the reference points influence the estimate, the variation range may be reduced by
the weight of evidence from the sources, although this may be more a matter of judgment than of calculation. The reference points smooth the source series, but strong features will persist, such as the accelerated population rise in Stonehouse after 1780.

Conclusion

This method results in a population estimate for Stonehouse 1563–1811 subject to a range of variation. The estimate is produced by amending parish registration with correction factors, developed by the Cambridge Group, to convert annual totals of Anglican baptisms and burials into births and deaths. These factors are based on probabilities, but they form part of a balanced template, and are therefore adopted as they stand. A population base series is generated, using national vital rates, which is regarded as providing annual solutions to the demographic accounting equation.

The population base series does not reliably describe the population, but is used to generate a long average, which indicates the trend of population growth. The ratios 0.85 to 1.15 to the long average describe a range about which the population may normally be expected to lie. Other sources may help to define the level of population within this range, and indicate extremes up to ratios of 0.8–1.2. Sources outside these ratios should be regarded as suspect in terms of population information. A parish estimate is prepared by merging the selected sources with the long average developed from registration. In the absence of other sources, the long average will serve as an approximate estimate, variable within the normal range.

This experiment has been carried out in one parish, but could be evaluated against source series in others. The method is most effective when used with continuous parish registration, and where a parish corresponds to the unit assessed in the early national censuses. If found to be viable, it could offer a self-reliant approach to local population estimates, where a source series is not available. Parish population reconstruction by this method could have potential as a tool to compare local population patterns with the national one, and to support further debate on factors influencing regional demography.

Acknowledgements

Valuable comments by the Editorial Board of Local Population Studies on earlier versions of this article are gratefully acknowledged.

NOTES

3. E.A. Wrigley, R.S. Davies, J.E. Oeppen and R.S. Schofield, English population history from family...


7. N. Herbert ed., *Victoria county history of Gloucestershire* (hereafter VCH Glos), X, 267. Haywardsfield, an extra-parochial place, contained one household in this period, and is included in published census totals: *Population tables*, I (HMSO, 1852), Division VI, 22.


10. Gloucestershire Archives, Gloucester (hereafter GA), P316.


12. VCH Glos X, 286; GA, P68.


14. This test detects the most clearly deficient years identified by Wrigley and Schofield in nearby Eastington and Stroud: R. Schofield, *Parish register aggregate analyses* (Colchester, 1998), CDRom.


19. Wrigley and Schofield, *Population history of England*, 136–42: values from Tables 5.25 and 5.26. After 1781, the inflation factor for years ending 01 is the mean of the two adjoining decadal averages, which are applied respectively to each of the intervening nine years.

20. Wrigley and Schofield, *Population history of England*, 305–55, and Figure 2; values for vital rates per calendar year from 531–5, Table A3.3.


Surveying the people, 102–3.
29. GA, D445/M7–11.
31. GA, D4289/M1.
37. TNA, E179/247/14, E179/116/544.
41. Bodl., Gough Glouc. 32 (1).
44. GA, P316/1N1/3.
46. Wrigley and Schofield, Population history of England, 28; Schürer and Arkell, Surveying the people, 231.
AN EVALUATION OF THE RELIABILITY OF ANGLICAN ADULT BURIAL REGISTRATION

Peter Razzell

Dr Peter Razzell is currently a research fellow in the History Department at the University of Essex. His most recent book is The conquest of smallpox: the impact of inoculation on smallpox mortality in eighteenth century Britain (London, 2003).

Introduction

The accuracy of parish registers is central to historical demographic research in the pre-civil registration period. A number of approaches have been adopted to analyse the quality of registration, including statistical analysis of plausible patterns of demographic events. In recent years, new techniques involving nominal record linkage have been used for assessing birth registration, including the comparison of census with parish register data, and the same-name method for evaluating the reliability of the burial registration of infants and young children.

The findings derived from these assessments of register reliability can have a major effect on conclusions about the population history of England and Wales in the parish register period. For example, Wrigley and Schofield concluded that the increase in population in the eighteenth century was mainly due to a rise in fertility, whereas the present author has argued that the prime determinant of population growth in this period was a reduction in mortality. Wrigley and Schofield’s conclusion about the central role of fertility in their aggregative work was largely based on the inflation of baptisms at the end of the eighteenth century, derived from an assumption that birth registration deteriorated sharply during this period as a result of increasing religious nonconformity. I have presented an alternative set of figures on births based on inflation ratios derived from census/parish register comparisons. Additionally, I have compiled a range of figures on infant and child mortality for different parishes, using inflation ratios derived from same-name research. Little or no work has been carried out on the accuracy of adult burial registration using nominal record linkage, and the purpose of this paper is to present some provisional findings on this topic, based on the linkage of data from census, parish register and probate records.

Comparing census records and parish registers

Census-type listings have survived for a number of parishes in the pre-1841 period, and they exist in some instances for short runs of years. Where these
schedules include data on the marital status of adults, it is possible to compare information on the death of an individual—for example, a husband no longer enumerated in a later census and his wife becoming a widow—with the list of burials in the parish register. Census-type listings were carried out under the 1695 Marriage Duty Act, compiled in order to implement taxation on marriages, births and burials, as well as on bachelors over the age of 25 years and childless widows. The function of these listings was to help establish the population due for taxation under the Act. The Act ran for an 11-year period between 1695 and 1706, and required the census-type listing to be carried out annually. The schedules for two parishes—Lyme Regis, Dorset and Swindon, Wiltshire—have survived with information on marital status for a number of years from 1695 onwards.

For Lyme Regis, 83 married couples were traced in the 1695, 1698 and 1703 censuses, in which either the husband or wife disappeared between 1695 and 1703. These 83 couples were in the following categories: (i) 47 husbands whose wives were later enumerated as widows; (ii) 9 wives with husbands later listed as widowers; (iii) 4 husbands whose wives were later enumerated without their husbands; (iv) 23 wives whose husbands were later enumerated without those wives, some of who were listed with new wives. Identification of individuals was possible because of the near-identical sequence of listing of families in successive censuses, as well as the presence of children in families.

An attempt was made to locate these 83 individuals in the Lyme Regis burial register. In all, 29 of the 83 unlisted husbands and wives (35 per cent) could not be traced in the burial register (Table 1). It is possible that the two disappeared husbands with wives listed in their own names (the third category) had either temporarily left Lyme Regis or abandoned their wives. However, all the families of the unlisted husbands and wives continued to reside in Lyme Regis, usually with their children, and given that most

<table>
<thead>
<tr>
<th></th>
<th>Total number of deaths</th>
<th>Deaths traced in burial register</th>
<th>Percentage of deaths traced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Husbands no longer enumerated, wives becoming widows</td>
<td>47</td>
<td>24</td>
<td>51</td>
</tr>
<tr>
<td>Wives no longer enumerated, husbands becoming widowers</td>
<td>9</td>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>Husbands no longer listed, wives enumerated in their own names</td>
<td>4</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>Wives no longer listed, husbands enumerated in their own names</td>
<td>23</td>
<td>19</td>
<td>83</td>
</tr>
<tr>
<td>Totals</td>
<td>83</td>
<td>54</td>
<td>65</td>
</tr>
</tbody>
</table>

Source: Lyme Regis burial register deposited in Dorset History Centre (formerly the Dorset Record Office) Dorchester.
surviving spouses were enumerated in later censuses as widows or widowers, the evidence suggests that the great majority of missing husbands and wives had died between censuses.

One important feature of the Lyme Regis results is the large number of missing husbands who were not registered in the burial register (Table 1). It is possible that some of these died at sea: about a fifth of men were listed as mariners in the burial register during 1703–1704 and in apprentice indenture documents in 1663–1725. Also it is possible that some of the missing burials were due to the ‘traffic in corpses’ with individuals being buried outside their parish of residence. However, it is unlikely that this could explain why it was mainly men who were missing from the burial register. Also, the Lyme Regis register often noted such burials: for example, the register recorded that on 12 January 1697 ‘Margaret Miller widow died in this parish but was buried at Musberry in Devon.’ Additionally, there is other evidence to be discussed later that suggests missing burials were mainly due to clerical negligence in parochial registration.

In the 1695 and 1698 Lyme Regis census listings, a number of individuals were crossed out of the list with the capital letter ‘D’ marked against their names, presumably because their families were liable to the tax on burials under the Marriage Duty Act. Of 22 such individuals, 13 were traced in the burial register, all in the year of the census (from 1 May to 30 April, the year defined by the Marriage Duty Act). The other nine cases were missing from the burial register, representing an omission rate of 39 per cent, very similar to that found for the missing husbands and wives among the 83 married couples (Table 1). It is unclear whether these nine cases were all marked for payment of tax on burials, or were simply listed as dead. They could not be located in the 1703 census listing and it is likely that they all died between 1695 and 1703, but it is unknown whether they were buried in Lyme Regis or not.

Twenty-two cases were marked with the letter ‘D’. Eleven were husbands, seven were wives, three were daughters and one was a son of the families enumerated. Seven of the eleven husbands were missing from the burial register, one of the seven wives, one of the three daughters, and none of the sons (the one son was registered). This again mirrors the earlier finding that husbands were much more poorly registered in the burial register than other members of the family, possibly as a result of being buried at sea or elsewhere outside of Lyme Regis. Missing cases were not distributed evenly between the 1695 and 1698 censuses: 11 of the 13 cases listed as dead in 1695 were found in the burial register, as against only 2 out of 9 in 1698. This indicates that the legal penalties for the non-registration of burials were taken much more seriously in the first year of the Act, and that the Lyme Regis clergyman and his clerk became much laxer in burial registration in the later period. This is compatible with what is known generally about the gradual deterioration of compliance with the Act during the 11-year period that it was in force.

How typical was the poor burial registration found in Lyme Regis? The evidence from Swindon is that in some other parishes it was very much better.
during this period. Of 25 husbands and wives who disappeared between censuses in Swindon during the period 1697–1702, leaving widows and widowers behind, 22 were found in the burial register. Research on 47 Bedfordshire parishes tracking married couples from the 1841 census to the 1851 census identified 32 wives and husbands enumerated in 1841 who had become widow and widowers by 1851. All except two of these 32 cases were traced in Anglican burial registers between 1841 and 1851, indicating a high degree of burial registration reliability, even higher than that found in Swindon at the end of the seventeenth century.9

**Comparison of probate records with parish registers**

A further way of checking burial registration reliability is to compare information in probate records with that in burial registers, searching the parish register for the registration of the burial of the person leaving the will. The majority of wills give the parish of residence of the person leaving the will, but this is not necessarily the parish of burial. This in effect is a form of ‘traffic in corpses’ and is an issue that must be addressed when considering the registration of burials of those leaving wills.

Of 202 people leaving wills in Lyme Regis in the period 1664–1749, 74 could not be traced in the burial register within five years previous to probate, an omission rate of 37 per cent.10 This is slightly higher than the proportion of missing burials found through the tracking of husbands and wives (35 per cent), but sufficiently similar to give some confidence in both methods of evaluating burial registration reliability.

Information on wills is widely available, and it is possible to check registration reliability where both wills and parish registers survive. Ideally we would want to evaluate both the burial registration of people leaving wills in their parish of residence, as well as in neighbouring parishes where a ‘traffic in corpses’ might have taken place. This is possible for parishes in the county of Bedfordshire, where a digital transcript of Anglican and nonconformist burials, covering 355,985 individual entries, has been compiled for the whole county for the period 1538–1851.11

A published index of wills proved or administered in the Archdeaconry of Bedfordshire church court is available for the same period, giving information on name, parish of residence and occupation.12 People whose wills were administered by this court are likely to have only owned property in the county of Bedfordshire, as wealthy people owning property in more than one county frequently used Prerogative Courts for this purpose. Patricia Bell, the editor of published Bedfordshire wills, concluded that ‘local probate records relate to the more prosperous husbandman, yeomen, and tradesmen and their widows, and also to parish clergy and some minor gentry’.13 For people using the Bedfordshire court and only owning local property, this is likely to have reduced the incidence of ‘traffic in corpses’ outside the county. This is confirmed by the analysis of parish of intended burial listed in Bedfordshire probate records: of the first 100 wills for the period 1510-23 with relevant information, 96 gave the parish of residence as the requested parish of burial.14
Thirteen Bedfordshire parishes were selected for intensive study, having been originally chosen for a project on infant and child mortality because of their high quality of information running from the sixteenth through to the nineteenth century. The parishes are as follows: Barton in the Clay, Bedford St. Marys, Chalgrave, Dunstable, Henlow, Houghton Regis, Husborne Crawley, Maulden, Milton Bryant, Sandy, Shillington, Toddington, and Woburn. The majority of the parishes are located in the south of the county, six of them on the edge of Bedfordshire and six of them partly contiguous to each other. The sample was constructed by selecting names beginning with the letters A to G, chosen from the index of Bedfordshire Probate Records. A name search was then made both in published Anglican burial registers and in the digital burial index. In order to allow for date errors, a case was defined as traced when located in the burial register within the five-year period immediately before the date of probate. In order to trace a case in a neighbouring parish register, a search was only made to within one year before probate because of the greater difficulty of establishing correct identity. Phonetic variations were allowed for, and matching criteria were defined as widely as possible—such as a woman listed as a widow even without a forename—in order to minimise the risk of missing a traced case.

There was little variation in the proportion of untraced cases over time (Table 2), and the overall average of missing burials was 17 per cent. Seventy-nine per cent of burials were found in the year of probate, 17 per cent in the previous year, 2 per cent two years before, and 2 per cent three to five years previous to the year of probate. Only 4 per cent of burials were located outside the parish of residence as stated in the will index.

It is not possible with the present data to trace burials outside Bedfordshire, but a comparison of the six parishes on the edge of the county with the seven ‘inner’ parishes suggests that this is not a major problem. The proportion of untraced cases in the former group is 16 per cent (148 out of 917), compared to

<table>
<thead>
<tr>
<th>Period</th>
<th>Total number named in probate records</th>
<th>No. traced in burial registers</th>
<th>% in probate records traced in burial registers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1538–1599</td>
<td>181</td>
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<td>81</td>
</tr>
<tr>
<td>1600–1649</td>
<td>292</td>
<td>249</td>
<td>85</td>
</tr>
<tr>
<td>1650–1699</td>
<td>348</td>
<td>287</td>
<td>82</td>
</tr>
<tr>
<td>1700–1749</td>
<td>405</td>
<td>343</td>
<td>85</td>
</tr>
<tr>
<td>1750–1799</td>
<td>280</td>
<td>228</td>
<td>81</td>
</tr>
<tr>
<td>1800–1849</td>
<td>241</td>
<td>197</td>
<td>82</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,747</strong></td>
<td><strong>1,451</strong></td>
<td><strong>83</strong></td>
</tr>
</tbody>
</table>

Table 3  People named in probate records traced in 13 Bedfordshire burial registers, by individual parish

<table>
<thead>
<tr>
<th>Parish</th>
<th>No. in probate records</th>
<th>No. traced in burial records</th>
<th>% traced in burial records</th>
<th>No. traced in same parish burial records</th>
<th>% traced in same parish burial record</th>
<th>Population size 1801</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milton Bryant</td>
<td>53</td>
<td>50</td>
<td>94</td>
<td>49</td>
<td>92</td>
<td>333</td>
</tr>
<tr>
<td>Barton in the Clay</td>
<td>118</td>
<td>107</td>
<td>91</td>
<td>103</td>
<td>87</td>
<td>448</td>
</tr>
<tr>
<td>Total for parishes with populations under 500</td>
<td>171</td>
<td>157</td>
<td>92</td>
<td>152</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>Chalgrove</td>
<td>82</td>
<td>64</td>
<td>78</td>
<td>58</td>
<td>70</td>
<td>534</td>
</tr>
<tr>
<td>Husborne Crawley</td>
<td>108</td>
<td>93</td>
<td>86</td>
<td>87</td>
<td>81</td>
<td>543</td>
</tr>
<tr>
<td>Henlow</td>
<td>91</td>
<td>82</td>
<td>90</td>
<td>80</td>
<td>88</td>
<td>552</td>
</tr>
<tr>
<td>Total for parishes with populations of 501–700</td>
<td>281</td>
<td>239</td>
<td>85</td>
<td>225</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Maulden</td>
<td>121</td>
<td>99</td>
<td>82</td>
<td>96</td>
<td>79</td>
<td>738</td>
</tr>
<tr>
<td>Houghton Regis</td>
<td>167</td>
<td>138</td>
<td>83</td>
<td>131</td>
<td>78</td>
<td>784</td>
</tr>
<tr>
<td>Shillington</td>
<td>234</td>
<td>206</td>
<td>88</td>
<td>203</td>
<td>87</td>
<td>899</td>
</tr>
<tr>
<td>Total for parishes with populations of 701–1,000</td>
<td>522</td>
<td>443</td>
<td>85</td>
<td>430</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>Sandy</td>
<td>209</td>
<td>184</td>
<td>88</td>
<td>183</td>
<td>88</td>
<td>1,115</td>
</tr>
<tr>
<td>Dunstable</td>
<td>174</td>
<td>126</td>
<td>72</td>
<td>123</td>
<td>71</td>
<td>1,296</td>
</tr>
<tr>
<td>Toddington</td>
<td>191</td>
<td>148</td>
<td>77</td>
<td>138</td>
<td>72</td>
<td>1,443</td>
</tr>
<tr>
<td>Woburn</td>
<td>133</td>
<td>111</td>
<td>83</td>
<td>103</td>
<td>77</td>
<td>1,563</td>
</tr>
<tr>
<td>Bedford St Mary</td>
<td>66</td>
<td>49</td>
<td>74</td>
<td>47</td>
<td>71</td>
<td>616</td>
</tr>
<tr>
<td>Total for parishes with populations over 1,000</td>
<td>773</td>
<td>618</td>
<td>80</td>
<td>594</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,747</td>
<td>1,457</td>
<td>83</td>
<td>1,401</td>
<td>80</td>
<td></td>
</tr>
</tbody>
</table>

Note: The parish of Bedford St Mary was included among the parishes in the largest size category because it was one parish within a large town.

18 per cent (148 out of 830) in the seven ‘inner’ parishes. However, the proportion of cases traced in adjacent parishes is slightly less in the parishes on the edge of the county—3.5 per cent (27 out of 769)—than it is in the ‘inner’ parishes—4.3 per cent (29 out of 682). Most parishes on the edge of the county were surrounded by three or four other Bedfordshire parishes, and so the small difference between the two groups in the proportion of burials registered in other parishes is not surprising.

There are variations in the proportions of untraced cases by individual parish (Table 3), and these appear to have been partly a function of population size. However, the sample includes only two parishes with populations of under 500, in order to partly remedy this defect, three additional parishes with population sizes of less than 500 people—Little Barford, Bletsoe and Great Barford—were selected for analysis. Of 120 individuals establishing probate in these three parishes during the period 1538–1851, 15 (13 per cent) could not be traced in the burial registers or the digital index. Adding this figure to the 14 untraced people in the parishes of Milton Bryant and Barton in the Clay (Table 3), therefore, produces 29 untraced cases out of a total of 291 (10 per cent) in the five parishes with populations of less than 500. This is exactly half the proportion of untraced cases in parishes with a population of over 1,000. The reasons for variations in the proportions of traced cases in parishes of different population size will be discussed later in the paper.

There appears to have been little or no association between occupation and registration accuracy (Table 4). It might be expected that the poorer socio-economic groups such as labourers and husbandmen would be subject to less adequate burial registration, but this does not appear to have been the case. The finding of a slightly higher proportion of untraced cases amongst widows and spinsters is different from the findings on Lyme Regis, suggesting that there were special factors at work in the latter place. There was also a tendency for gentlemen and professionals to be buried outside their parish of residence, whereas the reverse was true of labourers and husbandmen. However, the samples are small and the topic requires research on larger numbers for confident conclusions.

There is evidence from other areas of the country comparing probate records with information in individual parish registers to suggest that adult burial registration was incomplete in the period before the end of the eighteenth century (Table 5). Indeed the overall percentage of traced cases in the 13 Bedfordshire parishes (Table 3) was higher than the average reported from seven parishes elsewhere (Table 5)—80 per cent compared with 72 per cent—a fact which may have been partly due to most of the seven parishes in the latter group being small towns. However, there is no linear relationship among the parishes elsewhere in the country between population size and the proportion of burials traced (Table 5). Most of the sample sizes in these parishes are very small, and they relate to varying time periods. Only more systematic research will settle the issue of the relationship between population size and burial registration accuracy.
Table 4  People named in probate records traced in 13 Bedfordshire burial registers, by occupation

<table>
<thead>
<tr>
<th>Occupation in probate records</th>
<th>Total no. in probate records</th>
<th>No. traced in burial registers</th>
<th>% traced in burial registers</th>
<th>No. traced in same parish burial register</th>
<th>% traced in same parish burial register</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gentlemen and professional</td>
<td>67</td>
<td>57</td>
<td>85</td>
<td>51</td>
<td>76</td>
</tr>
<tr>
<td>Farmers and yeomen</td>
<td>447</td>
<td>387</td>
<td>87</td>
<td>371</td>
<td>83</td>
</tr>
<tr>
<td>Artisans and tradesmen</td>
<td>466</td>
<td>397</td>
<td>86</td>
<td>382</td>
<td>82</td>
</tr>
<tr>
<td>Labourers and husbandmen</td>
<td>190</td>
<td>160</td>
<td>84</td>
<td>157</td>
<td>83</td>
</tr>
<tr>
<td>Widows and spinsters</td>
<td>249</td>
<td>204</td>
<td>82</td>
<td>191</td>
<td>77</td>
</tr>
</tbody>
</table>


Table 5  People named in probate records traced in the burial registers of seven individual parishes

<table>
<thead>
<tr>
<th>Parish and period</th>
<th>Total no. in probate records</th>
<th>No. traced in burial registers</th>
<th>% traced in same parish burial register</th>
<th>Population size in 1801</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyme Regis, Dorset, 1664–1749</td>
<td>232</td>
<td>150</td>
<td>65</td>
<td>1,451</td>
</tr>
<tr>
<td>Hartland, Devon, 1598–1793</td>
<td>81</td>
<td>66</td>
<td>81</td>
<td>1,546</td>
</tr>
<tr>
<td>Colyton, Devon, 1553–1773</td>
<td>124</td>
<td>79</td>
<td>72</td>
<td>1,641</td>
</tr>
<tr>
<td>Great Dunmow, Essex, 1559–1610</td>
<td>50</td>
<td>40</td>
<td>80</td>
<td>1,828</td>
</tr>
<tr>
<td>Long Melford, Suffolk, 1559–1610</td>
<td>97</td>
<td>77</td>
<td>79</td>
<td>2,204</td>
</tr>
<tr>
<td>Newbury, Berkshire, 1546–1648</td>
<td>50</td>
<td>38</td>
<td>76</td>
<td>4,275</td>
</tr>
<tr>
<td>Thaxted and Saffron Walden, Essex, 1560–1602</td>
<td>62</td>
<td>51</td>
<td>82</td>
<td>5,075</td>
</tr>
<tr>
<td>Total</td>
<td>696</td>
<td>501</td>
<td>72</td>
<td></td>
</tr>
</tbody>
</table>

Note: A search was made in the burial registers for a period within five years before the date of probate. The parishes in this table were selected in the course of other research. For example, the two parishes Colyton and Hartland were chosen because they were important in the Cambridge Group for the History of Population and Social Structure’s reconstitution project. With the exception of Lyme Regis, all source material on probate records and burial registers is to be found in the Society of Genealogists’ Library.
Table 7 Components of death under-registration in English burial registers, 1630–1799

<table>
<thead>
<tr>
<th>Date</th>
<th>Deaths not registered as % of all deaths</th>
<th>Estimated components of under-registration as % of those deaths not registered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Religious dissent</td>
</tr>
<tr>
<td>1630–1639</td>
<td>0.0</td>
<td>-</td>
</tr>
<tr>
<td>1640–1649</td>
<td>0.2</td>
<td>50</td>
</tr>
<tr>
<td>1650–1659</td>
<td>0.8</td>
<td>51</td>
</tr>
<tr>
<td>1660–1669</td>
<td>1.2</td>
<td>52</td>
</tr>
<tr>
<td>1670–1679</td>
<td>1.8</td>
<td>50</td>
</tr>
<tr>
<td>1680–1689</td>
<td>2.5</td>
<td>43</td>
</tr>
<tr>
<td>1690–1699</td>
<td>3.2</td>
<td>35</td>
</tr>
<tr>
<td>1700–1709</td>
<td>3.7</td>
<td>28</td>
</tr>
<tr>
<td>1710–1719</td>
<td>4.2</td>
<td>24</td>
</tr>
<tr>
<td>1750–1759</td>
<td>6.7</td>
<td>12</td>
</tr>
<tr>
<td>1790–1799</td>
<td>16.5</td>
<td>7</td>
</tr>
</tbody>
</table>


In one respect the tracing of burials of people making or administering wills is a mild test of burial registration adequacy. People establishing probate were mostly adults—usually males—who owned property and were not from the poorest section of the community. We would expect families of such people to ensure registration of their burials, particularly because of the legal implications of property transfers. One way of examining the relationship between burial registration and wealth is to compare the burials of will-leavers with that of paupers. Many parishes paid for the burial of the poor, including the purchase of coffins and carrying the dead to be buried. Lyn Boothman has carried out such research for the parish of Long Melford in Suffolk. Of 97
people who left wills in 1559–1610, 20 (21 per cent) could not be traced in the burial register, compared with 34 of 52 paupers (65 per cent) buried at about the same time.\textsuperscript{20} Boothman has suggested that the very high omission rate amongst Long Melford paupers may have been a result of the non-payment of burial fees by the local poor law authority.\textsuperscript{21}

Comparison of poor law and burial records for the two parishes of Whitchurch, Oxfordshire and Folkestone, Kent indicate that burial registration of paupers was of a similar level to that found amongst will-leavers (Table 6). The range of omission rates—from 11 to 22 per cent—is similar to that found among will-leavers in Bedfordshire (Table 3), suggesting that wealth was not an important factor in burial registration reliability.

Discussion

A number of questions are raised by the findings summarised in the previous two sections. Perhaps the most important is what factors accounted for the under-registration of burials in the parish register period? Wrigley and Schofield have presented figures for different components of death under-registration, which have been summarised by Jeremy Boulton (Table 7). Burial under-registration due to delayed baptism is not relevant to adult burials, but the other two components—religious dissent and the residual—are applicable. However, perhaps the most striking feature of the table is the zero amount of burial under-registration in the 1630s, and the relatively negligible extent of under-registration in the period up to the middle of the seventeenth century. This is in strong contrast to the findings derived from the comparison of probate/burial data (Table 2), where there is a significant amount of burial under-registration in the seventeenth and first half of the eighteenth century, not dissimilar in amount to that found subsequently.

It is possible to clarify the impact of religious dissent by analysing the nonconformist registers that have survived for Bedfordshire and been included in the Bedfordshire Family History Society’s burial database (Table 8). The majority of these registers begin in the late eighteenth and early nineteenth century. Only four of the thirteen parishes in the Bedfordshire probate sample have surviving registers: Bedford, Houghton Regis, Maulden and Woburn. There were several nonconformist denominations in Bedford, and there were a substantial number of burials (510) in the Moravian register between 1746 and 1850. Burials included in the registers for the three other parishes were insignificant in number: 18 in the Houghton Regis Baptist register between 1794 and 1837, 32 in the Maulden Independent register in the period 1785–1834, and 66 in the Woburn Quaker register between 1704 and 1850. The number of burials in the Bedford nonconformist registers could be an important factor in Anglican under-registration in that town, but it appears that religious dissent played an insignificant role in the other twelve parishes in the Bedfordshire sample.\textsuperscript{22}

The remaining residual component of burial under-registration probably relates to clerical negligence and registration problems such as the non-
payment of fees. In the sixteenth and seventeenth centuries, many of the 13 sample registers had annual gaps in the registration of burials, even after many years of regular registration. However, there was a significant change over time in the occurrence of annual gaps: in the period 1538–1649, 32 per cent of untraced probate cases were the result of yearly gaps in the burial register, whereas after 1700 there were none. This suggests that burial registration improved during the late seventeenth century, but the aggregate evidence from the Bedfordshire sample (Table 2) suggests otherwise. Much burial under-registration was probably the result of systematic clerical negligence, as indicated by Burn in his study of parish registers, first published in 1829:

The custody of parish registers having been frequently committed to ignorant parish clerks, who had no idea of their utility beyond their being occasionally the means of putting a shilling into their own pockets for furnishing extracts, and at other times being under the superintendence of an incumbent, either forgetful, careless or negligent, the result has necessarily been, that many Registers are miserably defective, some having the appearance of being kept from month to month, and year to year, yet being deficient of a great many entries.23

This clerical negligence appears to have been present from the sixteenth century onwards. For example, 'in 1567 the incumbent of Tunstall, Kent, appeared to have tired of registering the Pottman family because of its concentration in the parish and simply stated in the register: “From henceforwd I omit the Pottmans”.’24

Some of the neglect of burial registration was due the non-payment of fees. In the Northamptonshire parish of Brington, ‘the very true reason why this register, is found as imperfect in some years as from 1669 to 1695 is because the parishioners could never be persuaded to take to see it done, not the churchwardens as ye canon did require, and because they refuse to pay such dues to ye curate as they ought be custome to have payed.’25

In 1702–1703 ‘a committee of Convocation drew up a list of ecclesiastical offences notoriously requiring remedy, in which irregularity in keeping registers is prominent in the list of gravamina.’26 Evidence for clerical negligence was abundant in the early nineteenth century. The Gentleman’s Magazine remarked in 1811 that ‘the clergymen (in many country places) has entered the names at his leisure, whenever he had nothing better to do, and perhaps has never entered them at all.’27 The Report of the Select Committee on Parochial Registration in 1833 provided substantial evidence on the reasons for defective parish registration. One of the witnesses, Mr William Durrant Cooper, a solicitor, had extensive experience of tracing individuals in parish registers for property cases, and concluded that parish registration was ‘exceedingly defective … [with] a very large number of marriages, deaths and baptisms not entered at all … especially deaths.’28 To illustrate this, he gave the following example:

52
Note: The registers listed here are those in the Bedfordshire Family History Society's database, which is based on those registers which have been copied or transcribed and deposited in the Bedfordshire Record Office. This table includes nine registers not covered by the Registrar-General’s list of deposited registers published in 1859, and is likely to include all surviving Bedfordshire nonconformist burial registers (see *Bedfordshire Notes and Queries*, 3 (1890–92), 199–202). The registers not covered by the Registrar-General’s list are: Ampthill Methodist, Bedford Bunyan Meetinghouse, Bedford Primitive Episcopalian, Bedford Protestant Dissenters, Biggleswade Protestant Dissenters, Hockliffe Congregational, Leighton Buzzard Baptist, Little Staughton Baptist, and Maulden Independent.

<table>
<thead>
<tr>
<th>Place</th>
<th>Denomination</th>
<th>Period covered</th>
<th>Number of burials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ampthill</td>
<td>Methodist</td>
<td>1817–1841</td>
<td>27</td>
</tr>
<tr>
<td>Ampthill</td>
<td>Quaker</td>
<td>1707–1847</td>
<td>112</td>
</tr>
<tr>
<td>Bedford</td>
<td>Bunyan Meetinghouse</td>
<td>1846–1850</td>
<td>93</td>
</tr>
<tr>
<td>Bedford</td>
<td>Congregational</td>
<td>1785–1836</td>
<td>38</td>
</tr>
<tr>
<td>Bedford</td>
<td>Howard Church</td>
<td>1790–1837</td>
<td>147</td>
</tr>
<tr>
<td>Bedford</td>
<td>Primitive Episcopalian</td>
<td>1834–1845</td>
<td>62</td>
</tr>
<tr>
<td>Bedford</td>
<td>Protestant Dissenters</td>
<td>1837–1850</td>
<td>87</td>
</tr>
<tr>
<td>Bedford</td>
<td>Moravian</td>
<td>1746–1850</td>
<td>510</td>
</tr>
<tr>
<td>Biggleswade</td>
<td>Baptist</td>
<td>1786–1829</td>
<td>3</td>
</tr>
<tr>
<td>Biggleswade</td>
<td>Methodist</td>
<td>1835–1850</td>
<td>26</td>
</tr>
<tr>
<td>Biggleswade</td>
<td>Protestant Dissenters</td>
<td>1727–1786</td>
<td>2</td>
</tr>
<tr>
<td>Blunham</td>
<td>Baptist</td>
<td>1739–1850</td>
<td>99</td>
</tr>
<tr>
<td>Cranfield</td>
<td>Baptist</td>
<td>1794–1837</td>
<td>97</td>
</tr>
<tr>
<td>Hockliffe</td>
<td>Congregational</td>
<td>1817</td>
<td>1</td>
</tr>
<tr>
<td>Houghton Regis</td>
<td>Baptist</td>
<td>1794–1837</td>
<td>18</td>
</tr>
<tr>
<td>Leighton Buzzard</td>
<td>Baptist</td>
<td>1771–1850</td>
<td>98</td>
</tr>
<tr>
<td>Leighton Buzzard</td>
<td>Quaker</td>
<td>1826–1850</td>
<td>44</td>
</tr>
<tr>
<td>Little Staughton</td>
<td>Baptist</td>
<td>1786–1806</td>
<td>22</td>
</tr>
<tr>
<td>Luton</td>
<td>Baptist</td>
<td>1837–1850</td>
<td>397</td>
</tr>
<tr>
<td>Luton</td>
<td>Quaker</td>
<td>1776–1850</td>
<td>115</td>
</tr>
<tr>
<td>Maulden</td>
<td>Independent</td>
<td>1785–1834</td>
<td>32</td>
</tr>
<tr>
<td>Southall</td>
<td>Baptist</td>
<td>1802–1820</td>
<td>9</td>
</tr>
<tr>
<td>Stevington</td>
<td>Baptist</td>
<td>1830–1850</td>
<td>43</td>
</tr>
<tr>
<td>Turvey</td>
<td>Congregational</td>
<td>1848–1850</td>
<td>6</td>
</tr>
<tr>
<td>Woburn</td>
<td>Congregational</td>
<td>1790–1837</td>
<td>75</td>
</tr>
<tr>
<td>Woburn Sands</td>
<td>Quaker</td>
<td>1704–1850</td>
<td>66</td>
</tr>
</tbody>
</table>

Total 2,501
On the sale of some property [in 1819] from Mr Cott to Lord Gage, it was necessary to procure evidence of the death of three individuals, Mrs Pace, Mr Tuchnott and Mrs Gouldsmith. They were at different places, all in Sussex; Mrs Pace was regularly entered; Mr Tuchnott was buried at Rodmell, about five miles from Lewes, and on searching for the register of burial we found no entry whatever. On making an inquiry in the churchyard of the sexton, he stated he recollected digging the grave, and the ceremony being performed; Mr Gwynne, the rector, whose neglect in that and other parishes is well known, had omitted to enter it … Mrs Gouldsmith, who was buried at Waldron, in the same county, was not entered, but on going to the parish clerk, who was a blacksmith, he stated he recollected the circumstance, and accounted for her burial not being entered in this way: he said it was usual for him, and not the clergyman, to take account of the Burials, and he entered them in a little sixpenny memorandum book … If it so happened that the fee [of one shilling] was paid at the time, as was the case with affluent persons, no entry would appear in his book, he only booked what was due to him, and as the clergyman entered the parish register at the end of the year from his book, and not at the time of the ceremony, all burials that were not entered in his book would not find their way into the register.29

This evidence suggests that clerical negligence was the main reason for the non-registration of Anglican burials. However, if this were the case, we would expect baptism registration also to be subject to the same process of under-registration. Evidence of births which did not find their way into baptism registers can be found by comparing census statements of birth with entries in baptism registers. This has been carried out for a sample of 45 parishes drawn from all parts of England during the period 1760–1834 (Table 9).30 The proportion of untraced births is higher than the percentage of untraced adult burials, and this may be for a variety of reasons, including the different socio-

<table>
<thead>
<tr>
<th>Period of birth</th>
<th>Total number of cases listed in the 1851 census</th>
<th>Percentage of cases not traced in the baptism register of the parish of birth as stated in the 1851 census</th>
</tr>
</thead>
<tbody>
<tr>
<td>1761–1770</td>
<td>68</td>
<td>32</td>
</tr>
<tr>
<td>1771–1780</td>
<td>347</td>
<td>28</td>
</tr>
<tr>
<td>1781–1790</td>
<td>637</td>
<td>33</td>
</tr>
<tr>
<td>1791–1800</td>
<td>1,053</td>
<td>36</td>
</tr>
<tr>
<td>1801–1810</td>
<td>1,517</td>
<td>32</td>
</tr>
<tr>
<td>1811–1820</td>
<td>1,989</td>
<td>33</td>
</tr>
<tr>
<td>1821–1830</td>
<td>3,092</td>
<td>30</td>
</tr>
<tr>
<td>1831–1834</td>
<td>2,251</td>
<td>27</td>
</tr>
</tbody>
</table>

economic characteristics of the samples, as well as being partly a function of population size. There was little or no trend with year of birth in the percentage of births traced, which accords with a similar finding for the same period for adult burial registration (Table 2).

The proportions of untraced cases in the smaller parishes is significantly less than those in the larger parishes, a similar finding to that for adult burial registration (Tables 3 and 5). It may be that if many clergymen only compiled their registers sporadically or even at the end of the year, as suggested by the anecdotal evidence quoted above, then the larger the parish the more likely they were to forget or neglect the registration of marriages, baptisms and burials. This hypothesis will have to be evaluated through further research on much larger samples, and will perhaps have to include the study of legal records, diaries, autobiographies and other local historical sources.

Conclusion

The present article has illustrated the application of nominal record linkage methodology to the measurement of adult burial registration. The limited amount of evidence from this research suggests the following conclusions:

1. Burial registration was deficient in all periods between 1538 and 1851.
2. Burial registration of adults was worse in larger than smaller parishes.
3. Socio-economic status appears to have had little or no influence on the quality of burial registration of adults.
4. Religious dissent played an insignificant role in Anglican burial under-registration, which was caused mainly by clerical negligence.

These conclusions are necessarily provisional, given the small number of parishes covered by the research. However, demographic data by their very nature lend themselves to the analysis of registration reliability, particularly where it is possible to ‘triangulate’ sources, as in the case of Lyme Regis. The availability of a wide range of digital sources—the baptism and marriage registers transcribed by the Church of Jesus Christ of Latter Day Saints

Table 10  Percentages of individuals listed in the 1851 census not traced in baptism registers, by population of parish: 45 parishes

<table>
<thead>
<tr>
<th>Population in 1851</th>
<th>Total no. of cases listed in the 1851 census</th>
<th>Percentage of cases not traced in the baptism register of the parish of birth as stated in the 1851 census</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 500</td>
<td>(9 parishes)</td>
<td>579</td>
</tr>
<tr>
<td>500–999</td>
<td>(7 parishes)</td>
<td>638</td>
</tr>
<tr>
<td>1,000–1,499</td>
<td>(9 parishes)</td>
<td>2,003</td>
</tr>
<tr>
<td>1,500–1,999</td>
<td>(10 parishes)</td>
<td>2,383</td>
</tr>
<tr>
<td>2,000+</td>
<td>(10 parishes)</td>
<td>5,351</td>
</tr>
<tr>
<td>All 45 parishes</td>
<td></td>
<td>10,954</td>
</tr>
</tbody>
</table>

(Mormons), the digitised burial registers produced by local family history societies, and the computerised national censuses of England between 1841 and 1901—will allow research on a large number of parishes.

Methodological work on these digital sources will be a prelude to a new research agenda, not based on ‘model-down’ reconstruction of national data, but derived from detailed and meticulous local evidence including both quantitative and qualitative source material. These exciting developments will allow comprehensive research on parishes from a wide range of places and counties, and should allow in due course confident general conclusions about the population history of England in the parish register period.

NOTES


7. Copies of the Lyme Regis census schedules were kindly supplied by the library of the Cambridge Group for the History of Population and Social Structure.

8. This was reflected in Swindon by the declining number of people enumerated in the censuses: 747 in 1697, 649 in 1701 and 522 in 1702. Most of the missing individuals in later censuses were children, as the number of families remained more or less constant.

9. For further details see P.E. Razzell and C. Spence, ‘The hazards of wealth: adult mortality in pre-twentieth century England’, *Social History of Medicine*, forthcoming. There is evidence that parish registration in rural, predominantly Anglican areas, was of a high quality in the post–1837 period, and held up well until at least the second half of the nineteenth century (personal communication from Andrew Hinde).

10. These probate records are deposited in the Dorset Record Office.

11. A copy of this digital transcript has kindly been made available by the Bedfordshire Family History Society for the current research.


14. Bell, *Bedfordshire wills*. These are the Bedfordshire wills nearest in time to the parish register period which have been transcribed and published.

16. No attempt was made to trace individuals in the digital nonconformist burial index, as the main purpose of the research was to assess the quality of Anglican burial registration.
17. Phonetic variations were examined manually, and any possible name variation was counted as a traced case. It is therefore likely that any false negatives would be more than balanced by false positives.
18. The parishes on the edge of the county are Barton in the Clay, Dunstable, Henlow, Houghton Regis, Shillington, and Woburn; the ‘inner’ parishes are Bedford St. Mary, Chalgrave, Husborne Crawley, Maulden, Milton Bryant and Toddington.
20. Personal communication from Lyn Boothman.
22. The nonconformist churches in Bedford probably served a wide hinterland taking in a number of rural parishes as well as the town itself, but none of the other 12 parishes in the Bedfordshire sample were either adjoining or within a radius of 10 miles of the town.
24. Burn, History of parish registers, 41.
27. Burn, History of parish registers, 42.
30. There are a number of complex methodological issues involved in measuring birth under-registration: see Razzell, Essays in English population history, 82–149.
31. The samples are also for different parishes, and in the case of births were selected from the general population rather than from those whose wills were proved or administered.
RESEARCH NOTE

OUT-PATIENT MATERNITY RELIEF IN LATE GEORGIAN BUCKINGHAMSHIRE AND HERTFORDSHIRE

Stuart Basten


Introduction

Maternity care provision expanded and diversified significantly during the eighteenth-century. This was the era of the development of famous institutions such as the London Foundling Hospital, and lying-in hospitals in London, Newcastle, Edinburgh, Dublin and elsewhere. However, while these hospitals have been the subject of much historical investigation—exploring their social, demographic and medical implications—charities which provided aid to patients at home in the later eighteenth and early nineteenth centuries, particularly in provincial England, have been largely ignored.

These charities performed a significant function in the communities in which they were established. Some gave a comprehensive service of outpatient maternity care, while others merely provided child-bed linen for poor mothers while in labour. Indeed, a significant tension existed in numerous British and Irish cities between lying-in hospitals and out-patient charities, which often generated heated debates regarding medical, financial and moral efficiency. However, the story of these charities is long and complex, and cannot be adequately covered here. Rather, this brief research note will demonstrate the variety of methods of out-patient maternity provision available in two neighbouring counties—Hertfordshire and Buckinghamshire—where the range of provision seems to form a microcosm of the various tiers available elsewhere in England. Four charities are discussed which exemplify the variety in the scope and funding of maternity provision, while alone of the four the Ware charity provides some insight into the motives that lay behind them.
‘Linen charities’: Abbots Langley and the Marchioness of Buckingham’s Charity

In the south Hertfordshire parish of Abbots Langley and in central and north Buckinghamshire we find perhaps the most basic type of maternity charity discussed in the introduction—one which lends supplies of child-bed linen to poor women. Unfortunately, the only existing records of these charities are the 1839 Charity Commissioners Report for Hertfordshire and the reports of the Society for Bettering the Condition and Increasing the Comforts of the Poor respectively. Consequently, only a relatively static picture can be presented. The reports do, however, allow reconstruction of brief histories of the charities, and provide an outline of their main functions.

Mrs Susannah Freeman, in her will dated 26 February 1803, left two large sums for the benefit of the poor of the parish of Abbots Langley: one £200 bequest the interest of which was ‘to be laid out in clothes for the use of the poor’, and a further £200 ‘for the purpose of purchasing child-bed linen and sheets for the
use of pregnant women in the said parish.’ Both the distribution and the return of this linen were to be administered ‘by the said vicar and churchwardens as they shall see proper.’

This model can also be found elsewhere in the local area, most notably in the bequest of the Marchioness of Buckingham who, circa 1787, instituted a charity for the purchase of ‘sets of child-bed linen’ for poor women about to enter labour. Under the scheme, ‘three sheets, two blankets, one leathern sheet, two-bed-gowns, two night caps, three bed shifts, three children’s caps, three children’s shirts, one cotton wrapper and a sufficient quantity of small articles’ were to be lent out to new mothers for ‘a fortnight, three weeks or a month, according to circumstances.’ Each woman was to be allowed to ‘retain a cap, a shirt, and some flannel for the child’, while occasional provision was also to be made of broth and ‘beer caudle’ during confinement, as well as medical aid in particular cases. The coverage of the Buckinghamshire charity was, however, much wider than its counterpart in Abbots Langley. Here, ‘Fifteen sets of childbed linen and clothes [were] distributed in parcels at Stowe, Wotton, Buckingham and Aylesbury, and at Gosford Hall in Essex, under the care of persons at those places’, who would also ‘receive applications and inquire into the characters of the persons applying.’

In terms of gauging the effect of this type of charity, the only observation was furnished by Reverend Robert Holt, the author of the account of the Buckinghamshire charity in the 1798 report of the Society for Bettering the Condition and Increasing the Comforts of the Poor. Here, he observed that the lending of child-linen,

affords the poor, at a small expence, much more relief and comfort, than they could provide for themselves with the same sum, even if they had the means of purchasing them: for one set of articles may, in the course of a year, serve a dozen families successively, who either might not have the means of purchasing them, or, if they had, would be obliged to buy them merely for temporary use, and then to sell them again to disadvantage.

Further advantages of the scheme were felt in the wider community. In both Buckinghamshire and Abbots Langley, children at the local parish schools were involved in the charities. In Abbots Langley, for example, Mrs Freeman stipulated that any dividend arising from her bequest should ‘be laid out in placing female children at some proper school in [Abbots Langley] (at the discretion, and on the recommendation, of the said vicar and churchwarden), and employing them in keeping the said child-bed linen and sheets in repair.’ For this, the fund paid £4 16s. 0d. per annum to Mrs Taylor at the local school of industry, and £3 for clothing, while straw bonnets and Easter frocks were also purchased for the girls every so often. This function was financed by the expansion of the funds of the charity in the early nineteenth century, the result of sound management. The purchase of £94 7s. 0d. worth of ‘New Four Per Cent Annuities’ in March 1826, for example, yielded an annual dividend of £3
which in turn was ‘employed in paying for the instruction of three more girls.’ The goal of such investments was to increase the number of girls instructed as funds accumulated.10

In the Buckinghamshire charity, the labour of young girls was equally important for, as Holt observes, ‘almost every article [was] spun, woven, and made up at the schools for poor children, which have been of late set up at Stowe, Wotton, and Gosfield.’ This, therefore, had the dual benefit of further promoting the ‘industry of the labouring poor’ as well as keeping the costs of the charity down.11

Midwifery assistance in Aldenham

A second type of maternity charity was instigated by Reverend Dolling, the vicar of the Hertfordshire parish of Aldenham, in 1783.12 As there was ‘no midwife living in the village’, Dolling ‘selected a poor widow, who had three children supported by the parish, and sent her up for instruction, to the Lying-in Hospital, in Store-Street, near Tottenham-Court Road.’ Here, under the tutelage of Dr Osborn, she trained for three months in the art of midwifery, ‘at a very small expense’. This expense, Dolling notes, ‘was collected in the parish by subscription; part of which paid for her board in the hospital; and the rest of the money was applied for her journey and incidental expenses.’ After her training, Dolling explained, she ‘attends all the day-labourers’ wives, at the stipulated sum of half-a-crown,’ and as such ‘has been the cause of a considerable saving in the medical bills of the parish, besides being a very great comfort and relief to the poor.’ Indeed, both her aptitude and ability appear unimpeachable, for ‘Tho without any preparatory education, she returned so well instructed, as to exercise her calling in the parish ever since, without a single accident, or ever having occasion to call in medical assistance.’ Furthermore, this activity allowed her to ‘support herself and her children comfortably... in the enjoyment of the confidence due to her skill.’ The observer at the Society for Bettering the Condition of the Poor was clearly impressed by this model:

The expence and trouble of the above was trifling; its benefit, both to the poor and the parish, considerable: whenever therefore a parish is distant from medical aid, and unprovided with a midwife of its own, the above may be recommended to its consideration.13

A midwifery and child-bed linen charity in Ware

Perhaps the most significant organisation was founded in the Hertfordshire town of Ware in September 1795.14 This charity is particularly noteworthy as it combined the functions of both the provision of child-bed linen and the assistance of midwifery. Analysis of the organisation also helps us better to understand the motivations and politics involved in giving to such maternity charities at this time.
Unlike the relief provided in Abbots Langley and Buckinghamshire, the Ware charity was funded almost exclusively by local subscription. Each subscriber, upon payment of 26s. per year, was entitled to recommend up to three women for relief. Such a recommended patient could be either a ‘lying-in woman’ or a ‘distressed sick woman.’ Upon recommendation, the lying-in woman was allowed ‘besides the use of a set of linen for her month, seven shillings towards defraying the expense of a midwife, nurse, &c.; and, to be laid out in flannel for the child, one shilling; or, in the case of twins, two. The charity further stipulated that the linen ‘must be returned clean, and right in number’ and that ‘women, offending wilfully against the regulations, should be excluded in future from the benefits of the charity.’

The success of the charity can be clearly measured by its significant growth in the years 1795 to 1803, as demonstrated in Table 1. In terms of resources, as Allen observes, the charity ‘began with three bags or sets of linen, for the mother and child; but by the surplus of subscriptions, however small, and by some donations, they have been enabled to purchase twenty sets of linen, and to keep them in good repair.’ Perhaps most significant, however, is the coverage of the charity, and the obvious impact this had on maternal provision in Ware. Interestingly, there are more instances of pregnant women who ‘received the benefit of the charity’ in any given year between 1796 and 1802 than there are baptisms recorded in Ware. As these data refer to baptisms rather than births, it is, of course, very difficult to ascertain with any accuracy the precise proportion of pregnancies in Ware in which the charity played a part, or to gauge the immediate effect that the Charity might have had on infant or maternal mortality in the town.

One possible cause of the surplus of the number of pregnancies assisted over recorded baptisms is that the Ware charity differed in one main respect to many other contemporary lying-in at home charities: it did not specify parochial residence as a stipulation of relief. Rather, as the charity ‘continued to increase’, it ‘extend[ed] its advantages to the adjacent villages for some miles around.’ This feature, therefore, suggests that some of the births occurring in the parishes contiguous to Ware—such as Thundridge, Much

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Table 1  Pregnancies assisted by the Ware lying-in charity, 1796–1802

<table>
<thead>
<tr>
<th>Year ending August</th>
<th>Pregnancies assisted by the Ware charity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1796</td>
<td>50</td>
</tr>
<tr>
<td>1797</td>
<td>51</td>
</tr>
<tr>
<td>1798</td>
<td>75</td>
</tr>
<tr>
<td>1799</td>
<td>79</td>
</tr>
<tr>
<td>1800</td>
<td>97</td>
</tr>
<tr>
<td>1801</td>
<td>98</td>
</tr>
<tr>
<td>1802</td>
<td>112</td>
</tr>
</tbody>
</table>

Source: W. Allen, ‘Extract from an account.’
Hadham, Widford, Hunsdon, Stanstead Abbots, Great Amwell, Hertford All Saints and Bengeo—were aided by the charity, and would thus explain the surplus of assisted pregnancies over the number of baptisms recorded in Ware alone. This should not, however, overshadow the fact that the charity clearly played a role in the maternal experience of a very significant number of mothers in Ware and the Upper Lea Valley.

Apart from the important role it played in assisting mothers in Ware, the charity is also very useful in revealing attitudes towards maternity care. As noted above, there were a number of tensions present in the varying arguments as to how best to care for women in labour—more particularly, who should assist them and where that assistance should be given.18 ‘The most material object of hospitals for the reception of lying-in women’, the charity observed, was ‘the affording of superior medical aid in cases of difficulty.’19 These institutions, of course, had the advantage that, in the case of complications, a surgeon or man-midwife could be quickly on hand to help with the delivery. The Ware Charity, however, based its provision of emergency medical care on the method employed by the Manchester Infirmary. Here, ‘upon notice from a regular midwife of a difficult case of delivery, the surgeon of the district, or in his absence the one next in rotation, immediately attends gratis, and assists the woman at home.’ The importance of such a back-up plan was, however, emphasised by the charity, noting that while ‘The cases, in which surgeons have been so called in, were very few;...most, if not all, of them would have been attended with great danger, without such medical assistance.’

As the physician, in such an emergency, assisted gratis, only the cost of medicine would need to be met by the charity. All these provisions are essentially linked to the one major concern of the charity: how to achieve maximum efficiency of care provision. Expense, they note, ‘always ought to be a subject of attention, in the administration of every charity’, and that ‘Waste in charities exhausts and annihilates those funds, for a share in which the necessities and the sufferings of man will ever produce and demands, beyond the power of satisfaction.’ Within this context, it is then observed that,

If we compare the relative bearings of expense and effect, we shall find that the expense of one woman delivered in a lying-in hospital...will be nearly as much as, applied according to the regulations of the charity at Ware, would afford twelve women more unexceptionable, and perhaps more useful, relief, during this period of suffering and danger.20

The charity was also concerned with the effects that in-patient care would have upon the household economy. In particular, they were concerned that lying-in hospital care ‘injures the domestic and prudential habits of the objects of the charity; and returns them to their families, with an indisposition to practise those minute details of economy which are essential to the well-being of the poor.’ Furthermore, they complained that ‘...tho in a few days after the
birth they would be capable, if at home, of managing and directing in their own families, yet, if delivered in a lying-in hospital, they do not return under a month. This absence, the charity believed, could even take a more sinister turn, as ‘in the mean time their [the ‘absent’ mothers] must be supplied by some female attendant; often with very pernicious family consequences.’

Conclusion

This short note has attempted to demonstrate the various methods by which poor women in Hertfordshire and Buckinghamshire were able to gain assistance in both the delivery, and early care, of their children. The broader context of maternity charities is the subject of ongoing investigation. It is already clear, however, that these charities reflect much wider concerns regarding how best maternity care might be provisioned, both medically and morally, and reveal particular concern with what might be called ‘efficiency of philanthropy.’

Acknowledgements

The author would like to thank the staff at Hertfordshire Archives for their assistance; Ian Agnew and Owen Tucker at the Cartographic Unit, University of Cambridge Geography Department for constructing Figure 1; and Professor Sue Bowden of the University of York and the editor of *LPS* for their help, advice and encouragement.

NOTES

1. For an excellent overview of developments within maternal care at this time, see L.F. Cody, *Birthing the nation: sex, science and the conception of eighteenth-century Britons* (Oxford, 2005).
4. See Basten, ‘Provincial lying-in at home charities,’ 6-10.
5. For a full discussion of these charities from a national perspective, see Basten, ‘Infant and
maternal health’ and Basten, ‘Provincial lying-in at home charities.’

6. Reports of the commissioners appointed in pursuance of Acts of Parliament to inquire concerning charities and education of the poor in England and Wales; arranged in counties, with Indexes: Hertford 1815 to 1839 (Hertfordshire Archives and Local Studies, HS0 824 0046/361.763), printed page 252/handwritten page 82.


10. Reports of the commissioners, printed page 253/handwritten page 83.


12. Rev. Dolling, ‘Extract from an account of the mode of supplying a country parish with a midwife. By the Rev. Mr. Dolling, late Vicar of Aldenham, Herts.’, in Society for bettering the condition...of the poor. The reports of the Society (see note 7).


14. W. Allen, ‘Extract from an account of a charity for lying-in women at Ware. By Mr. William Allen,’ in society for bettering the condition and increasing the comforts of the poor. The reports of the society for bettering the condition and increasing the comforts of the poor. ... 4 (London, 1804).


18. See, for example, Cody, Birthning the nation; Basten, ‘Provincial lying-in at home charities,’ 6-10 and Basten, ‘Infant and maternal health’.


SOURCES AND METHODS
This series considers a range of sources and methods commonly used in local population history. Each contribution is written by an experienced population history practitioner, and will usually address both the possibilities and the pitfalls of the respective sources and methods under discussion. The methods described vary in sophistication and complexity, but are intended to be those which might be useful to the broad readership of Local Population Studies, and are accompanied by worked examples. The LPS Board is happy to enter into correspondence on this item, which should be addressed in the first instance to the LPS General Office.

ESTIMATING LOCAL POPULATION SIZES AT FIXED POINTS IN TIME:
PART I—GENERAL PRINCIPLES

Nigel Goose and Andrew Hinde

Introduction

One of the most basic pieces of demographic information that the local population historian requires is knowledge of the size of the population of the locality being studied, and how this changed over time. Without this information it is very difficult to characterise a community accurately as a village, market town or town, to establish growth or decline, or to calculate other demographic variables, such as birth or death rates. From 1801 onwards, the decennial censuses provide this basic information at parish level in the published census reports, but before that, it is rarely available. For some communities, census-type information from before the nineteenth century does survive, in the form of the various community listings that were first effectively employed by Peter Laslett and Richard Wall at the Cambridge Group for the History of Population and Social Structure (CAMPOP) in the 1960s, and which have been used by several historians since, to explore the structure of the family and household in pre-industrial England. They are, however, relatively few, the sample of 100 used by Laslett representing just a small fraction of the 10,000 English parishes. Even the full 600 or so extant documents relating to the pre-1841 period held at CAMPOP cover only a small sample of all parishes, particularly as some parishes feature more than once in this collection. They are also concentrated in some areas (notably Kent, London, Westmorland and Staffordshire) and are either rare or completely absent in others (such as Lincolnshire, Oxfordshire, Cornwall and Cheshire).
Moreover, they are chronologically bunched, with large numbers surviving for the 1690s and 1790s, relatively few for earlier dates in the seventeenth century, and very few indeed for the sixteenth century or earlier.2 

To establish population totals, therefore, recourse must be had to other sources that were not designed to provide a complete list of inhabitants, but were drawn up for other purposes. Prominent among these are taxation returns, ecclesiastical surveys and muster returns, all of which represent only a sub-set of the entire local population. In consequence, they must be adjusted to allow for the omission of different categories of inhabitant, which will vary from case to case, but might include women, children (themselves of different age ranges), the elderly, non-communicants or recusants, those too poor to be taxed, those who managed to avoid taxation, and those deemed not to be able-bodied and capable of bearing arms. Not surprisingly, historians have interpreted these sources in different ways, which on occasion has resulted in estimates—not only of population sizes but also of long-term trends—that are completely at odds with each other.3 Indeed, debate over the correct interpretation of some of these sources has featured in previous editions of Local Population Studies (LPS).4 It is not possible in the space of a short article to complete a full survey of these sources, still less to discuss them in detail. But what we can do is, first, to describe some important principles that lie behind their use and interpretation and to offer some warnings and, second, to provide a list of the more important sources with brief details on their interpretation, notes on any continued disagreement about their use, and a select bibliography. In part I of this article we discuss general principles, and in part II (to be published in LPS 78) we will provide a list of the main sources, advice on their interpretation and a select bibliography. The main focus of the article is on the pre-census period.

Purpose and coverage of sources

The first point to insist upon is that both the purpose, and the intended coverage, of a source must be established before analysis can begin. This may sound obvious, but it is good practice which is not always followed even by professional historians. To give an example, some historians have treated the Exchequer Lay Subsidies of 1524–25 as if they provide a list of heads of household, and have hence applied a household size multiplier to convert taxpayers to total population, usually with some further allowance for those who may have been exempt from, or may have avoided, taxation. But in fact the subsidies were payable by all males aged 16 years or over, as both Roger Schofield and John Sheail pointed out in their PhD theses, written as long ago as 1963 and 1968 respectively.5 The distortion that such misinterpretation can produce is illustrated by considering a community of 100 taxpayers. Assuming that taxpayers are equivalent to household heads, and adopting a household size multiplier of 4.75 produces an estimate for the population of 100 x 4.75 = 475. Assuming that the taxpayers were males aged 16 and over, and that those under 16 constituted 37.5 per cent of the population leads to an estimate for the total number of males of 100 x (100/62.5) = 160, and, assuming...
further that the population contained equal numbers of males and females, to a total population of 320. The discrepancy is substantial, the first estimate producing a figure 67 per cent higher than the second. If these figures were to be compared with calculations made for an earlier or later date, it is quite possible that the long-term trend of population growth or decline would differ according to which one was adopted. This is not to argue that the second calculation is necessarily correct and the first entirely erroneous, and arguments have been offered in favour of the former interpretation rather than the latter. But given the clear remit of the Exchequer Lay Subsidies to tax males aged 16 and over, the burden of proof that these returns were in fact lists of male household heads must fall upon those who insist upon treating them in this way. It must also, of course, be remembered that these are lay subsidies, and so exclude the clergy, for which an allowance might be made where they are known to have been of significant number.

A related issue is that of the geographical area which is covered by the source. Most sources will identify themselves with the name of a place, but it is not always clear whether, for example, the details in the source relate to the population of the parish, or just of the main settlement within it. Some sources are based on manorial boundaries, which may not always coincide with parish boundaries. The issue of the geographical extent of the data provided in a source is especially relevant when using a series of different sources to establish long-term population trends in a particular place. In rural areas dominated by nucleated settlement, the problem may not be too severe, as most of the population of a parish or a manor tended to live in the main settlement. In urban areas, however, or in those rural areas characterised by dispersed settlement, the geographical area covered by a source may be both more difficult and more important to establish.

In more recent data sources, notably in the nineteenth century, the problem is not so much that the geographical area to which a source relates is unknown, but that different sources close together in time, and occasionally different tables within the same source (such as a published census report), might relate to different geographical units. An example would be the varying use of registration districts and urban and rural sanitary districts at the end of the nineteenth century. During the last few years, efforts have been made to construct new (mainly electronic) databases which map the data as originally presented on to a standard set of boundaries.6

Quality and survival of sources

A second important group of considerations to recognise is that these sources, even when their purpose and intended coverage is clear, can vary considerably in quality, be subject to local or regional variation, and fall foul of local ineptitude or inefficiency. They might also be lost for a particular area due to archival neglect or the chance ravages of rodent infestation or warfare, and where long runs of similar documents exist they can vary markedly in their coverage from year to year. Let us take some examples to demonstrate
these points, again beginning with the Exchequer Lay Subsidies of 1524–25. For many counties coverage is excellent, although for none is it entirely complete. However, the returns for the counties of Bedfordshire, Cornwall, Derbyshire, Gloucestershire, Hereford and Kent, and possibly also Lincolnshire, Middlesex and Shropshire, are clearly very deficient, while in Lancashire and Yorkshire the surveys were conducted very differently from those in the southern counties. In general, the tax assessed is much higher in the south and east of England than in the north and west. Furthermore, comparison of the returns for 1524–25 with 1543–45 (the only other period for which the lay subsidies appear to achieve substantial coverage) shows similar numbers at the two dates in the south and east, but larger numbers at the latter date in the north and north-west, indicating a possible shortfall in that region in 1524–25. Even when full returns do survive for a particular locality, they can be subject to the ravages of time, and are not always completely legible even with the aid of ultra-violet light. One can easily be misled by an entry in the appropriate List and Index Society volume where a documentary reference appears to guarantee coverage of a particular locality, only to be confronted with a partly legible, mouse-eaten fragment when one arrives at The National Archives. Fortunately we now have Richard Hoyle’s edition of John Sheail’s gazetteer of the 1524–25 and 1543–45 returns to guide us, though local researchers should, of course, still consult the original documents from which this has been compiled. The ecclesiastical returns of 1563 and 1603 are even more patchy in their coverage, surviving for only 12 dioceses out of 26 in 1563, and only 16 in 1603, with only seven possessing returns for both years.

Laxity or ineptitude can often be detected in lists which only give totals of inhabitants by the use of round numbers. Any total for a community which is a multiple of one hundred should be treated with suspicion for, although it may be a good approximation, in most cases it will be an estimate rather than a head count. Many such cases occur in the ecclesiastical return of 1563, the so-called ‘Bishops’ Census’. These include the towns of Birmingham (200 ‘houseling people’), Lichfield (400) and Canterbury (700), but it is not only towns for which estimated numbers appear to have been given. In the introduction to their authoritative edition of the ecclesiastical returns of 1563 and 1603, Alan Dyer and David Palliser analyse the proportion of individual returns in 1563 that are rounded to multiples of 10, 12 or 20 in each diocese for which information survives. Overall this tendency was very marked, but it varied considerably between dioceses, with a range for multiples of 10 rising from 10.4 per cent in Worcester to 57.8 per cent in Canterbury, a generally greater tendency to provide round estimates in deaneries further away from the diocesan centre, and somewhat greater evidence of rounding in larger parishes rather than smaller ones. As Dyer and Palliser conclude: ‘[t]he moral of this analysis for the researcher is obvious. Districts should be assessed for their tendency to approximate to particular values, and those numerals should be regarded with caution’. The same considerations, of course, apply to any listing of population or households that gives suspiciously round numbers, and if this tendency was more marked in the mid-sixteenth century when numeracy was in its infancy, many similar
examples can still be found in the ecclesiastical census of the mid-nineteenth century, at the height of the Victorian statistical movement.\(^{12}\)

The Hearth Taxes of the later seventeenth century provide a good example of a source that is—taken at face value—apparently consistent, but in practice variable in quality. The Hearth Tax was levied from 1662 to 1689, and returns survive from 1662–66 and from 1669–74; in the intervening and subsequent years the tax was farmed and detailed returns are unavailable. It was levied according to the number of hearths per household, at the rate of 1 shilling (5p) for each hearth every half year. Those not assessed either for church or poor rates due to their poverty, and those whose house was not worth over £1 per annum and did not possess other lands and goods to the value of £10, were exempt, although in 1664 such exemption was limited to those with two hearths or fewer.\(^{13}\) It is clear that the tax applied to households and not to houses, so in theory it should be relatively easy to establish a population total by applying a suitable household size multiplier. In practice, however, the returns are less straightforward than one might expect: many lists are clearly incomplete, some include those exempt while others do not, the treatment of paupers is unclear and variable, and totals can differ substantially from year to year even for the same locality. Local variations in the practice of administering the tax clearly occurred, while surviving documents come from different stages in the tax’s collection.\(^{14}\) In some instances the returns for 1662 or 1664 appear to be the most complete, for others the best lists are often those for 1674. Where several lists survive for a particular locality, it is essential to compare and choose between them. Where this is not possible, for example in the case of the town of Reading where the only surviving list is for 1664 and excludes those exempt from taxation, the source must be approached with due scepticism and recognition that it may be of very limited value on its own for the purpose of establishing population size.\(^{15}\)

Another source that can present similar difficulties is the Compton Census of 1676. This ecclesiastical return, at its best, lists men, women and children—those conforming to the Church of England, those who were nonconformists and those who were ‘papists’ or Catholics. For most parishes, however, the lists only include those of age to communicate, which at this time meant those over the age of 16, while in other parishes only the number of male communicants is given. Fortunately, ‘conjectural interpretation’ of the probable coverage of the Compton Census for the various parishes for which it survives has been provided in Anne Whiteman’s authoritative edition of the returns, these interpretations having been made on the basis of a range of comparisons with the ecclesiastical returns of 1603, the Protestation Oath of 1641–42, the Hearth Taxes where available and other local sources.\(^{16}\) Despite its wide coverage, however, it is not comprehensive. Within the province of Canterbury, for example, there are no returns for the archdeaconry of St Albans or for the archdeaconry of Suffolk, while several individual parishes and groups of parishes are omitted in peculiar jurisdictions. In the Province of York, returns exist for only two of the four dioceses: Carlisle and York.\(^{17}\)
Multipliers

In most cases, once a source has been identified, its intended coverage established and its reliability explored, a suitable multiplier will need to be chosen to convert the raw numbers it provides to a population total (we have already considered the example of the Exchequer Lay Subsidy). Some suggested multipliers will be included in Part II of this article, from which it will be seen that for some sources there is virtual consensus, for others considerable disagreement. It is essential to be up-to-date with the most recent relevant literature before settling upon a particular figure, and to avoid simply adopting one found in a secondary source, or in a guide to local history sources that may have been written some time ago: the author of your secondary source may have a particular axe to grind, while, as our understanding of sources changes with time, multipliers once seen as credible may no longer be regarded valid. As an example of the latter, J.C. Russell once thought that the medieval age of communion was 14, but more recent research suggests an age as low as 7 before the Reformation. Nor are such multipliers necessarily conformable over time: by the seventeenth century the age of communion was 16, and hence the ecclesiastical returns of 1603 and 1676 have to be treated very differently to the communicants listed in the Chantry Certificates of 1546 and 1548. The age structure of the population will also change over time, and hence so too will allowances for proportions of children in the population. As the best estimates available, recourse might be had to the age structure calculated by quinquennia in Wrigley and Schofield’s *The population history of England*. Similarly, in periods of rapid population growth, particularly when associated with high fertility, one might expect the average household size to be higher than during periods of population stability or decline. That said, local demographic variations, often associated with particular socio-economic factors, may exert an overriding influence. In this respect, a detailed census of part of the town of Cambridge for the 1620s revealed particularly small mean household sizes in the town’s suburbs, despite the rapid growth the town was experiencing, which could be explained by the relative poverty of these areas and the high incidence of plague they experienced. Potential variations of this kind have to be considered, particularly for parishes and communities that possess distinctive social and economic features. Even the apparently straightforward doubling of a list of men to allow for women might be suspect in certain circumstances, such as in towns from the late seventeenth century where sex ratios were often skewed towards women because of the employment opportunities they provided in domestic service and other service occupations.

Ranges of estimates and comparisons between sources and over time

For any locality, uncertainty will remain no matter how much care is taken in the selection, inspection and conversion of sources to produce population totals. For this reason two further strategies are suggested. First, it makes sense to offer hypothetical upper and lower estimates, particularly where source interpretation is most controversial, such as in the case of the
Exchequer Lay Subsidies of 1524–25. At the very least, the approximate nature of any estimate must be emphasised, to avoid misleading any reader who might be less familiar with the complexity and uncertainty of interpretation involved. Second, wherever possible calculations from different sources at similar dates should be cross-checked against each other. This strategy proved particularly fruitful for Anne Whiteman’s elucidation of the local coverage of the Compton Census, but it is quite rare to find two sources (in this case the Compton Census and the Hearth Tax) so close together in time. For this reason, where parish registers survive, comparison between estimated population totals from fixed sources and the vital events the registers contain can often be revealing. It was this procedure that suggested that the totals given in the Bishops’ Census of 1563 for some parishes in the town of Cambridge and county of Hertfordshire were suspiciously low, for when the totals the Census produced were compared with numbers of baptisms in extant parish registers the resultant baptismal rates were often far higher than one would have expected.

To expand on this point further, if population sizes for the same place have been estimated for several points in time using different sources, it is worth considering whether, when all the estimates are taken together, the story implied about the long-term evolution of the place’s population is both plausible and consistent with what is known about national population trends and with the numbers of vital events recorded in the parish registers. Clearly local populations did not always follow national trends. Local migration patterns can lead to variations, and an apparently abrupt change in a place’s population might be a real effect of some local economic event (though there might be independent evidence of the latter). However, if the population of a place estimated from an early fourteenth-century source was smaller than that estimated using the Poll Taxes of the late fourteenth century, it should probably arouse suspicion.

The assumption of rule of thumb parameters for feasible baptismal rates might often help determine whether or not a particular listing produces totals that are within the bounds of probability, although it must also be noted that parish registers themselves change of time in terms of their reliability. This is, of course, why Wrigley and Schofield applied different correction factors to raw totals of baptisms, marriages and burials for different periods in their study of English population history between 1541 and 1871, and local historians might consider following the same procedure. This approach is exemplified by Janet Hudson’s article on Stonehouse in Gloucestershire, printed in this very issue of LPS, although one must always remember that ‘national’ correction factors might not always apply to local communities.

Hudson’s study attempts to establish whether or not it is feasible to use parish registers on their own to establish population totals. Although her employment of chronologically specific correction factors adds sophistication, this is by no means a novel idea, and was in fact suggested by W.E. Tate as long ago as 1951. The procedure suggested by Tate was to multiply the
number of baptisms by 30 to give an approximate population total, which assumes a crude baptismal rate of 33 per 1,000. Clearly, individual figures for particular years might not be representative, and so calculations should be based upon averages of at least five years, avoiding periods suspected to be exceptional (for instance, due to the incidence of epidemic disease or famine). Now that Wrigley and Schofield have provided estimated national crude birth rates for each quinquennium from 1541 to 1871, these might be preferred to Tate’s rule of thumb figure, though again the changing quality and coverage of baptism registers over time, and the possibility of distinctive local demographic circumstances, must be born in mind.

Used in this way, parish registers form an important supplementary source which covers an extensive time span (from 1538 onwards), and with good (if variable) geographic coverage too. But there is another reason for examining at least the trend that counts of vital events in a particular locality reveals, and this is that sole reliance upon sources that survive only for specific dates can force consideration of the long-term population trend into a framework within which it does not sit comfortably.25 While it is useful up to a point to know that, say, the population of a locality was larger in 1676 that it was in 1563 or 1603, this does not tell us anything about fluctuations that might have occurred between those dates, or identify key periods of growth. If we are to chart population change with more chronological precision, therefore, recourse must still be had to parish register evidence where available.

NOTES
2. P. Laslett, The world we have lost further explored (London, 1983), 289–90.
15. TNA, E179/76/460.
REVIEW OF RECENT PERIODICAL LITERATURE

Andrew Hinde, Tom Nutt and Jon Stobart

All articles reviewed were published in 2005 unless otherwise stated.


The first of these two papers describes the rapid growth in the population of Swansea between about 1670 and 1800. Using a wide range of sources, including Hearth Tax records, the Compton Census of 1676, parish registers and the early nineteenth-century censuses, Anthony shows that the growth of the population of Swansea during this period (from 1,700 to more than 6,000) eclipsed that of all other Welsh towns except one. Population growth went alongside economic growth, the latter being ‘balanced’ in the sense that industry, commercial activity, leisure and tourism, and scientific activity all contributed (on the role of scientific activity, see the paper by Miskell reviewed in *Local Population Studies*, 73 (2004), 92–3).

The experience of Swansea contrasted markedly with that of Merthyr Tydfil, the one Welsh town which experienced more rapid growth before 1800. The rise in the population of Merthyr was meteoric, progressing from effectively zero in 1700 to over 7,000 in 1800 and more than 46,000 in 1851. But Merthyr’s growth was grossly ‘unbalanced’ in that it was almost entirely due to the construction of ironworks. Indeed, recent historians have doubted whether the Merthyr of the first half of the nineteenth century could be called a town because of its lack of judicial and administrative functions and urban facilities and services (p. 101). The consequence, Jones argues in the second of these two papers, is that by the mid-nineteenth century Merthyr suffered from the excessive power of industrial capital (personified by the ironmasters) and a shortage of ‘civic’ and social capital. This contributed to out-migration from the town both to other parts of Britain and to the United States when the fortunes of the iron industry turned down in the 1860s.

M. Barber, ‘Hearing women’s voices: female migration to Canada in the early twentieth century’, *Oral History*, 33, 68–76.

*Local Population Studies* 75 (2005), 87–9 contained reviews of three papers dealing with emigration from Scotland. Here is another one, in which Barber describes the experience of 15 young women who left Scotland in the early twentieth century to take up positions as domestic servants in Canada.

This paper examines attitudes towards so-called ‘monstrous’ births in the sixteenth and seventeenth centuries. Drawing on writings from across Europe, the author contrasts two models of belief: a ‘traditional’ view that they were signs from God, related to (perceived) lapses in moral order; and a more ‘progressive’ view that they revealed the complexity and order of the natural world. While it provides an intriguing insight into how medical science was changing in the early-modern period, there is little here on how ordinary people aligned themselves with these rival viewpoints or how they perceived or reacted to these unfortunate phenomena.


Most of the literature on the Irish famine of the 1840s has concentrated on its impact in the west and south-west of the country, where the suffering was most severe. However, it caused considerable distress throughout the whole island, and this paper reviews its impact in the hitherto little studied region of south-east Ulster. Beale discusses the strategies that guardians of the poor in the unions of this area adopted to try to deal with the crisis, using a range of official records and other sources such as newspapers.


This article is, effectively, a ‘trailer’ for Benedictow’s recent book on the Black Death: *The Black Death, 1346–1353: the complete history* (Woodbridge, Suffolk, 2004). In the book, Benedictow makes two major points. First, he concludes that the disease was, indeed, plague—and mainly bubonic plague at that—thereby contradicting recent research which has suggested that other diseases may have been responsible. Second, the mortality rate in the first great epidemic was higher than has previously been supposed, and approached 60 per cent. If he is right about this, then his findings have considerable implications for our understanding of the demography of medieval England, since they imply that the English population before 1348 was considerably greater than most previous estimates have suggested.


This article examines patterns of inheritance and family networks among will makers in early-modern Blakesey, Northamptonshire. It finds that whilst the nuclear family was central in terms of the wishes of testators, there are also indications of strong and wider kinship ties.

This paper complements studies based on local estate accounts with a broader analysis using taxation records, namely lay subsidies. The wider geographical coverage provides a useful comparative context which suggests that Scottish raids did create local economic problems, but that other factors were also important in producing ‘crises’ in particular communities. Principal amongst these was the need to supply troops and equipment for military expeditions into Scotland. More generally, the drop in revenues raised by the subsidies was linked to a growing problem of tax evasion.


This paper considers, at length and in considerable empirical detail, a crisis-ridden period in English and European agrarian economies. The author begins by dismissing the notion of an avaricious land-owning class extracting excess profits from their holdings. Indeed, he argues that lords received, on average, a smaller share of national and rural income than did their counterparts in the seventeenth and eighteenth centuries—a time of agricultural dynamism and prosperity. These relatively modest incomes were caused by the poor returns received on tenanted land which, in turn, were associated with a surprisingly large number of freehold tenants paying very low rents. Campbell builds on this by further arguing that these low rents were linked with a range of rent-seeking practices, including sub-dividing and sub-letting plots, which caused a reduction in total factor productivity. The consequence was rural congestion, especially in areas such as East Anglia, which made the population vulnerable to environmentally stimulated crises.


This largely descriptive paper identifies those involved in ropemaking in the city and county of Durham from the Middle Ages to the nineteenth century. Apart from its local interest, the paper forms a useful list of the range of sources to which local historians might turn for occupational data.


During the early phases of the First World War Britain relied on voluntary enlistment to provide soldiers. Enthusiasm for volunteering was higher in Scotland than in England or Wales, but, as Coetzee shows in these papers, it varied according to men’s demographic and family characteristics. In the first paper, Coetzee emphasises the tensions faced by men with dependent children, which were mirrored in a debate between those who stressed the
duties of such men to their country and those who were more concerned that such men should be looking after their families.

These factors played themselves out in regional variations, as the second paper shows. In many Highland counties more than half the eligible males volunteered, whereas in southern and western Scotland fewer than one third did so. Coetzee’s analysis suggests that the tendency of men to enlist was related to the regional economy, and that where there was an abundance of unmarried young men with uncertain economic prospects (as, for example, in the crofting counties), volunteering was more popular.


This paper reports a statistical analysis of geographical patterns in infant mortality in 414 local government districts in Cheshire, Lancashire, Yorkshire, Cumberland, Westmorland, Durham and Northumberland. Data on infant mortality are related to the characteristics of the districts as reported in the population censuses of 1931, 1951, 1961 and 1971. There was a general decrease in disparities in infant mortality over the period, with the association between mortality and social class diminishing, but an association with urban overcrowding becoming stronger.

G.C. Cook, ‘Medical disease in the merchant navies of the world in the days of sail: the Seaman’s Hospital Society’s experience’, *Mariner’s Mirror*, 91, 1, 46–51.

The Seaman’s Hospital Society was founded in 1821, to care for sick and injured members of the merchant navy. For the first half century of its existence, it operated a hospital ship which was moored in the Thames near Greenwich. In this paper, Cook examines the diseases from which those admitted to the hospital in the years 1829–31 were suffering. Fevers, chest conditions, rheumatism and bowel conditions were the most common ailments, though mortality from these was low. Phthisis was rarer, but the majority of those admitted with this complaint died.


The first part of this paper describes the institution of life-cycle service in early modern England in terms which will be familiar to many readers of *Local Population Studies*. Two features which Cooper stresses which have perhaps been neglected in the historiography were, first, its educational role and, second, its role in fostering social mobility—often not over vast social distances but important for maintaining a stable society. It also helped oil the wheels of the economy by facilitating the geographical movement of workers to the available work. The second part of the paper describes the reasons for the decline of life-cycle service in the nineteenth century. Demographically, the decline in the age at marriage, higher fertility and lower mortality meant that families were larger. This reduced the demand for servants and also
reduced the length of the phase of the life-cycle during which young people were available to be ‘in service’. Life-cycle service, in other words, was naturally more appropriate for a roughly stationary population than for a growing one. Culturally, the increasing size of houses led to the physical separation of servants from those they served, and this encouraged a class of ‘lifetime’ servants who replaced the life-cycle servants. These lifetime servants were definitely socially inferior to their masters and mistresses, whereas many of the life-cycle servants of the seventeenth and eighteenth centuries had been their social equals.


In this complex paper, Crockett attempts to use data from the 1851 Census of Religious Worship to test three competing theories of the dynamics of religious participation. The first is the secularisation theory that modernity induces a decline in religious adherence because rationality overcomes tradition and superstition and hence the ‘demand’ for religion decreases. The second argues that religious worship is characterised by long cycles of decline and revival, kept going by its own internal dynamic. The third argues that church attendance rates are a function of the ‘supply’ of church services (and hence of the number of churches). Crockett uses registration district data on church attendance in England in 1851 to suggest that in rural areas the supply argument is persuasive. Church attendance was highest in those areas where access to church services was greatest, notably in those parts of the south Midlands where nonconformist and Anglican churches were both numerous. In urban areas, on the other hand, access to churches was easy for almost everyone, and there seems to be strong evidence that church attendance was determined largely by the demand for services.


The largest Jewish community in medieval England was that of London, although as this article illustrates, there were also significant communities in other provincial centres. This article uses two tax listings, from 1194 and 1241, to show that Warwick had a substantial Jewish population, whose members were involved in money-lending. The community was relatively short-lived, however, since by 1280 there were no recorded Jewish residents.

A. Davis, ‘To what extent were women’s experiences of maternity influenced by locality? Benson, Oxfordshire c.1945 to 1970’, Family and Community History, 8, 21–34.

Oral history evidence is used to paint a picture of the varied experiences of motherhood by women in the Oxfordshire village of Benson during the 25 years after World War II. Davis stresses the importance of locality in determining that experience. Women in Benson were fortunate to have the services of a resident general practitioner and his wife (who was also a qualified doctor). They also had access to a maternity home at nearby Wallingford, and almost all compared this institution favourably with nearby hospitals.
S. Dimmock, ‘Reassessing the towns of southern Wales in the later Middle Ages’, *Urban History*, 32, 33–45.


These three papers appear as part of a special issue of *Urban History* which aims to reassess the history and historiography of Welsh towns. Taking them chronologically, the paper by Stevens explores the social inequalities between English and Welsh burgesses in a small market town in north Wales during the fourteenth century. Although there were roughly equal numbers of English and Welsh, evidence from the borough court records shows that their wealth levels were very different, English burgesses being noticeably wealthier. Despite these inequalities, Stevens notes that the Welsh enjoyed good access to wealth-generating and status-affirming activities: they were able to acquire real estate and act as jurors, for example. On this basis, he argues that they were just as influential in the town as their English neighbours. However, the reason for relative lack of wealth remains unclear.

The paper by Dimmock focuses attention upon the neglected urban history of south Wales. It is often assumed that the region was predominantly rural before the nineteenth century, when industrialisation brought about the rapid growth of mining and iron-making towns, and their associated sea ports (see the papers by Anthony and Jones reviewed above). Dimmock attempts to challenge this notion. He draws on unusual sources—700 property deeds for medieval Haverford West and the Marcher lordship customs accounts for Chepstow—to gain some insight into the urbanisation and function, social-property structures, and commerce and trading networks of these two settlements. He argues that both were flourishing urban and commercial centres by the late thirteenth century. The nature of their urban credentials can and should be tested by similar studies of towns in England and elsewhere in Europe.

Powell’s paper is a much broader survey, based on more established data sources including lay subsidies, hearth tax returns and the Compton Census. Welsh towns of the early-modern period were small by English (and even more so by European) standards. Powell argues that this was not because they were isolated from the commercial mainstream—the argument put forward by Peter Clark in his chapter in P. Clark (ed.) *Small towns in early modern Europe* (Cambridge, 1995). In contrast, the paper asserts that it reflected, first, the often specialist roles of Welsh towns (frequently linked to local production systems) within wider commercial networks that linked them closely with towns in England; and, second, the lack of widespread rural-urban migration, itself the product of the lower demographic pressure which characterised the pastoral economy prevalent in much of Wales. What is less clear from the analysis is why English towns in similar environmental and agricultural contexts grew far more rapidly.

Readers of *Local Population Studies* who have interests in the management of medieval estates will find this article of considerable relevance to their research. Dodds explores the management of the tithes income of Durham Priory in the fourteenth and fifteenth centuries. Like the management of manorial demesnes, monks could choose either to collect the tithes directly, for later sale or consumption, or to sell them before harvest. For the monks, this was a potentially significant decision, since the cash income from tithes could exceed that from manorial demesnes. However, the decision required considerable information, ranging from labour costs and grain prices, as well as other market factors, such as the availability of purchasers. The administration of tithes was thus complex, necessitating the keeping of detailed records. Management decisions as to whether to sell or to collect were highly contingent, and hence varied chronologically. Dodds suggests that an apparent later tendency, identified by historians, to lease and sell should not be seen as withdrawal from estate management, but rather a changing response to market conditions and the needs of the priory community.

M. Drake, ‘The vaccination registers: what are they and what can we learn from them?’ *Local Population Studies*, 74, 36–53.

This paper is a description of the vaccination registers kept between 1872 and 1904 in England and Wales, under the auspices of the Local Government Board. The paper describes the process by which vaccination was regulated, and the laws relating to compulsory vaccination enforced. It details the contents of the registers, and provides some illustrations of the kinds of analysis which they permit. They are particularly useful for the analysis of local-level variations in infant mortality.


In this article, Erickson examines the interaction of law, economy and society in the case of marriage and coverture. She contends that the peculiarities of English law can be seen as a contributing factor to the early development of England’s complex economy. Under the English common law fiction of coverture, an English woman effectively gave up ownership of all her property to her husband. This entailed a number of consequences for both parties: for the wife and her family it was potentially highly restrictive in terms of property ownership; for the husband it meant that he was liable for any debts incurred by his wife both before and during the marriage. As Erickson suggests, it was therefore often necessary to ameliorate legally the effects of coverture, using contracts, bonds, settlements and trusts, and other forms of property transfer. This created a climate of contract and litigation, which helped to develop confidence in property law. English law was also unique in allowing unmarried women (both never-marrieds and widows) to act as full legal individuals, without legal guardians as was generally the case in Europe. This freedom for females to act may have increased the level of
activity in financial markets: as Erickson highlights, small (and possible female) shareholders and investors were significant in the development of financial markets in the cities of London and Amsterdam. Where Local Population Studies readers in particular may find interest in this article is in Erickson’s call for further research into individual biography. She cites the example of Joyce Jeffries, from Hereford, and Anne Lister, from Halifax, as examples of financially active women. In order to test Erickson’s hypothesis, more research is required into other such women and the extent of their activities, networks and places of business.

T. Evans, ‘“Unfortunate objects”: London’s unmarried mothers in the eighteenth century’, Gender and History, 17, 127–53.


These two papers are based on records from the London Foundling Hospital during the eighteenth century. In the first, Evans uses the petitions which women made to the secretary of the Hospital to assess the situation of unmarried mothers in London during the second half of the century. She argues that many of the women who petitioned the secretary were migrants from rural areas, and found themselves in their predicament because they had effectively ‘imported’ rural pre-nuptial sexual practices. In the countryside, it was common for young men and women to have pre-marital sexual relations and, if a pregnancy resulted, social pressure in a small community generally ensured that the couple in question married before the birth of the child. In London’s more fluid society, however, such pressure was not brought to bear, and the fathers tended to vanish without trace. Although many petitions made by unmarried mothers used the language of seduction, this was often a ploy to garner sympathy, and not an accurate description of their experience. Moreover, it was in the mother’s interest to state that she had been deserted by the child’s father, as if the father could be traced, the child would be refused admission to the Foundling Hospital on the grounds that the father should be pursued for support through the Poor Law system.

In the second paper, Levene provides new estimates of the mortality of foundlings before their first birthday based on exposure from birth, rather than from entry into the foundling institution—which is normally used when measuring infant mortality among foundlings. Remarkably, the mortality of foundlings was not appreciably higher than the general level of infant mortality in the capital, except during the period 1756–60 when admission to the Foundling Hospital was unrestricted. Before and after that period, the authorities at the Hospital ran a fairly rigorous selection policy which, Levene argues, probably screened out the least healthy of the potential ‘customers’.


There has been a long-running debate in the literature about the extent to which the quality of care offered by mothers influenced the health and life
chances of infants in early twentieth-century Britain. In this paper, Fisher looks at the role of fathers by focusing on the fathercraft movement which grew up between the wars. He convincingly describes the fine line which the movement had to tread between encouraging fathers to become more involved in the upbringing of their children while neither seeming to want to take over the traditional role of the mother nor diluting the fathers’ ‘masculinity’.


Following the article by Roger Bellingham published in Local Population Studies, 73 (2004), 51–60, Galley has conducted an exercise to assess the quality of the Dade parish registers of St Olave, York. He finds that there are significant errors of omission in the registers, especially of infants who died shortly after birth. In his conclusion he states that, wonderfully detailed though Dade registers are, ‘historical demographers should not be lulled into believing that their coverage of the population is much better than ordinary parish registers in the same period’ (p 82–3).

M. Garry, ‘“Seduced by the devil”: divorce in eighteenth-century Norfolk’, Norfolk Archaeology, 44, 591–601.

This short article looks at three Norfolk divorce cases mentioned in J. Gill’s Trials for Adultry, published between 1779 and 1802. In particular, Garry is able to examine one case in detail, using correspondence surviving in Holkham archives. This sheds light on not only attitudes towards divorce, but also other aspects of social and economic life in the eighteenth century.


Anyone who has, even casually, examined the census returns for workhouses in England during the second half of the nineteenth century will have been struck by the large number of elderly male inmates. Yet, as Goose points out in the introduction to this paper, the academic literature has tended to focus on the situation of elderly women, and has rather neglected the plight of poor old men. Using the county of Hertfordshire as a case study, he shows that males were much more likely to be ‘offered the house’ than were females, and that this was especially true of elderly men. The different treatment of men and women did not just apply to the able bodied, but was true also of the non-able bodied. Partly this was because the New Poor Law offered many more protocols under which outdoor relief might be granted to old women than it did for old men; partly it was because retired women were felt to be more useful by their kin and so were more commonly accommodated in the households of their younger relatives. Goose acknowledges that the situation of men in Hertfordshire was particularly unfortunate because it was an arable agricultural county. This meant that a high proportion of men were employed as agricultural labourers, an arduous occupation which wore men out and for which older men were ill-suited. Moreover, there were alternative
strenuous) employments available to women in the straw-plaiting and hat-making industries. Nevertheless, gender differences in the treatment of paupers under the New Poor Law can be observed throughout England.

W.M. Gordon, ‘“What, I pray you, shall I do with the balance?”: single women’s economy of migration’, *International Review of Social History*, 50, 53–70.

Existing accounts of the economics of migration among single women during industrialisation contrast the experience of British migrants, who maintained strong ties with their families of origin and often remitted money to their parents, with that of their sisters in the United States, who tended to ‘break free’ from their families and strive for economic independence. In this article, Gordon uses evidence from young women migrants in Preston (England), Paisley (Scotland) and Lowell (Massachusetts) to suggest that this contrast has been overplayed, and that British and American women were more similar than has hitherto been thought.


The advent of geographical information systems (GIS) has opened up the possibility of storing historical demographic data electronically, and, in particular, making available at the click of a few buttons the vast array of aggregate census data collected and published in England and Wales since 1801. One problem which has to be overcome before this can be achieved is that of the changing geographical boundaries of administrative units (for example registration districts and counties). Unless a consistent set of boundaries can be devised, time series of regional and local data will be contaminated by changes in the extent of the relevant areas. The first of these papers reviews a range of methods for handling and resolving this issue which make use of GIS. It is technical in places, but will be very useful background reading for those who intend to use data sets such as the Great Britain Historical Database available from AHDS History at the University of Essex (see the paper by Southall in *Local Population Studies*, 76 (2006), 76–89).

The second paper applies GIS and associated methods to the analysis of population change in the Poor Law Unions of Ireland between 1841 and 1861. Gregory and Ell include a discussion of the most suitable scale for geographical analysis, and then use regression models to evaluate the spatial relationship between illiteracy, the presence of towns, housing quality and population loss. One of their main conclusions is that the relationships between illiteracy and housing quality, on the one hand, and population change on the other, varied from region to region. In the east, they were as
expected, but in the west this was not true, and where, for example, regions with above-average proportions of better quality housing experiencing greater than average rates of population loss.


This article examines the operation of lifeleasehold in two Lancashire estates between 1649 and 1697. It illustrates well how the relationship between landlords and tenants was heavily conditioned by the chronological and spatial conjunction of demographic, economic and environmental factors. Lifeleasehold was the dominant form of tenure in the west of England from the seventeenth to the early eighteenth centuries, and in south-west Lancashire it persisted until the late eighteenth century. The principle of the contract was that it lasted for the duration of three 'lives', who were nominated by the lessee at the point of entry. The lease itself was characterised by a low annual rate of rent, but high entry fines were usually payable soon after entry to the tenement. Fines were also paid at the addition or change of lives, but not upon the death of the tenant or landlord. This system provided security of tenure, but was potentially complicated to administer. The high entry fines often necessitated negotiation, since the entry fine was based on an assessment of the value of the tenement, although other social, economic and cultural factors were relevant. On William Blundell’s estate, for example, preference was effectively given to Catholic tenants, and on the Molyneux estate, to local tenants.

Gritt has examined the nature of the relationships between the three lives named in 1,272 contracts entered into the books of the Molyneux estate between 1649 and 1697. Whilst there was an obvious tendency for the second and third lives to reflect 'nuclear' familial concerns (that is, wives and sons), a significant number of geographical outsiders and non-family members were also named. Gritt argues that since the high entry fines of lifeleaseholds required tenants to use credit, these apparent strangers were money lenders or investors, who could lend the capital required for the fine, with interest, and perhaps nominate the third ‘life’ as security. This outside capital provided farmers with access to land that would have been otherwise beyond reach, thereby facilitating continuity in terms of the occupancy of tenements on estates and day-to-day farming within communities.


Drawing on the records of a court case brought by the parishioners of St Oswald's, Durham, against Bishop Thomas Hatfield, this paper draws a detailed picture of the potential for and problems in travel in the fourteenth century. Disputes over what constituted a day’s journey and how daylight might be judged reveal the complex and often contrasting perceptions of time and space which conditioned individual world views. On a more pragmatic level, we are given a fascinating insight into the working practices and
journeys of individuals, witnessed as they travelled around the region (or sometimes no further than the neighbouring parish) in their day-to-day work.


Methodism in Sussex has always been less strong than in many other counties, and rather little is known of its origins. Hickman shows that in Brighton, Lewes and other Sussex towns, soldiers who had fought in the Napoleonic Wars played a more important role in its development than they did in other areas, and perhaps a more important role than ‘missionaries’ sent into the county by John Wesley and the Wesleyan Methodist Conference.


Though mortality among men during World War I was heavy, it is likely that contemporary accounts exaggerated the extent to which a whole generation of young men had been wiped out. This belief, though, may have been behind the schizophrenic view that public opinion—and indeed policy—took of women who, during the period after the War, were unable to find husbands. Spinsters were substantially worse off than war widows (who were entitled to a pension), and many poorer spinsters did fit the stereotype of being ‘poor, needy, and tied to their mothers’ (p. 396). But better off and better educated women (who probably suffered more than others from the shortage of eligible men, as war mortality was especially high among the officer class) were often able to forge alternative lives for themselves as career women. Holden’s wide-ranging and thoughtful article examines these and other related issues, concluding that although ‘most women of this generation [that] had either lost fiancés during the war or were deprived of chances to find marriage partners ... were cast as bereaved victims’ (p. 404), many of them ‘filled important, but undervalued, positions in the labour force of early and mid-twentieth-century Britain’ (p. 405).


This article examines the operation of five Westmorland manorial courts in the early-modern period when, as the author rightly suggests, historians have tended to assume that such courts were of declining importance relative to other institutions such as the parish, township and justices of the peace. Holdsworth examines the records of Crosby Ravensworth, Great Musgrave, Newbiggin, Thrimby and Kirkland, and finds a considerable range of presentments for public order offences and failure to meet communal obligations, as well as pleas in cases such as debt and trespass. These cases tended not to reflect the top-down control of the lord of the manor, but rather the efforts of individuals and the community to regulate the social and economic life of the manor.
The paper opens with a useful discussion of the workings of manor courts and the types of documents that survive. It highlights general trends and the situation pertaining in Westmorland. The *personae dramatis* are identified—the focus here is on the presiding steward (acting for the lord of the manor) and the jurors (obliged to serve in their status as freemen)—and their roles investigated through analysis of the ‘crimes’ and ‘pleas’ that came before the court. What emerges is a fascinating insight into the concerns and workings of the local community in the early-modern period.


Using the census enumerators’ books for the 1851 and 1901 censuses, Hunt presents a detailed examination of the structure of the household in the large agricultural village of Bassingham. Between 1851 and 1901 the average household size in the village declined along with its population, and Bassingham shared in many of the trends identified in previous studies of other places, such as a decline in the number of offspring and domestic servants, and an increase in the proportion of households consisting of one person living alone. Where Bassingham differed from other communities, its distinctive features seem to have been related to the relative abundance of housing in the village. Thus it had a larger proportion of simple family households and fewer lodgers than other similar places. A feature of the paper is the wealth of comparative analysis which Hunt presents.


S. King, ‘“It is impossible for our Vestry to judge his case into perfection from here”: managing the distance dimensions of poor relief, 1800–1840’, *Rural History*, 16, 161–89.

These three papers consider aspects of poor relief provision in nineteenth-century England. The first examines the impact of the campaign to reduce welfare opportunities in the 1870s, 1880s and 1890s in the union of Brixworth, Northamptonshire, which set itself up as a standard-bearer for this so-called ‘crusade’ against outdoor relief. Hurren shows that the ‘crusade’ had important knock-on effects on medical expenditure and investment in sanitary improvements, since these tended to be under the control of local poor law officials who felt accountable to their ratepayers. For example, Hurren links a lack of investment in proper sanitation to an outbreak of diphtheria. Unfortunately, for this reviewer (AH) the paper is marred by the frequent use of emotive and value-laden language, which makes it hard for the reader to gain an objective picture of the unfolding political, social and economic processes.
The second paper looks at local policies and practices with respect to funeral expenses. Hurren and King compare the experiences of the poor in the parish of Hulme, near Manchester, under the Old Poor Law with those of the poor of Brixworth Union between 1871 and 1900. They show that pauper funerals and burial arrangements were not always as stark and simple as is commonly believed. Moreover, community expectations of a ‘proper funeral’ remained a powerful force throughout the century and in extreme cases could shame guardians of the poor into paying funeral expenses out of their own pockets when local policy would not allow such expenses to be paid officially. Finally, there is little evidence that the poor tried wherever possible to avoid pauper funerals.

In the third paper, King considers the practice of ‘out-parish relief’, or relief paid by one parish to its settled paupers who were resident elsewhere. The system of out-parish relief had advantages. It avoided the expense of removal. It facilitated the migration of workers in search of employment, as it permitted their ‘home’ parishes to support them from a distance through temporary periods of unemployment in their destination parishes. More generally, it almost certainly permitted a more efficient matching of workers to the available work, and thus contributed to overall economic growth. However, it did require the transfer of numerous small sums of money across the country, and this was a difficult and often bureaucratic enterprise. The evidence used in the paper comes again from the parish of Hulme near Manchester, and is supplemented by evidence from two other Lancashire parishes. King shows that the out-parish relief system worked most smoothly when there was mutual trust between the pauper’s parish of settlement and the parish of residence, but that when such trust broke down long-running and acrimonious disputes could ensue.

A theme running through the second and third papers is the argument that the degree of continuity in relief practice between the Old and New Poor Laws has, perhaps, been under-emphasised in the literature.

R. Hutton, ‘Seasonal festivity in late medieval England: some further reflections’, English Historical Review, 120, 66–79.

This article presents Hutton with an opportunity to reiterate and defend the arguments of his book, The rise and fall of merry England: the ritual year 1400–1700 (Oxford, 1994), as well as to relocate this work within the field of subsequent research by other historians. Hutton had argued that the late medieval period had seen a growth in the quantity and intensity of seasonal ceremonies and festivities: the ‘merry England’ of the book’s title. He had done so using parochial records—and more particularly, churchwardens accounts—and observed the appearance of ceremonies, such as Corpus Christi processions, that had not existed before the fourteenth and fifteenth centuries. Hutton here reiterates the terms of this argument, and also clarifies a second argument that such merrymaking and festivities, which had generally been viewed with suspicion and hostility by religious and lay elites, were gradually being adapted and co-opted into civic celebrations and even as a form of parochial fundraising. Hutton cites the example of fire festivities, such as the
lighting of bonfires at summer solstice. These needed to be regulated, and hence were eventually assimilated into corporation events such as processions and pageants in which fire became an integral part. The article emphasises inevitable urban-rural differences in festival practices, and illustrates well this colourful aspect of medieval and early-modern parochial life.

M. Ingram, 'Men and women in late medieval and early-modern times', English Historical Review, 120, 732–58.

This review article will be of interest to those readers of Local Population Studies whose research concerns matters of gender in late-medieval and early-modern England. Encompassing reviews of (among others) Alexandra Shepard’s Meanings of manhood in early modern England (Oxford, 2003), Laura Gowing’s Common bodies: women, touch and power in seventeenth-century England (London, 2003) and Joanne Bailey’s Unquiet lives: marriage and marriage breakdown in England, 1660–1800 (Cambridge, 2003), Ingram provides a valuable survey of the state of the historiography. The books under review are representative of new approaches in social and cultural history, but LPS readers may find much that is familiar and of interest, in terms of both themes and sources. The article discusses, for example, social and cultural attitudes toward reproduction and marriage, women’s interaction with courts and the law, and patriarchy and social relations.


These are the latest in a series of articles on the populations of late-nineteenth century workhouses (see the papers by Hinde and Turnbull in Local Population Studies, 61(1998), 38–53; Goose in Local Population Studies, 62(1999), 52–69; and Jackson himself in Local Population Studies, 69(2002), 51–64). In the first paper, Jackson combines evidence from the admission and discharge registers of the Medway Union Workhouse, which provide data on the dynamics of the workhouse population, with the census enumerators’ books for 1881, which provide a complementary snapshot of the inmates. The Medway workhouse was different from those in rural southern England studied by previous authors in that there were more female inmates than males, a feature that Jackson attributes to the buoyant labour market for men provided by military institutions in the area. Men tended to enter and leave the workhouse more frequently than women, but because they stayed much shorter periods on average, the population at any one time contained more females than males. There is a wealth of other information in the article about such aspects as the role of the workhouse as a lying-in hospital for women, and the occupational structure of those admitted.

The second paper concerns Bedford Union Workhouse in the 1880s, and analyses the experience of female vagrants, with a description of their
characteristics (for example their age and sex composition). Fillmore suggests that the Vagrants Act of 1882 led to harsher treatment of this class of paupers.


In this article, Jenner explores the intellectual origins of early eighteenth century campaigns to close urban graveyards and end the practice of burial within churches. Jenner disputes the current historiography, which asserts that these campaigns represented the secularisation of society, the modernisation of death, and the triumph a nascent ‘public health’ campaign fought by an emergent medical establishment. Instead, Jenner locates the movement to end such practices within a far older set of discourses, which not only recognised the health risks of graveyards and interment, but also drew on religious beliefs and historical justifications for a change in practices of urban burials.

K. Jones and M. Zell, “‘The divels speciall instruments’ : women and witchcraft before the “great witch hunt”’, *Social History*, 30, 45–63.

Drawing on church court records from the diocese of Canterbury, this paper examines the gendered nature of witchcraft in the late Middle Ages. Jones and Zell argue that, although men and women were associated with benevolent witchcraft, the expectation that witches would be women was already well established in the fifteenth century. More particularly, harmful magic was ‘women’s business’, with the majority of prosecutions being brought, not by a zealous clergy, but by laymen alleging actual harm. This challenges earlier interpretations which explain the gender imbalance in prosecutions in the sixteenth century in terms of deteriorating economic conditions and changing attitudes to women.


In this paper Kirby analyses the employment of boys and girls aged under 15 years in London in 1851, and compares it with the rest of England and Wales. Child employment in London was at a much lower level than in the rest of the country, and was very much confined to particular occupations: messengers and porters in the case of males, and domestic service among females. Even in these occupations, however, the proportion of all employees who were aged 10–14 years was lower in London than elsewhere in the country. The preoccupation of the literate classes with the ‘evils’ of child labour in the capital seems to have derived from the fact that London’s working children came mostly from very poor backgrounds, rather than the high prevalence of child labour in the city.

The personnel records of police forces in early twentieth-century England are used to analyse the unconventional marital histories of 119 police officers from the cities of Liverpool, Manchester and Birmingham. These officers were all either accused of conducting, or discovered to have, ‘irregular’ relationships, such as affairs while living with a spouse, known cohabitation, marital separation, or even passing themselves off as single when they were really married. The richness of the source material allows Klein to describe the often complex details of these policemen’s private lives. She explains that their commanding officers within the police forces were often slow to condemn them, and opted to try to resolve situations rather than simply to dismiss men from the force without good cause.


Toll books from horse fairs provide an important insight into the nature and geography of internal trade during the early modern period—a time when few other sources of this calibre are available. The Macclesfield toll book records receipts of tolls and individual transactions, naming both buyer and seller. This analysis reveals a peak in trade immediately following the end of the Civil Wars—a so-called peace dividend. It also indicates a widespread trade in horses centred on this Cheshire town. In more general terms, there is an indication that the horse trade was becoming increasingly professionalised.


Though covering a large geographical area which includes most of southern, western and northern Europe, this paper may be of interest to readers of Local Population Studies for its long time horizon (18 centuries) and the fact that the United Kingdom is treated as a single region and compared with other regions in Europe. Using skeletal evidence to measure adult heights and thereby to make inferences about the standard of living, Koepke and Baten find that, overall, the average height of Europeans did not change between the beginning of the first century and 1800. There were peaks and troughs along the way, the most notable peak being in the sixth century, with a subsidiary peak in the twelfth century, and troughs in the thirteenth and seventeenth centuries. A weak association is found between climate and height, and the authors also discuss a probable relationship between height and the consumption of dairy products.


This article discusses the relationship between the Jewish and non-Jewish communities in the East End of London during the first half of the twentieth century. Until the interwar period, community life in the area was organised on a micro-scale, at the level of the individual street. Jews and non-Jews did not interact because they lived on different streets, but interaction between
persons living on different streets within the non-Jewish community was also rather rare. During the 1930s, however, there came ‘a series of changes in work, leisure and politics that ... would form the basis of an expanded notion of belonging in the East End’ (p. 337). This involved a sense of being part of a wider community, which encompassed the whole of the East End, and which included both Jews and non-Jews.


This complex article is an analysis of an extraordinary new data set which has been created by applying record linkage to the two per cent sample from the census enumerators’ books (CEBs) of the 1851 census created by Michael Anderson, and the machine-readable version of the 1881 CEBs available from AHDS History at the University of Essex. The result is a set of several thousand paired records, each pair describing the location, occupation and characteristics of the same individual in 1851 and 1881. By applying econometric analysis to those linked persons who were living in rural areas in 1851, Long can estimate the impact of migration to urban areas between 1851 and 1881 on social mobility, controlling for the fact that those who migrated were a select group. He finds that rural-urban migration was, indeed, associated with upward social mobility among those who migrated, and it would also have benefited those rural dwellers who did not, in the event, move to an urban area. An additional finding— which will probably not surprise those readers of *Local Population Studies* who are familiar with migration patterns in Victorian England—is that rural-urban migrants were very definitely not drawn from the poorest section of the rural workforce, but were ‘those whose labour market prospects were brightest’ (p. 26).


The 1832–3 Rural Queries were a survey of poor law practice and other relevant issues carried out by the Poor Law Commissioners. In this paper Lyle uses the responses of over 800 parishes to a single question: ‘What is the allowance received by a woman for a bastard?’ to describe the geography of the generosity of this benefit. The most common rates were 18d and 24d per week, but there were regional variations in this, which conformed in important aspects to those identified by Steven King in his *Poverty and welfare in England 1700–1850: a regional perspective* (Manchester, 2000). Generally, low rates prevailed in the north-west and south-west of England, the south Midlands and parts of East Anglia. The highest rates were in the Home Counties. Lyle also examines the views of the respondents as to whether the allowances they paid were sufficient ‘to repay’ women for having illegitimate children. The majority of respondents considered that they were not, or that they were, at best, only just sufficient. She points out that this evidence seems to have been ignored by the Poor Law Commissioners when they wrote up their report!

During the second quarter of the nineteenth century, child labour in almost all occupations was gradually regulated. The silk industry, however, remained exempt from most of the new legislation because of a successful campaign by employers to persuade the authorities that silk mills were not deleterious to the health of those working in them. As the century wore on, though, it became apparent that silk workers were exposed to occupational hazards which were at least the equal of those in other textile trades. The most serious of these was the crowded working environment in the silk throwing factories of places such as Macclesfield in Cheshire and Leek in Staffordshire which, combined with the long hours worked, exposed young children to high risks of contracting phthisis. McCunnie shows that death rates from phthisis in silk towns were higher than elsewhere in the country, and that phthisis mortality in these areas was concentrated at a younger age than was typical in the rest of the country, consistent with its cause being the conditions experienced by child workers.


Historians of all periods are increasingly uncovering the prevalence, depth and extent of credit networks in past societies. It is still often assumed, however, that medieval and early-modern women (and particularly middle and ‘lower sort’ women) were subordinate within patriarchal families and society, and hence not fully involved in such networks. Using evidence from English equity courts, McIntosh explores the credit dealings and often accompanying litigation that affected women of all life-cycle stages and social standings. Women could frequently find themselves drawn into credit and litigation, perhaps as single women involved in bastardy and child maintenance cases, or as wives required to take charge of their husband’s business dealings in the event of his absence or even, as in one case cited, madness. Widows most obviously had to deal with the estates of their late husbands, and often had to negotiate the maintenance and financial arrangements for their children. In this respect, even women without a personal interest in finance might find themselves pulled into the financial affairs of their family relations. This article shows how women were inevitably involved in credit networks, and that in spite of many socio-legal and other constraints, women could exercise considerable agency within the spaces allocated to them.


This paper contains a statistical analysis of the ratio of female to male mortality in the age groups 10–19 years and 20–44 years in the registration districts of England and Wales during the 1850s. Considerable variation in the ratio is reported, and the authors attempt to account for this using regression models in which the occupational structure, women’s work, marriage, and a proxy for migration are included as independent variables. Also included are deaths from phthisis (which is known to have affected young women more than young men) and deaths related to childbirth. The results suggest that women in agricultural areas fared relatively badly, and that migration and
mortality were related, with areas into which women migrated having relatively favourable mortality conditions for females. To what extent the latter effect is the result of the selective migration of healthy women remains an unexplored issue. The analysis makes use of the relatively sophisticated technique of multi-level modelling. The authors claim that their results suggest that there was a county-level effect, in that mortality patterns among districts within the same county were correlated. However, this reviewer (AH) is sceptical about the existence of this effect, as it is unclear what epidemiological or environmental factors might have been responsible for it, and the authors of the paper offer no suggestions.


It is well known that working in metalliferous mines during the nineteenth and early twentieth centuries was dangerous. In the paper, Mills argues that much of the danger in the Cornish mines arose because the miners themselves were unwilling to adopt safer working practices. The nature of their contracts meant that supervision of mine working was very limited, and competition between individual miners encouraged risk-taking. Moreover the chance of certain adverse outcomes (for example accidents) was small, and some more probable outcomes (for example contracting silicosis) lay years in the future and the risk was therefore discounted.


A dataset is created in which marriage register and individual-level census records are linked together for two areas of England—Birmingham and rural Norfolk. The linkage is between marriages from 1837–43 and the 1851 census, and marriages from 1847–53, 1857–63 and 1867–73 and the 1881 census. The aim of this exercise is to measure occupational mobility both within and across generations: within generations by comparing the occupations of linked persons at different times, and between generations by comparing the occupations of grooms and their fathers at the same point in time. The study is confined to males. The results show that upward occupational mobility was greater in Birmingham than Norfolk but that the effect of literacy on social mobility was greater in Norfolk than in Birmingham. Readers of Local Population Studies are warned that the centrepiece of the analysis is a series of ordered probit models which require careful and rather laborious interpretation.


Through the early-modern period, medical practice became increasingly important in the treatment of ailments, especially those which were life-threatening. Individuals faced in such circumstances were four times more
likely to call on a doctor in 1705 than their counterparts in 1585. Surprisingly, this does not appear to have resulted in significant growth in the number of doctors. Rather, it was linked to a growing level of activity amongst doctors, who increasingly acted as general practitioners. Their patients, meanwhile, saw both doctors and their medicines as complementing, rather than replacing, divine healing power—again underlining the early-modern period as one of transition from medieval to ‘modern’ belief systems.


Too often, archaeological investigation of the post-medieval period has been confined to ‘industrial archaeology,’ and thus to specific localities and a limited period. In this paper, Newman attempts to formulate a research agenda for archaeological investigations of rural areas. This agenda stresses the potential for such research to shed light on agrarian society and the ways in which people engaged with their physical environment. Newman also writes that whereas history ‘reveals the lives and perceptions of the literate, generally the most powerful or their officers and servants ... [and] tells us little about the condition of the masses ... [archaeology can shed light on the life of the majority’ (p. 211). Readers of *Local Population Studies* will probably dispute the first part of this statement, as much current research published in this journal and elsewhere contributes to ‘history from below’ using documentary evidence. However, it is the second half of the statement which is most important, for it suggests that closer collaboration between rural archaeologists of the post-medieval period and the social, economic and demographic historians writing ‘history from below’ might be beneficial to both groups. The archaeology of post-medieval rural Britain is, both metaphorically and literally, an underdeveloped field.


The long-standing debate over the relative impact of birth and death rates on changing population levels gets another airing here, with Nightingale seeking to better understand the role of mortality in the late Middle Ages. The problem, she argues, has long been one of finding evidence which might give an accurate measure of death rates during this period. A new source is deployed here: namely some 33,000 certificates gained by creditors under the Statute Merchant of 1285 and the Statute Staple of 1353. The author acknowledges problems with the source—and discusses these in detail—but she uses it effectively to show that, with a few exceptions, high mortality and epidemic disease dominated population trends in late medieval England, at least up to the mid-fifteenth century. However, this does not close off the fertility-mortality debate, since death rates alone cannot account for the low population growth seen in England during this period. Nightingale thus lays Wrigley and Schofield’s argument for fertility rates as the dominant dynamic alongside the high mortality rates that she has found. Moreover, and of particular interest to those concerned with local population studies, she argues
that decadal and regional variations were significant elements of the national picture.


This paper uses the archive of Stewart and Kincaid, a firm of Irish land agents, to examine the scale and nature of landlord-assisted emigration before and during the famine years of the late 1840s. The conclusions reached by Norton are that landlord-assisted emigration was more common than previous historians have thought. In the pre-famine period it seems that ‘the agents recognised that some assistance to emigrate was desirable, and they attempted to facilitate such departures with humanity and even with compassion’ (p. 40). However, during the famine period ‘the welfare of client landlords became paramount in the firm’s thinking’ and this led to large-scale ‘programmes of estate clearance’, in which the ‘voluntary’ nature of tenants’ departure was more debatable (p. 40).


Despite its title, this paper is not about ‘reconstitution’ but about demographic reconstruction. In other words it is much more in keeping with the analysis reported in E.A. Wrigley and R.S. Schofield, *The population history of England 1541–1871: a reconstruction* (Cambridge, 1981) than with family reconstitution. In *The population history of England*, Wrigley and Schofield used a technique known as back projection to estimate population totals for the pre-censal era. In this paper, Nusteling develops an alternative (simpler) method which, unlike back projection, does not require the estimation of migration. The method relies on the identification of fertile marriages, and assumes that mortality and fertility within marriage are constant. It is therefore almost entirely driven by nuptiality. When applied to the early modern English data the method produces an estimate of the population of England in 1546 of 3.2 million, compared with the back projection estimate of 2.8 million. Readers of *Local Population Studies* are warned that the paper is hard to follow in places.


This article is about the neglected topic of mobility, as opposed to residential migration. Using in-depth interview data from a sample of 156 respondents from Greater Manchester, Morecambe and Lancaster, Pooley and his colleagues chart changes in everyday mobility during the second half of the twentieth century at four points in the life-cycle: 10–11 years, 17–18 years, 30–39 years and 60–69 years.

Following the five papers on emigration reviewed in *Local Population Studies* 75 (2005), 87–9, here is a paper examining migration from part of Northern Ireland to Australia. The paper concerns emigration from Cavan and Fermanagh counties to New South Wales and South Australia under the remittance system, through which ‘[c]olonial residents deposited money locally to be paid towards the cost of the passage and outfit of friends or relatives in the British Isles’ (p. 248). A feature of emigration under this system from the area studied was that Protestants were over-represented and Catholics under-represented among the migrants. The authors argue that this was because former Protestant emigrants in Australia were better placed to take advantage of the remittance system to provide opportunities for migration to their friends than were former Catholic emigrants.


In *Local Population Studies*, 69 (2002), 91–2 we reviewed an article by Reid in which she used health visitor records for west Derbyshire to study neonatal mortality and stillbirths during the early years of the twentieth century. In this paper, she uses the same source to look at the effect of the 1918–1919 influenza epidemic on the mortality of infants, young children and their mothers. It is well known that the epidemic struck most fiercely those aged 20–40 years, and that pregnant women were especially at risk. The Derbyshire data show that stillbirth and neonatal mortality rates went up in 1918, suggesting that foetuses being carried by women who were struck by the disease were at risk of being born prematurely, and thus more likely to be stillborn or suffer early death. Post-neonatal mortality also rose, but not by as great a proportion as that of young adults. Moreover, although babies and young children were at risk of catching influenza, some of the rise in their mortality was probably the indirect result of the death of their mothers.


According to Deirdre McCloskey, the ‘prudent’ medieval peasant scattered his farm fields in order to mitigate the risk of a poor harvest. This form of ‘portfolio theory’ suggests that peasants would farm a variety of small plots that each faced a different risk, such as different weather, weeds, soil conditions and rodents. This reduced yields by as much as 10 per cent, but the prudent peasant was prepared to exchange return for risk. This article disputes this narrow interpretation of medieval farming and community life. Instead, Richardson suggests that since medieval farming was a collective enterprise, alternative institutions existed to pool risk: fraternities and customary poor laws. Using a corporate census from the reign of Richard II, as well as manor court rolls, Richardson suggests that fraternities were geographically pervasive, and could provide financial support and other forms of relief to members. Customs such as gleaning and pea picking were also a potentially efficient response to farming risk, in that they could keep people from starving, but without undermining incentives to work. These
forms of cooperation lead Richardson to suggest that risk pooling institutions were indeed embedded within local communities, and operated to mitigate the vicissitudes of agrarian life.


In this paper, Roach discusses the overlapping networks of the ‘great and the good’ in Sheffield during the ‘long’ nineteenth century, and shows how individuals with financial, political or cultural influence used their connections to build up civic institutions, notably the University.

R. Schofield, ‘“Monday’s child is fair of face”: favoured days for baptism, marriage and burial in pre-industrial England’, *Continuity and Change*, 20, 93–109.

Using information about the exact dates of baptisms, marriages and burials taken from the 26 family reconstitutions carried out by Cambridge Group for the History of Population and Social Structure, Schofield traces the proportions of each type of ceremony taking place on each day of the week. As might be expected, burials were roughly evenly spread, although during the eighteenth century a tendency developed to hold burials which would previously have taken place on Saturdays or Mondays on Sundays. There was a general favouring of Sundays for baptisms, this being especially the case in the early seventeenth century and after 1750, when in some decades more than half of all baptisms took place on that day. The preferred days for marriages followed a more complex trend. In the late sixteenth century, Saturdays, Sundays and Mondays were favoured, but as the seventeenth century progressed Thursdays prospered at the expense of Sundays. In the eighteenth century, Mondays became increasingly popular (this was probably associated with proto-industrialisation). Fridays were universally shunned by those wishing to tie the knot.


Oligarchies have long been recognised as a defining feature of the governance of medieval towns. Yet we know relatively little about how they were formed and how they functioned as networks of individuals. This study ties social network theory to detailed empirical evidence contained in the Borough Community Court of Wells in Somerset in the period 1377–1450. It argues that the success of the oligarchy was based on their close interaction with one another (as one might expect), but also with other citizens. Shaw focuses in particular on the role of key individuals as arbitrators in the proceedings of the borough court, a role which brought leading citizens into contact with a wide range of people. These are conceptually divided between a so-called inner circle, with whom the individual had direct contact, and an outer-circle, who were only indirectly linked. The most powerful and influential figures in the town were those central to these networks. While some of the analysis
may seem a little too abstract, the conclusion builds a rounded vision of the town as a holistic society.


It is conventionally assumed that female membership in early-modern European guilds was slight. Most guilds did not admit women, and from this it has been argued that female participation in manufacturing tended to increase only as the influence of guilds in regulating production declined. By the late eighteenth and nineteenth centuries, of course, textile manufacture and dress making was largely unregulated and characterised as sweated trades. This study, however, illustrates how the York Merchant Tailors’ Company did in fact admit women in the eighteenth-century, with females accounting for a much as 33.8 per cent of guild membership in c.1758. Smith’s explanation draws upon combination of socio-economic and demographic factors. First, York in the eighteenth century had a sex-ratio in which women predominated, creating a ‘surplus’ of women. In turn, this not only created a market for female items of clothing, such as stays, but also shifted the supply of labour. Smith suggests that the York guild’s decision to admit females was a positive response to these changed local conditions. Whereas guilds outside York sought to resist change and the regulation of female employment, in York the guild adapted. As Smith concludes, the admission of women in York was quite unique in the history of post-medieval guilds. However, this evidence indicates that guilds were not necessarily ‘monolithic institutions’, but that they could adapt to the particularities of local demographic and socio-economic conditions. Important demographic background, consistent with these arguments, will be found in C. Galley, The demography of early modern towns: York in the sixteenth and seventeenth centuries (Liverpool, 1998).


Criminality and perceptions of criminality can provide important insights into the mindset and geographical horizons of local communities. In this essay, newspaper articles covering crime are investigated to gauge the importance of crime as ‘news’ and the ways in which crime and different types of crime were represented to the reader. In a sample taken from ten years spanning the period 1729–67, over one quarter of news stories in The Kentish Post were about crime—some 14,721 stories in all. The influence of the metropolis was significant, with many stories being gleaned from London newspapers or concerning crimes which took place there. Whether local or national, however, a wide range of crimes were reported in the press, ranging from petty thefts to lurid murder stories. Moreover, these were not all reassuring accounts of criminals being caught and receiving their just desserts: unsolved crimes also featured on the pages of newspaper. The author argues that this reveals not simply a fascination with crime and acts of criminal behaviour, but it also tells us much about how the east Kent readership viewed themselves and their communities.

Baptism was and remains an important feature of Christian life in most denominations. It serves both a spiritual and a social function. At one level, it incorporates the individual into the spiritual family of the church. At another, nominating godparents could be used to underline existing friendships or to bring families, and particularly offspring, to the attention of influential patrons. In exploring baptism ceremonies through a detailed reading of family papers, Tait seeks to provide a better understanding of the dynamics of communal life: the ways in which godparents were chosen and the relationships perpetuated or established through the process. The paper also provides insights into conflict between denominations and their social as well as spiritual traditions.


Fire insurance records pre-date tithe apportionment maps by many decades, starting in the seventeenth century for most places. They typically contain information about the size of the house insured, its contents, the occupation of the policyholder and whether the house was rented out and, if so, to whom. Despite the relevance of this kind of information to social, economic and demographic historians, they seem only rarely to have been analysed. This paper uses fire insurance records for the Wiltshire town of Devizes to describe the economic geography of the town in the eighteenth century.


It is becoming recognised that many parts of rural England in the past did not fit the stereotype of the purely agricultural ‘occupational community’ described most notably by Howard Newby in his book Country life: a social history of rural England (London, 1987). This paper deals with one such area, the Somerset coalfield south of Bath, and considers the period when coal mining was being developed and the population of the coal parishes was growing rapidly. The general question which Thompson addresses is whether those engaged in the non-agricultural activity (coal mining in this case) formed a separate ‘community’, so that there was little interaction either socially or economically between the miners and the agricultural population, or whether the two groups were integrated. Her conclusion is that, in the Somerset coalfield at any rate, the miners were, in fact, not ‘a breed apart’, but formed a single community with those working in agriculture. It is possible, though, that the Somerset case is not typical of the rest of the country. The coal miners formed the majority of the population of the parish of Camerton which Thompson studies, and therefore it is likely that their culture would be dominant. In addition, she makes the point that the ‘parochial identity’ of the parish was quite weak even before the coal industry arrived, so that the non-mining population lacked social and institutional capital which they could use to retain their own cultural identity in the face of rapid in-migration.

This paper describes the appearance in England during the 1920s and 1930s of a group of working-class women who had financial independence because they worked outside the domestic sphere. Todd describes these women and the relationships they had with other members of their families and households. She also explains that work outside the home was a crucial determinant of the amount of spare cash young women had to spend on conspicuous consumption and leisure activities. Those women who were constrained to look after other family members, or who continued to work as domestic servants, were much less financially and socially independent.


In 1917, the Corporation of Carlisle, like other local authorities, received a circular from the Local Government Board asking for details of ‘housing shortages and unfit dwellings’ (p. 217). The Corporation’s response was to set up a Housing Census throughout the city, inquiring about the type and quality of each dwelling, the number of rooms it contained, and the number of inhabitants. In this paper Turnbull analyses the results and describes the geography of housing conditions in the city at that time.


This paper describes an analysis of the information in the *Old Bailey Proceedings* between 1700 and 1799 concerning cases of bigamy. During the century 283 bigamy trials were held, in 211 of which the defendants were male. Slightly fewer than half the defendants were found guilty. The reasons given for bigamy were many and various, but perhaps the most common were economic: that is ‘bigamous unions ... contracted for material gain rather than conjugal happiness’ (18). In other cases bigamous unions followed the disappearance of the first spouse, or the defendant clearly believing that his or her first marriage was invalid. There were even instances of poor law authorities dragooning men into marrying female parishioners in order to remove the latter from their relief rolls.


For about 12 years in the late eighteenth century, the burial register of the parish of North Meols, Lancashire, recorded cause of death data. In this paper, Virgoe analyses these data and provides helpful comparisons with similar data for the parish of Whitehaven during roughly the same period (discussed in the paper by J. Ward reviewed in *Local Population Studies*, 63 (1999), 83). The commonest causes of death recorded in North Meols were ‘weakness’, ‘fever’,
‘smallpox’ and ‘consumption’. The first two of these affected all ages, but smallpox was confined to those aged under 10 years and consumption was most common among young adults. Analysis of the trend over time suggests that some of the deaths described as being due to ‘weakness’ and ‘fever’ may actually have been the result of consumption. The recording of cause of death was very rare for this period, but there are other burial registers which do include it. One such is the parish of Odiham in Hampshire (which will be familiar to many readers of LPS as one of the parishes reconstituted by the Cambridge Group for the History of Population and Social Structure), where causes of death are recorded for several years during the 1780s and 1790s.


This short paper describes the availability of household and individual listings from the first four censuses of England and Wales, taken in 1801, 1811, 1821 and 1831. The paper includes a discussion of the format and content of each of these censuses and the surviving documents, a table of the numbers of listings that survive by county, and a summary of the listings collection of the Cambridge Group for the History of Population and Social Structure.

S. Williams, ‘Earnings, poor relief and the economy of makeshifts: Bedfordshire in the early years of the New Poor Law’, *Rural History*, 16, 21–52.


In the first of these papers, Williams compares the earnings of poor families in the Bedfordshire parish of Westoning, in the Ampthill Union in 1834, before the Poor Law Amendment Act, and in 1837, by which time relief to the able-bodied poor had virtually ceased in the parish. She finds that there was a dramatic shift in the breakdown of family income between the two dates, the most important element of which related to the majority of men who were in ‘irregular’ employment. In 1834 the families of these men obtained close to 40 per cent of their income from poor relief. By 1837 this proportion had fallen to less than 5 per cent. Instead, families resorted to a wide range of by-employments and other activities to supplement low male wages. The most valuable of these was the right to keep a cow or a pig on common land, though this was only open to a few families. Others included gleaning, straw-plaiting, poaching, stone-picking and taking in lodgers. Thus ‘the withdrawal of outdoor relief to the able-bodied after 1834 meant that self-provisioning, by-employments and other forms of “self-help” became more important to labouring families to ensure their survival’ (46).

The second paper deals with two nearby parishes, Shefford and Campton, and looks at the generosity of poor relief payments to different types of applicant, to assess the impact of poor relief on the living standards of the poor. There is no doubt that poor relief was a vital component of household income for a
large proportion of labouring households in these villages, with paupers and their dependents never forming less than 10 per cent of the population, and up to 46 per cent in Campton in the bad year of 1801. The elderly were particularly dependent on the poor law, the authorities being ‘committed to regular weekly pension payments, allocating over two-thirds of spending to pensions’ (p.517).


This interesting paper tells the story of the workhouses in the village of Selling, in east Kent, during the late eighteenth and early nineteenth centuries. Before 1790, Selling operated a small workhouse in combination with two neighbouring parishes, although there was a period when the workhouse only served the parish of Selling itself. In 1790, Selling and five neighbouring parishes formed a Gilbert Union, which eventually encompassed 15 parishes. The study uses a variety of sources, including Minute Books, Treasurer’s Books and Relief Lists and includes details of seasonal fluctuations in the population of the workhouse during the 1820s and 1830s.


The relationship between landscape and land tenure has always been close. In the Lake District, ‘ancient’ (pre-parliamentary enclosure) landscapes are closely linked to customary tenures and the particular farming practices and ways of life associated with them. Especially important in this regard was the problem that the gentry had in gaining direct control over their estates, a difficulty which encouraged many to withdraw from much of rural Cumbria. This affected not just the landscape, but also the social structure, providing a lesson in how institutional frameworks can produce distinctive social outcomes.


Estimates of the stillbirth rate in the English past have hitherto been based either on assuming some relationship between the stillbirth rate and the mortality of babies in the first few days or weeks of life, or on assuming a similar relationship between the stillbirth rate and the rate of endogenous mortality (that due to congenital defects and similar factors). The two most widely cited sets of estimates are those made by N. Hart (‘Beyond infant mortality: gender and stillbirth in reproductive mortality before the twentieth century’, Population Studies, 52 (1998), 215–29), using the first method, and E.A. Wrigley (‘Explaining the rise in marital fertility in England in the “long” eighteenth century’, Economic History Review 51 (1998), 435–64) using the second method. In this paper, Woods discusses both these approaches and others. He observes that the stillbirth rates estimated by both Hart and Wrigley for seventeenth and eighteenth century England are considerably
higher than those reported in any other populations for which more direct
data are available, including historical (mainly Scandinavian) populations and
those from present-day developing countries. He presents new, much lower
estimates. He concludes that the observed mortality of babies during the first
couple of weeks of life is a better basis for estimating the stillbirth rate than is the
endogenous mortality rate, partly because the latter is 'more difficult to
measure as a rate and interpret as a concept' (p.160). Finally, he points out that
historical trends in the stillbirth rate are important, especially during the
eighteenth century, as it has been argued that a decline in the stillbirth rate
during that period made a significant contribution to the rise in overall
fertility. If Woods is correct, then the decline in the stillbirth rate during the
eighteenth century was much less than has previously been thought, which
means that 'its influence via the rise in fertility would be very much reduced
and, by implication, the role of other factors ... would need to be increased to
compensate' (p.160).

N. Woodward, ‘Crisis mortality in a Welsh market town: Carmarthen, 1675–

Readers of Local Population Studies will be familiar with the many studies of
crisis mortality in England. There is, however, a dearth of similar studies for
Wales, on account of the late beginnings of parochial registration in Wales and
the generally poor quality of surviving Welsh registers. This article's focus on
crisis mortality in St Peters, Carmarthen, is thus welcome. Woodward
describes the evolution of mortality in Carmarthen and compares it with data
from small market towns in England obtained from the CD-ROM of the data
for the Cambridge Group's 404 parishes (available from LPS). The results
show that crisis mortality in Carmarthen occurred with a frequency and
intensity typical of English market towns. The paper includes a cautious and
sensible discussion of the possible causes of each of the five episodes that
affected Carmarthen between 1675 and 1799, which suggests that dearth (and
high grain prices and associated malnutrition) may have compounded the
threat presented by the primary explanation, infectious disease.