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Veröffentlichungsversion / Published Version

Zeitschriftenartikel / journal article

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#### Empfohlene Zitierung / Suggested Citation:

Lee, R. (2006). The development of population history ('historical demography') in Great Britain from the late nineteenth century to the early 1960s. *Historical Social Research*, 31(4), 34-63. <https://doi.org/10.12759/hsr.31.2006.4.34-63>

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## The Development of Population History (‘Historical Demography’) in Great Britain from the Late Nineteenth Century to the Early 1960s

*Robert Lee* \*

**Abstract:** In retrospect, the development of population research in Great Britain represents a conundrum. Despite the seminal contributions to population theory and demographic science by Graunt, Petty, King, Malthus and Farr and the development at an early stage in the nineteenth century of substantial interest in explaining patterns of long-run population change, it was not until the mid-1960s that English historical demographers began to apply new methodologies which had been pioneered in France two decades earlier. Only with the creation of the Cambridge Group for the History of Population and Social Structure was an appropriate institutional framework provided for taking forward new research in this field.

This article seeks to cast some light on the background to this apparent conundrum by analysing the scale, direction and disciplinary focus of research in what is now recognised as historical demography in the period from the late nineteenth century to the early 1960s. It focuses on the growth of selective research activity on the historic development of population in Great Britain (primarily in England and Wales), in terms of its relevance to contemporary population theories, its contribution to the analysis of fertility and mortality trends, marriage and nuptiality, and migration. Particular emphasis is placed on the extent to which methodological developments were constrained by the quality and range of statistical sources, the belated recognition of demography as a separate academic subject, and the dominant concerns of other key disciplines, specifically sociology, economics and economic history, as they sought to es-

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establish their own research agendas. To this extent, the strengths and weaknesses of work on the population history of Great Britain prior to the mid-1960s reflected the changing influence of different disciplines, their respective research agenda, and the specific nature of funding opportunities.

## Background

In retrospect, the long-run development of British historical demography represents a conundrum. On the one hand, progress in population history up until the 1940s, according to David Glass, had been disappointing, despite the seminal contributions of Graunt, Petty, King, Malthus and Farr to population theory and demographic science, as well as the work of historically-minded statisticians, such as W.A Guy, and Creighton's monumental history of epidemics in Britain.<sup>1</sup> Louis Chevalier's galvanising call in *Population* for future research to be placed 'at the service of the history of demography' by analysing and exploiting local archives and parish registers, appears to have elicited only a modest, initial response in British academic circles and few historians were willing to accept the contention that the 'why and the how of the past' could only be understood effectively by appropriating demography.<sup>2</sup> Indeed, the first formal reference to 'demographic history', as a separate concept, can only be traced to an article by Buckatzsch on the impact of migration on local population levels in *Population Studies* in 1951.<sup>3</sup> On the other hand, progress in British historical demography from the 1960s onwards has undoubtedly been dynamic: according to Flinn, the improvements in the standards of historical demography by the late 1960s were already so substantial that 'much greater reliance may be placed on the generalisations that are being produced' and although it was accepted that technical advances in exploiting parish register material were 'pioneered in France', the achievements of the Cambridge Group for the History of Population and Social Structure since the receipt of the initial funding grant from the Gulbenkian Foundation in 1965 have been outstanding, setting a

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<sup>1</sup> D.V.Glass, Introduction, in: D.V.Glass and D.E.C.Eversley (eds.), *Population in History. Essays in Historical Demography*, London 1965, p.3; W.A.Guy, On the Duration of Life among Lawyers; with additional observations on the Relative Longevity of the Members of the Three Learned Professions, in: *Journal of the Statistical Society of London*, XX (1857), pp.65-73; Charles Creighton, *History of epidemics in Britain*, 2 vols., Cambridge 1891 and 1894 (reprinted with introductions by D.E.C.Eversley and E.A.Underwood, London 1965).

<sup>2</sup> Louis Chevalier, Pour une Histoire de la Population, in: *Population*, 1 (1946), p.245; idem., Towards a History of Population, in: D.V.Glass and D.E.C.Eversley (eds.), *Population in History. Essays in Historical Demography*, London 1965, p.71.

<sup>3</sup> E.J.Buckatzsch, The Constancy of Local Populations and Migration in England before 1800, in: *Population Studies*, 7 (1951), pp.62-68.

benchmark for future research.<sup>4</sup> According to van de Kaa, Wrigley's family reconstitution techniques represented an important stage in the technical analysis of fertility levels and change, while Wrigley and Schofield's *Population History of England* (1981), with its innovative use of backward projection and its detailed analysis of the relationships between demographic measures and time series of wages and prices was 'more than a technical breakthrough in demography proper'.<sup>5</sup>

This paper will seek to cast some light on the background to this apparent conundrum by analysing the scale, direction and disciplinary focus of research in what is now recognised as historical demography in the period from the late nineteenth century to the early 1960s. It will focus on the selective growth of research on the historic development of population in Great Britain, in terms of its relevance to contemporary population theories, its contribution to the analysis of fertility and mortality trends, marriage and nuptiality, and migration. Particular emphasis will be placed on assessing the extent to which methodological developments were constrained by the quality and range of statistical source materials, as well as by the belated recognition of demography as a separate academic subject and the dominant concerns of other key disciplines, specifically economics, sociology and economic history. Despite, or perhaps because, of a long tradition of research on population theory, the development of scientific interest in long-run population change was constrained by a number of institutional factors. First, existing institutions, such as the Royal Statistical Society, where the discussion of papers on population issues was dominated to a large degree by statisticians, professional actuaries, and civil servants as well as by academics, helped to sustain a traditional approach to the analysis of population change in the past. Second, there was only a limited degree of interaction between the developing social sciences by the early twentieth century and their respective research agendas focused primarily on contemporary or theoretical issues: if work on population history was relevant, this was only articulated in the context of current debates on the decline in fertility or the changing role of the family. Finally, both the extent and direction of work on population history were dependent on the institutional framework for population research as a whole. Again, despite a distinguished tradition, very little research was being carried out even by the 1930s: funding opportunities frequently depended on support from external bodies, such as the Eugenics Society, with their own specific agendas; it was not until 1938 with the appointment

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<sup>4</sup> M.W.Flinn, *British Population Growth, 1700-1850* (Studies in Economic History), London 1970, p.58; E.A.Wrigley, Editorial Note, in: E.A.Wrigley (ed.), *An Introduction to English Historical Demography*, London 1966, p.xi.

<sup>5</sup> D.J.van de Kaa, *Anchored Narratives: The Story and Findings of Half a Century of Research into the Determinants of Fertility*, in: *Population Studies*, 50 (1996), p.392; E.A.Wrigley and R.S.Schofield, *The Population History of England, 1541-1871. A Reconstruction*, London 1981; Osamu Saito, *Historical Demography: Achievements and Prospects*, in: *Population Studies*, 50 (1996), p.540.

of R.R.Kuczynski to a Readership in Demography at the London School of Economics that an appropriate academic framework for progressing research in this field was established; and it is not surprising, therefore, that there were comparatively few articles on population history in the early issues of *Population Studies* following its foundation by the Population Investigation Committee in 1947.

## The Pioneers of British Demography and the Legacy of the Past

According to Glass, the scientific revolution of the seventeenth century was accompanied by a visible interest in comparing past and present populations, particularly in relation to their size and characteristics.<sup>6</sup> In order to provide a basis for discussing future rates of population growth, many of the pioneers of demography, such as Graunt, Petty and King, actively speculated on past trends. Malthus, in turn, drew on selective historical material from England to sustain the view that the preventive check operated 'with considerable force throughout all the classes of the community', with evidence for the existence of checks to population growth drawn from 'modern pastoral nations', the Greeks and Romans, and other historic populations.<sup>7</sup> To this extent, both population accounting and demographic theory, as developed in Great Britain from the late seventeenth century onwards, consistently demonstrated a considerable interest in the past. It is not surprising, in this context, that the study of past populations, specifically the history of Britain's own demographic growth, continued to be a subject of academic and practical interest both before 1914 and after the First World War.

At one level, there was a continuing need to examine and reassess the population estimates of earlier authors, as well as to clarify the reliability of contemporary source data. Graunt and Petty were viewed by Lancelot Hogben, with some justification, as 'the pioneers of realistic social inquiry': together with Halley they effectively laid the foundations of what became 'the British empirical tradition of naturalistic inquiry'.<sup>8</sup> Not only was there a debate in the early-1930s between Greenwood and the Marquis of Landsdowne as to whether Petty had actually been the author of Graunt's book, with the latter described by Greenwood as a 'tyro in medical statistics' and the real discoverer

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<sup>6</sup> Glass, Introduction, p.1.

<sup>7</sup> T.R.Malthus, *An Essay on the Principle of Population; or, a View of its Past and Present Effects on Human Happiness; with an inquiry into our prospects respecting the future removal or mitigation of the evils which its occasions*, London 1806, Vol.II, p. 453.

<sup>8</sup> Lancelot Hogben, Introduction – Prolegomena to Political Arithmetic, in: Lancelot Hogben (ed.), *Political Arithmetic. A Symposium of Population Studies*, London 1938, pp.13-14.

of the life table,<sup>9</sup> but there was a significant degree of interest in evaluating contemporary and often conflicting views on the general trend in population growth and its causes. According to Edward Gonner, there was a marked variation in eighteenth-century population estimates advanced by ‘different and antagonistic writers’, whose individual contributions (whether optimistic or pessimistic) were later reviewed by David Glass in an incisive assessment of the ‘population controversy’.<sup>10</sup> Considerable effort was also expended in attempting to reconstruct the methods by which earlier population estimates had been arrived at. Gregory King’s estimate for 1695 was found to be generally reliable and a useful ‘sheet-anchor’ for English population history in the pre-censal era, even if the final figure has to be reduced by up to five per cent.<sup>11</sup> Brownlee set out to recalculate eighteenth-century estimates of total population by Farr, Finlaison and Gonner on the questionable assumption that the marriage rate for 1800-1802 held throughout the whole period. His conclusion that Farr’s estimate was probably the most accurate as it reflected the ‘habit of compromise inherent in the English minds’ does not, in retrospect, inspire confidence.<sup>12</sup> By contrast, the parish register abstracts (PRA) submitted to John Rickman at the time of the first census in 1801, as well as the different constructions placed on the available aggregate data, attracted a great deal of attention. According to Flinn, Brownlee’s calculations based on the PRA were ‘most esoteric’ and the classic, interwar study of Talbot Griffith which made extensive use of Rickman’s data, as a result was ‘largely of historiographical interest’.<sup>13</sup> Although Glass put forward a correction factor for the under-registration of births, it was finally realised that the parish register abstracts did not provide an adequate basis for study, despite elaborate manipulation of the available data by Krause and Deane and Cole.<sup>14</sup>

But the concern to understand how the pioneers of English demography arrived at their estimates of contemporary population totals as a basis for calcu-

<sup>9</sup> Major Greenwood, Graunt and Petty – A Re-Statement, in: *Journal of the Royal Statistical Society*, XCVI (1933), p.79.

<sup>10</sup> Edward C.K.Gonner, *The Population of England in the Eighteenth Century*, in: *Journal of the Royal Statistical Society*, LXXVI, Part III (1913), p.261; D.V.Glass, *Numbering the people. The eighteenth-century population controversy and the development of census and vital statistics in Britain*, Farnborough 1973.

<sup>11</sup> D.V.Glass, *Gregory King’s Estimate of the Population of England and Wales, 1695*, in: *Population Studies*, 4 (March 1950), p.358; Flinn, *British Population Growth*, p. 12.

<sup>12</sup> John Brownlee, *The History of the Birth and Death Rates in England and Wales taken as a whole, from 1570 to the Present Time*, in: *Public Health*, XXIX, 10 (July 1916), p.229.

<sup>13</sup> Flinn, *British Population growth*, pp.59,61; G. Talbot Griffith, *Population Problems of the Age of Malthus*, Cambridge 1926 (reprinted 1967).

<sup>14</sup> D.V.Glass, *A Note on the Under-Registration of Births in Britain in the Nineteenth Century*, in *Population Studies*, V (1951), p. 85; J.T.Krause, *Changes in English Fertility and Mortality, 1781-1850*, in: *Economic History Review*, 2<sup>nd</sup> ser., xi (1958), pp.52-70; idem., *The Changing Adequacy of English Registration, 1690-1837*, in: Glass and Eversley, *Population in History*, pp.379-393; P.Deane and W.A.Cole, *British Economic Growth, 1689-1959*, Cambridge 1962, chapter 3.

lating long-run trends also necessitated a closer attention to source criticism. First, there was a growing awareness of the extent to which census deficiencies hindered or precluded a rigorous analysis of earlier population trends. Gonner had emphasised the disadvantages which resulted from delaying the start of the national census until 1801 (due to 'unfortunate superstitions'),<sup>15</sup> and the late nineteenth century witnessed a growing criticism of contemporary census practice and a clearer realisation of the limitations of earlier census returns for the analysis of population change. Edwin Cannan criticised the Registrar General's estimates of total population, dismissed the intermediate census for London of 1896 as 'a most unfortunate invention', and condemned Malthus' assumption of a regular, intercensal geometric increase in population as 'absurd'.<sup>16</sup> There was a clear need for a standard unit of tabulation (to avoid the so-called Penge syndrome); continued difficulties in recruiting enumerators 'of exceptional character' whose work was often hampered by a lack of appropriate training; no real attempt had been made to confront the problem of defining exactly what a 'house' represented, even in the census of 1911; there was still no legal definition of still-births which were not formally registered until 1926; and the utility of census returns was undermined by a lack of adequate information on ethnicity, literacy, language and social grades.<sup>17</sup> Similar problems restricted the use that could be made of vital statistics in analysing patterns of long-run population change: there was a significant under-registration of births prior to 1861 which was not completed until 1874; the registration of deaths was only gradually improved in the course of the nineteenth century as a result of legislation in 1836, 1874 and 1878, and cause-of-death classification remained problematic in a number of cases.<sup>18</sup> Finally, there was a general feeling expressed by Barbara Hammond that the census parish register returns were 'seriously flawed', with the value and representativeness of the original material vitiated by the growth in non-conformity, rapid urbanisation, and the failure of many parish registers to record the baptisms and burials of some of the children who

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<sup>15</sup> Gonner, *The Population of England*, p.261.

<sup>16</sup> Edwin Cannan, *Demographic Statistics of the United Kingdom: their want of Correlation and other Defects*, in: *Journal of the Royal Statistical Society*, LXI (1898), pp.51-54.

<sup>17</sup> J.A.Baines, *On Census-Taking and its Limitations*, in: *Journal of the Royal Statistical Society*, LXIII (1900), pp.41-48; Arthur Newsholme, *The Elements of Vital Statistics in their Bearing on Social and Public Health Problems*, London 1923), p.28 (1<sup>st</sup> edition 1889); Reginald Dudfield, *Still-Births in Relation to Infantile Mortality*, in: *Journal of the Royal Statistical Society*, LXXVI, Part 1 (December 1912), p.4; E.Grebenik, *The Sources and Nature of Statistical Information in Special Fields of Statistics. Population and Vital Statistics*, in: *Transactions of the Royal Statistical Society*, 118, Series A (1955), p.458. The Penge syndrome reflected the problems generated by the continued absence of a standard unit of tabulation and the failure to 'round off' poor law or registration districts to coincide with municipal areas. As a result, data from a number of localities (such as Penge) were returned in different registration districts for census, poor law or other purposes.

<sup>18</sup> Glass, *A Note on Under-registration of Births*, pp.70-90; Newsholme, *The Elements of Vital Statistics*, pp.156-176.

died in infancy.<sup>19</sup>

As in other European countries, there was increasing criticism both before 1914 and during the interwar period of deficiencies in the British national registration system, specifically in relation to the analysis of fertility trends: as a result past studies of changes in fertility rates, it was argued, had often been 'simple'.<sup>20</sup> More importantly, the persistence of some of these deficiencies, even after the promulgation of the Population (Statistical) Act of 1938, made it more difficult for demographers and other social scientists to use historical data to test the validity of earlier or contemporary hypotheses.<sup>21</sup> This, indeed, had been one of the key functions of a great deal of existing research on Britain's past population. As Glass pointed out, there had been a shift of emphasis by the mid-1930s from concern over a rapid and unsustainable rise in population to a general acceptance of the probability of decline, but in both cases any analysis of causation required, by definition, a longer term perspective.<sup>22</sup> According to Brownlee, the fall in the birth rate from the late nineteenth century onwards may well have been due to 'definite intention', but the statistics used to support this hypothesis referred to 'much too short a period of time': even Sweden's vital statistics which were available from 1749 covered a period that was not 'sufficiently long to warrant any dogmatism regarding the present conditions'.<sup>23</sup> In order to counter an earlier claim by Udny Yule that 'no prophecy for the future could be safely made', Stevenson, then in charge of the General Register Office, utilised long-run birth rate data from a range of countries from the 1840s onwards to overcome any 'natural limitations' to the use of statistics.<sup>24</sup> To this extent, the analysis of long-term demographic trends was often seen as a prerequisite for addressing contemporary population issues.

In particular, the legacy of Malthus whose principle of population had 'swept the Western world in the nineteenth century'<sup>25</sup> focused attention on the

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<sup>19</sup> Barbara Hammond, Urban Death-Rates in the Early Nineteenth Century, in: *The Economic Journal* (Economic History Supplement, Vol.1, January 1928), p.425; Flinn, *British Population Growth*, p.14.

<sup>20</sup> A.Newsholme and T.H.C.Stevenson, The Decline of Human Fertility in the United Kingdom and Other Countries as shown by corrected birth-rates, in: *Journal of the Royal Statistical Society*, LXIX (1906), pp.34-87; D.V.Glass, Changes in Fertility in England and Wales, in: Hogben (ed.), *Political Arithmetic*, p.161; E.Grebenik, Some Aspects of Population in Britain, in: *Journal of the Royal Statistical Society*, CIII, Part III (1940), p.285.

<sup>21</sup> T.H.C.Stevenson, The Laws Governing Population, in: *Journal of the Royal Statistical Society*, LXXXVIII (1925), p.82.

<sup>22</sup> D.V.Glass, Future, in: *The Eugenics Review*, XXIX (1937-38), p.39; Alan T.Peacock, Malthus in the Twentieth century, in: D.V.Glass (ed.), *Introduction to Malthus*, London 1953, p. 60.

<sup>23</sup> John Brownlee, Germinal Vitality: a Study of the growth of Nations as an Instance of a hitherto undescribed Factor in Evolution, in: *Royal Philosophical Society of Glasgow*, XXXIX (1908), p.180.

<sup>24</sup> Stevenson, *The Laws Governing Population*, p.68.

<sup>25</sup> D.V.Glass, *Malthus and the Limitation of Population Growth*, in: D.V.Glass (ed.), *Introduction to Malthus*, London, 1959, p.30.

factors which affected population growth and the long-term relationship between demographic change and economic development. Even if his views were no longer highly regarded on the continent by the late nineteenth century and his conclusions were criticised in Britain as representing ‘a reductio ad absurdum argument’,<sup>26</sup> his ideas were still regarded by economists as offering a useful analytical framework and Keynes implicitly accepted the concept of geometrical progression.<sup>27</sup> In a wider context, many of the attempts to construct new or alternative interpretations of population change in the period between the end of the nineteenth century and the outbreak of the Second World War drew heavily on evidence extracted from the analysis of long-run demographic development both in Britain and elsewhere. This was the case, for example, in relation to Yule’s attempt to distinguish between short-, and long-term oscillations; Brownlee’s concept of ‘waves of germinal energy’ as a means of explaining cycles of rapid or reduced rates of population increase; and the use by Carr-Saunders of evidence on fertility even in prehistoric times to justify the claim that overpopulation had always been a rare occurrence.<sup>28</sup> Historical analogies were also used to test the case for selective policy initiatives. For example, the potential eugenic effect of family endowment schemes was tested on the basis of a detailed analysis of the workings of the Old Poor Law between 1795 and 1834 which concluded that family allowances (as under the Speenhamland system) would improve the survival rate of children and, in turn, prevent the operation of selection.<sup>29</sup>

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<sup>26</sup> P.Leroy-Beaulieu, *The Influence of Civilisation upon the Movement of the Population* (translated from the *Economiste Français*, 20-27.09.1890), in: *Journal of the Royal Statistical Society*, LIV (1891), p.375; G.Udny Yule, *The Growth of Population and the Factors which Control it*, in: *Journal of the Royal Statistical Society*, LXXXVIII (1925), p.213.

<sup>27</sup> Peacock, *Malthus in the Twentieth Century*, p.66; William Petersen, John Maynard Keynes’ *Theories of Population and the Concept of the ‘Optimum’*, in: *Population Studies*, VIII (1954-55), pp.228-246; J.Overbeek, *History of Population Theories*, Rotterdam 1974, p.94.

<sup>28</sup> G.U.Yule, *On the Changes in the Marriage- and Birth-rates in England and Wales During the Past Half Century, With an Inquiry as to Their Probable Cause*, in: *Journal of the Royal Statistical Society*, LXIX (1906), pp.88-132; Brownlee, *Germinal Vitality*, pp.180-204; A.M.Carr-Saunders, *The Possible Effects of Germinal Change upon the Progress and Decay of Civilization*, in: *The Eugenics Review*, XIV (1922-23), pp.246-257; *idem.*, *The Population Problem. A Study in Human Evolution*, Oxford 1925; Overbeek, *History of Population Theories*, p.114.

<sup>29</sup> J.S.Blackmore and F.C.Mellonie, *Family Endowment and the Birth-Rate in the early nineteenth century*, in: *The Economic Journal (Economic History Supplement)*, 2 (May 1927), pp.205-207; *idem.*, *Family Endowment and the Birth-Rate in the early nineteenth century. A Second Analysis*, in: *The Economic Journal (Economic History Supplement)*, 3 (January 1928), pp.412-415.

## The Achievements and Limitations of Research in Population History prior to 1960

It is difficult to offer even a brief overview of research on long-run population change in Britain because of the absence of a separate disciplinary designation until the early 1950s. In one sense, population history was always part of demographic analysis from the late seventeenth century onwards and a number of academics in the interwar period, such as Carr-Saunders, clearly recognised the ‘great significance’ of historical population trends in relation to both ‘the present position and probable future course of population’.<sup>30</sup> But historical demography was not even a recognised sub-discipline of population studies and it was only in the late 1950s that key journals, such as *Population Studies*, began to publish a growing number of articles in this field (Table 1). Nevertheless, the period between the late nineteenth century and the early-1950s witnessed a range of useful contributions on important aspects of the population history of Great Britain which also included selective methodological innovations. The following section will highlight research in a number of fields, including the birth rate and fertility, marriage and nuptiality, mortality, and migration.

Table 1: Articles on Population History (‘Historical Demography’) in *Population Studies* (1947-1960) \*

Period	No. of articles
1947/48 - 1949/50	1
1950/51 - 1954/55	5
1955/56 - 1959/60	12

\* including articles on the history of population thought

### 1. The Birth Rate and Fertility

The analysis of long-run trends in the birth rate and other measures of fertility was fuelled by two considerations: first, the need to determine the major factor behind the acceleration in population growth during the late eighteenth and early nineteenth centuries and its relationship to the onset of the ‘industrial revolution’; second, and more importantly, to explain the timing, uniqueness and significance of the fertility decline which had become evident from the 1880s onwards. Considerable effort was expended by a number of authors,

<sup>30</sup> J.C.Caldwell, *Demography and Social Science*, in: *Population Studies*, 50 (1996), pp.322-323; A.M.Carr-Saunders, *World Population Past Growth and Present Trends*, London 1936 (2<sup>nd</sup> edition 1964), p.69.

including Brownlee and Griffith, on charting changes in the birth rate, primarily in England and Wales.<sup>31</sup> The view propagated by Whetham and Whetham that the birth rate had remained fairly constant prior to 1876 because of the absence of any ‘artificial selection’ was challenged by Kuczynski; Welton claimed that a rise in the number of registered births after 1814 was ‘a notorious fact’; and the existence of birth rate oscillations was attributed by Brownlee to fluctuations in ‘germinal vitality’, in turn an expression of changes in race physiology.<sup>32</sup> The later decline in the birth rate was attributed to a variety of factors, including an increase in female employment, a lack of ‘vitality’ as a result of hereditary influences, a reactive fear to rapid population growth, as well as price trends which accounted, to some extent, for the ‘short-period cycle’ of its ‘extreme jaggedness’.<sup>33</sup> However, almost all this work was based on the parish register abstracts, despite their inherent and insuperable flaws. Although Brownlee also used life table evidence to calculate the course of both the birth and death rates in the nineteenth century, most writers, except Krause, employed a highly questionable constant birth/baptism ratio.<sup>34</sup> Marshall was particularly critical of the results obtained by Griffith using this approach which he castigated as being ‘suspect from the first’ and he was equally critical of the claim by Miss Blackmore and Miss Mellonie that there was a definite slump in the birth rate between 1811 and 1821.<sup>35</sup> In opposition to received opinion in the 1920s, he argued that the most active period of the Industrial Revolution had seen a persistence of a high birth rate which was the ‘regulating factor’ behind population change and abundant justification for the contemporary fears of Malthusians: he also suggested that Brownlee’s reworking of Farr’s initial figures ‘deserves more attention than it has received’.<sup>36</sup>

<sup>31</sup> Brownlee, *The History of Birth and Death Rates*, pp.228-238; Griffith, *Population Problems*.

<sup>32</sup> William Cecil Dampier Whetham and Catherine Durning Whetham, *Heredity and Society*, London, New York, Bombay and Calcutta 1912, p.59; R.R.Kuczynski, *The International Decline of Fertility*, in: Hogben, *Political Arithmetic*, p.51; Thomas A. Welton, *On the Distribution of Population in England and Wales, and its Progress in the Period of Ninety Years from 1801 to 1891*, in: *Journal of the Royal Statistical Society*, LXIII, Part IV (1900), p.595; Brownlee, *The History of the Birth and Death Rates*, pp.228-238; idem, *The Present Tendencies of Population in Great Britain with Respect to Quantity and Quality*, in: *The Eugenics Review*, XVII (1925-26), pp.73-76.

<sup>33</sup> William Cecil Dampier Whetham and Catherine Durning Whetham, *The Family and the Nation: A Study in Natural Inheritance and Social Responsibility*, London 1909, pp.116, 135; Edwin Cannan, *The Probability of a Cessation of the Growth of Population*, in: *The Economic Journal*, V (1895), pp.505-515; Yule, *On the Changes in the Marriage and Birth-rates*, p.130.

<sup>34</sup> Brownlee, *The History of the Birth and Death rates*, pp.228-238; Krause, *Changes in English Fertility and Mortality*; Flinn, *British Population Growth*, p.25.

<sup>35</sup> T.H.Marshall, *The Population Problem During the Industrial Revolution. A Note on the Present State of the Controversy*, in: *The Economic Journal* (Economic History Series, 4, January 1928), pp.439, 442; Griffith, *Population Problems of the Age of Malthus*; Blackmore and Mellonie, *Family Endowment and the Birth-Rate*, p.207.

<sup>36</sup> Marshall, *The Population Problem*, pp. 440,456.

A similar approach characterised research on historical trends in fertility. Considerable attention was paid to determining the timing of the fertility decline, which according to some authors first became apparent in the mid-nineteenth century.<sup>37</sup> However, according to Newsholme and Stevenson, using age-standardised Swedish fertility data to correct for varying levels of fertility of women at different ages, there was no clear evidence of a decline until after 1880.<sup>38</sup> Given increasing concern over the potential for race suicide or social suicide, particularly if ‘the Jews and other foreign races in the East End of London maintain their natural birth rate’,<sup>39</sup> it was inevitable that a great deal of work in this field focused on analysing the available fertility data from the mid-nineteenth century onwards in order to isolate potential causative factors. Roy Harrod, writing during the Second World War claimed, perhaps with some justification, that ignorance was ‘fairly complete’ as far as understanding the causes of the fertility decline was concerned, given the need to look for ‘factors which have never before operated in human history’.<sup>40</sup> In reality, research on fertility trends had already generated a lengthy series of underlying causal factors, including the rising cost of education, female employment, a greater desire for luxury associated with increased urbanization, the influence of the Bradlaugh-Besant trial of 1879 in spreading awareness of contraceptive practices, a speculative assertion that an increase in the number of births produced a ‘relative surplus of women’, and the even more questionable doctrine of fresh air with its apparent negative impact on the procreation of the species.<sup>41</sup>

It would be unreasonable to be unduly critical of many of these studies, given the failure of more recent research to isolate specific causal factors behind the secular decline in European fertility and increasing uncertainty over the operation of a filtering down process within the social hierarchy of Victorian Britain.<sup>42</sup> However, prior to the 1911 census (with its more detailed ques-

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<sup>37</sup> Newsholme and Stevenson, *The Decline of Human Fertility*, pp.34-87; Glass, *Future*, p. 40.

<sup>38</sup> Newsholme and Stevenson, *The Decline of Human Fertility*, p.61.

<sup>39</sup> Arthur Newsholme, *The Declining Birth Rate: Its National and International Significance*, London 1906, pp.57-58; Newsholme and Stevenson, *The Decline of Human Fertility*, pp.68-70; Whetham and Whetham, *The Family and the Nation*, p.147.

<sup>40</sup> Roy Harrod, *Britain’s Future Population* (Oxford Pamphlets on Home Affairs, No.114), London 1943, p.16.

<sup>41</sup> Grace G.Leybourne, *The Growth of Education in England and Its Influence on the Size of the Family*, in: *The Eugenics Review*, XXX (new series, vol.XI, 1938-39), pp.175-186; D.V.Glass, *Marriage Frequency and Economic Fluctuations in England and Wales 1851-1934*, in: Hogben, *Political Arithmetic*, pp.197-206; Newsholme and Stevenson, *The Decline of Human Fertility*, p.68; Stevenson, *The Laws Governing Population*, p.75; J.A.Banks and O.Banks, *The Bradlaugh-Besant Trial and the English Newspaper*, in: *Population Studies*, VIII (1954-55), pp.22-34; Ida Hirschman, *The Surplus of Women and the Declining Birth Rate*, in: *The Sociological Review*, XXVII (1935), p.351; John Brownlee’s comments on T.H.C.Stevenson, *The Fertility of various Social Classes in England and Wales from the Middle of the Nineteenth Century to 1911*, in: *Journal of the Royal Statistical Society*, LXXXIII (1920), p.434.

<sup>42</sup> Susan Cotts Watkins, *Conclusions*, in; Ansley J.Coale and Susan Cotts Watkins (eds.), *The*

tions on fertility) many of the attempts to establish a clear correlation between specific socio-economic variables and the registered trend in fertility were relatively superficial. Indeed, according to David Glass, the fertility rates utilised in past studies were often ‘simple’: they ignored changes in the age distribution of women and failed to take into consideration either the gross or net reproduction rate (as defined by Kuczynski).<sup>43</sup> Although there were some attempts to analyse the social class profile of the fertility decline, it was still the case at the end of the 1930s that ‘a complete occupational analysis’ was difficult to attempt, while Hollingsworth’s innovative analysis of British ducal families was only to appear in 1957.<sup>44</sup> Information on female fecundity could be derived from Scottish registration data from 1855 onwards, but little was known of potential underlying factors, such as changes in the ‘actual physiological infertility of a women’, despite a keenness to ‘look into the past’.<sup>45</sup> The situation was deftly summarised by David Glass in 1938: although existing research provided evidence of the impact of individual variables on fertility, such as female employment or the occupational structure of individual districts, ‘if we try to link up progressive changes in the operation of these social factors with the decline of fertility from one period to another, the relationship breaks down’.<sup>46</sup>

## 2. Marriage and Nuptiality

There were some useful research developments in this field prior to the outbreak of the Second World War, although, in general, it did not receive a great deal of attention. Indeed, according to David Glass ‘marriage and fertility patterns had almost ceased to be subjects for study’ until the foundation of the Population Investigation Committee in 1936.<sup>47</sup> In part, this was a result of a well-established belief, based on Rickman’s questionable figures that the mar-

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Decline of Fertility in Europe, Princeton, New Jersey 1986, pp.420-450; Eilidh M. Garrett, The trials of labour: motherhood versus employment in a nineteenth-century textile centre, in: *Continuity and Change*, 5:1 (1990), pp.148-149.

<sup>43</sup> Glass, *Changes in Fertility in England and Wales*, p.161.

<sup>44</sup> Stevenson, *The Fertility of various Social Classes*, pp.416-417; Carr-Saunders, *World Population*, p.102; Enid Charles, *Differential Fertility*, in: *The Sociological Review*, XXIX (1937), pp. 242-257; Enid Charles and Pearl Moshinsky, *Differential Fertility in England and Wales During the past Two Decades*, in: Hogben, *Political Arithmetic*, p.143; T.H.Hollingsworth, *A Demographic Study of the British Ducal Families*, in: *Population Studies*, XI (1957), pp.4-26 (reprinted in Glass and Eversley, *Population in History*, pp.354-367).

<sup>45</sup> Yule, *On the Changes in the Marriage and Birth-rates*, p.117; Marie Stopes’s comments on Stevenson, *The Fertility of various Social Classes*, p.438.

<sup>46</sup> Glass, *Changes in Fertility*, p.211.

<sup>47</sup> Population Investigation Committee, *A Record of Research and Publications 1936-1978*, London 1978, p.1.

riage rate for 1800-02 'held throughout the eighteenth century'.<sup>48</sup> Even in the mid-1960s, David Eversley, while accepting the central role of marriage in influencing population growth, concluded that there had been little change historically either in age at marriage or the proportion married.<sup>49</sup> It was recognised that changes over time in the marriage rate might have been linked to differences in the sex ratio, but neither a rise nor a decline in nuptiality was likely to have a decisive effect on trends in net reproduction.<sup>50</sup> According to Newsholme, the marriage rate had always been a 'barometer of prosperity' (as Farr had predicted in the mid-nineteenth century), but marriage records were often 'too scanty' to serve as an adequate basis for analysing class-specific differences.<sup>51</sup>

Despite this limitation, one of the focal points for contemporary research was concerned with generating information on the marriage rate of different social classes with the intention of comparing data 'as far back as possible'.<sup>52</sup> Evidence was put forward that the middle class had always married later than other socio-economic groups, such as miners, primarily because of extended professional training, but there was continuing concern that occupational classifications were imprecise and 'not watertight', although very few males were ever returned as 'unoccupied'.<sup>53</sup> It was generally recognised that marriage in the past had not been universal. According to Buer, the localisation of industry from the mid-eighteenth century onwards, particularly in the case of both coal mining and textile production, had created 'some check on marriage', as gender-specific labour demands affected the sex composition of the local population which led, in turn, to differentiated rates of marriage and population increase.<sup>54</sup> Census data also provided evidence of a fall in the frequency of marriage to minors between 1876-80 and 1920.<sup>55</sup> But there was no analysis of other compositional changes in the marriage rate, such as changes in the incidence of re-marriage and its possible impact on the birth rate. David Glass had initiated research on the incidence of divorce in England and Wales since 1858 and the attendant 'loss of family function', but it was only in the post-war period, as a result of work undertaken on behalf of the Population Investigation

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<sup>48</sup> Brownlee, *The History of the Birth and Death Rates*, p.228.

<sup>49</sup> D.E.C.Eversley, *Population, Economy and Society*, in: Glass and Eversley, *Population in History*, p.45.

<sup>50</sup> Charles and Moshinsky, *Differential Fertility*, p.154; Kuczynski, *The International Decline of Fertility*, p.71.

<sup>51</sup> Newsholme, *The Elements of Vital Statistics*, p.67; Stevenson, *The Fertility of Various Social Classes*, p.422.

<sup>52</sup> Stevenson, *The Fertility of Various Social Classes*, p.423.

<sup>53</sup> Stevenson, *The Fertility of Various Social Classes*, p.429 and the comments by Watson, p.436; Thomas A.Welton, *Occupation in England and Wales, 1871 and 1905*, in: *Journal of the Royal Statistical Society*, LXXIII (1910), p.164.

<sup>54</sup> M.C.Buer, *Health and Prosperity in England in the Early Nineteenth Century*, in: *The Eugenics Review*, XXI (1929-30), pp.189-196.

<sup>55</sup> Newsholme, *The Elements of Vital Statistics*, p.65.

Committee, that Rowntree and Carrier were able to examine trends in the divorce rate in a more detailed manner: they noted, with some justification, that it was 'surprising that so little is known of the demographic and sociological aspects of divorce'.<sup>56</sup> Considerably more emphasis was placed on explaining the possible causal factors behind the registered trends in the marriage rate. Udney Yule, for example, using a methodology developed by Hooker, sought to correlate 'conspicuous oscillations' in the marriage rate with the available time series on prices (Sauerbeck) and unemployment (Hartley). He concluded that the marriage rate (and the birth rate) had been sensitive historically to short-period economic changes, but the key variable had been fluctuations in prices.<sup>57</sup> To this extent, changes in the marriage rate over time, including the higher rates registered until the end of the eighteenth century, reflected 'national prosperity indices'.<sup>58</sup> But as Glass pointed out, even the modified crude marriage rate assumed a constant relative 'marriage ability' of unmarried people of different ages and the assumption that postponed marriages would be solemnized in the following year was equally problematic.<sup>59</sup>

### 3. Mortality and Morbidity

For T.H. Marshall and many contemporaries, the Industrial Revolution had been accompanied by a fall in the death rate which could be accepted 'as fact'.<sup>60</sup> It was a view that had been supported by Rickman, McCulloch and Malthus and one that most writers in the interwar period had no hesitation in reaffirming. According to Carr-Saunders using Kuczynski's method of calculating the 'true death rate', its decline could be attributed to 'immense improvements in health conditions', including better medical provision, vaccination, scientific progress, control of alcohol consumption (in particular gin), and better personal hygiene resulting from the use of cotton garments.<sup>61</sup> Farr's law, which posited an inverse correlation between mortality and population density during the 1860s, was effectively confirmed by Brownlee using data 'accumulated during the forty years since his death', despite the fact that he had clearly ignored the age composition of mid-nineteenth century towns.<sup>62</sup> The long-run decline in the

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<sup>56</sup> David V. Glass, Divorce in England and Wales, in: *The Sociological Review*, XXVI (1934), pp.288-308; Griselda Rowntree and Norman H. Carrier, The resort to divorce in England and Wales, in: *Population Studies*, XI, Pt.3 (1958), pp.188-233.

<sup>57</sup> Yule, On the Changes in the Marriage and Birth-rates, pp.93, 132; R.H. Hooker, Correlation of the Marriage-Rate with Trade, in: *Journal of the Royal Statistical Society*, LXIV (1898), pp.485-492.

<sup>58</sup> Marshall, *The Population Problem*, p.455.

<sup>59</sup> Glass, *Marriage Frequency and Economic Fluctuations*, pp.255, 261.

<sup>60</sup> Marshall, *The Population Problem*, p.429.

<sup>61</sup> Carr-Saunders, *World Population*, pp.72-78; Brownlee, *The History of the Birth and Death Rates*, p. 233.

<sup>62</sup> John Brownlee, Density and Death-Rate: Farr's Law, in: *Journal of the Royal Statistical Society*, LXXXIII (1920), p.283; Buer, *Health and Prosperity*, p.193.

death rate was even visible in some urban areas, with Manchester having an ‘astonishingly low’ mortality between 1811 and 1821 and many towns benefiting from a ‘natural excess’, although it was recognised that ‘the relative insalubrity of urban life’ was masked by ‘dilution effects’ generated by the ‘importation of rural lives of higher value’.<sup>63</sup>

Research on mortality trends was reinforced in a number of ways. First, there was an attempt from a comparatively early stage to analyse occupation-specific mortality with William Guy’s work on the mean age at death of lawyers, clergymen and other élite groups whose details were recorded in the Annual Register and various county histories.<sup>64</sup> According to Brownlee, the evidence suggested ‘much the same expectation of life’ between the sixteenth and eighteenth centuries, with evidence of a subsequent improvement, but specific occupations, in Newsholme’s opinion, had been characterised for some time by a noticeable ‘healthiness’.<sup>65</sup> At a later date, Percy Stocks re-examined data for the period between 1851 and 1923 in order to delineate between mortality which was due to the presence of specific occupations in a locality or attributable to ‘factors not connected with the occupation’.<sup>66</sup> Second, there was increasing interest in age-, sex-, and disease-specific mortality trends. The ‘infantile death rate’ was regarded by Brownlee as a ‘good measure of the health of a district’, and the ‘marked decline’ in mortality from 1800 onwards was ‘probably due to the introduction of vaccination’, although further work suggested there was little distinction between infant mortality under one month between children born in healthy and unhealthy surroundings.<sup>67</sup> According to Dorothy George, evidence from London’s bills of mortality indicated a noticeable decline in infant diseases during the eighteenth century, probably as a result of a fall in the number of infant deaths from smallpox and Newsholme summarised evidence relating to the distribution in the decline of infant mortality according to age and sex.<sup>68</sup> However, George’s claim that there had also been a fall in

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<sup>63</sup> Griffith, *Population Problems*; Barbara Hammond, *Urban Death-Rates in the Early Nineteenth Century*, in: *The Economic Journal* (Economic History Supplement, Vol.1, January 1928), p.420; T.H.Marshall, *The Population of England and Wales from the Industrial Revolution to the World War*, in: *Economic History Review*, V (1934), p.75; Newsholme, *The Elements of Vital Statistics*, p.205.

<sup>64</sup> William A.Guy, *On the Duration of Life among Lawyers: with additional observations on the Relative Longevity of the Members of the Three Learned Professions*, in: *Journal of the Statistical Society of London*, XX (1857), pp.65-71.

<sup>65</sup> Brownlee, *The History of Birth and Death Rates*, p.235; Newsholme, *The Elements of Vital Statistics*, p.234.

<sup>66</sup> Percy Stocks, *The Effects of Occupation and of its Accompanying Environment on Mortality*, in: *Journal of the Royal Statistical Society*, CI (1938), p.678.

<sup>67</sup> Brownlee, *The History of the Birth and Death Rates*, p.233; John Brownlee, *Notes on the Biology of a Life-Table*, in: *Journal of the Royal Statistical Society*, LXXXII (1919), pp.34-65; Marshall, *The Population Problem*, p.435.

<sup>68</sup> Dorothy M.George, *The Increase of Population in the Eighteenth Century as Illustrated by London*, in: *Economic Journal*, XXXII (1922), pp.325-352; Newsholme, *The Elements of Vital Statistics*, pp.354-358.

puerperal mortality was dismissed by Marshall as being ‘utterly misleading’.<sup>69</sup> A comparison of trends in male and female mortality was carried out by Martin which included an analysis by both age and region from 1841-1901 onwards, although it was difficult to examine sex-specific mortality by disease because of changes in cause-of-death classification.<sup>70</sup> It was admitted that the continued use of imprecise classifications, such as ‘old age’ prevented a rigorous examination of trends in disease-specific mortality, while other causes of death were ‘especially difficult’ to diagnose and to interpret (ranging from diabetes, rheumatic fever to infective endocarditis).<sup>71</sup> Nevertheless, the long-run trend in cancer mortality attracted particular attention, although it was admitted that a significant proportion of the registered increase in the death rate was due to improvements in diagnosis and changes in the age composition of the population.<sup>72</sup> Evidence from hospital records from the mid-eighteenth century onwards was also increasingly used to analyse disease-specific mortality trends, whether in relation to lobar pneumonia, pulmonary tuberculosis, measles or other causes of death<sup>73</sup>: it also strengthened the case that improvements in medical practice had been an important contributing factor in the overall decline of mortality.

The interpretation of long-run mortality trends was strengthened by methodological improvements, including refinements in the analysis of existing life tables (first compiled by Farr from the census returns of 1841 and 1851) and an increasing reliance on actuarial data from life assurance companies.<sup>74</sup> The use of standardized mortality rates and life table evidence was widely welcomed,<sup>75</sup> but this was accompanied by a more sceptical approach to the accepted belief

<sup>69</sup> Marshall, *The Population Problem*, p.443.

<sup>70</sup> W.J.Martin, A Comparison of the Trends of Male and Female Mortality, in: *Journal of the Royal Statistical Society, Series A, Part III* (1951), pp.287-298.

<sup>71</sup> Newsholme, *The Elements of Vital Statistics*, pp.175-176; W.P.D.Logan, Mortality in England and Wales from 1848 to 1947, in: *Population Studies*, IV, 2 (1950), pp.132-178.

<sup>72</sup> George King and Arthur Newsholme, The Alleged Increase of Cancer (abstract), in: *Proceedings of the Royal Society*, liv (1893), pp.405-407.

<sup>73</sup> M.Greenwood and R.H.Candy, The Fatality of the Lower Extremity and of Lobar Pneumonia. A Study of Hospital Mortality rates, 1751-1901, in: *Journal of the Royal Statistical Society*, LXXIV (1911), pp.365-397; Report of the Special Committee on Morbidity and Mortality Statistics in the United Kingdom, in: *Journal of the Royal Statistical Society*, 7 (1913), pp.791-812; William Butler, The Fatality Rate of Measles: A Study of its Trend in Time, in: *Journal of the Royal Statistical Society*, LVIII (1945), III-IV, pp.259-276.

<sup>74</sup> T.E.Hayward, A Series of Life-Tables for England and Wales for Each Successive Decennium from 1841-50 to 1881-90, Calculated by an Abbreviated Method, in: *Journal of the Royal Statistical Society*, LXIV (1901), pp.636-641; H.W.Manley, A Comparison between the Mortality Experience of the Equitable Society at the Beginning and End of the Nineteenth Century, in: *Transactions of the VIIth International Congress of Actuaries*, London 1912; Report of the Special Committee, pp.791-812; William P.Elderton and M.E.Ogborn, The Mortality of Adult Males since the Middle of the Eighteenth Century as Shown by the Experience of Life Assurance Companies, in: *Journal of the Royal Statistical Society*, CVI (1943), pp.1-20.

<sup>75</sup> Newsholme, *The Elements of Vital Statistics*, p.227.

that population growth in England and Wales from the eighteenth century onwards had been primarily a result of a fall in the death rate. The classic study of Talbot Griffith which reaffirmed this hypothesis was to hold sway for many years,<sup>76</sup> but shortly after its publication Barbara Hammond was already critical of his reliance on Rickman's parish register abstracts. Even allowing for institutional and medical reforms in Manchester in the late eighteenth century, the death rates for 1811-1821 were 'astonishingly low'. She concluded that 'the truth seems to be that from such data as we possess it is impossible to produce any satisfactory figures about the death rate for Manchester': figures for other large towns were also seriously flawed.<sup>77</sup> Marshall was also one of the few contemporary critics of Griffith in the sense that he attached considerable importance to the maintenance of a high birth rate throughout the Industrial Revolution as a factor behind overall population growth.<sup>78</sup> And yet it was not until the 1950s and early 1960s that Griffith's orthodoxy was seriously challenged. According to Habakkuk, the statistics used by Griffith 'do not allow more than an assessment of probabilities' and the results derived from parish register abstracts were 'useless for explanatory purposes'.<sup>79</sup> This undoubtedly marked a 'major turning-point in the historiography of British population': as David Glass emphasised, future attempts to analyse eighteenth-century population growth 'must break away from Rickman's series'.<sup>80</sup> At the same time, McKeown and Brown set out to demolish the argument held by Griffith and others that the decline in mortality was largely due to medical advances.<sup>81</sup>

It is also instructive to note that there was a growing, if more limited, interest in analysing long-run changes in morbidity. Snow utilised data from a number of large Friendly Societies 'to indicate one or two problems of statistical interest', while Rusher drew on a range of nineteenth century material, including the Report of the Select Committee of 1825, Ansell's tables of 1835, Finlaison's Report of 1854, and Neison's study of the Ancient Order of Foresters (1882) to test the 'speculative law' of Dr Price that the rates of sickness and mortality were closely correlated.<sup>82</sup> According to Buer, members of Friendly

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<sup>76</sup> Griffith, *Population Problems*.

<sup>77</sup> Hammond, *Urban Death-Rates*, p.425.

<sup>78</sup> Marshall, *The Population Problem*, pp.429-456.

<sup>79</sup> H.J.Habakkuk, *English Population in the Eighteenth Century*, in: *Economic History Review*, 2<sup>nd</sup> series, VI (1953), p.271 (reprinted in Glass and Eversley, *Population in History*, pp.269-284); idem, *The Economic History of Modern Britain*, in: *Journal of Economic History*, XVIII (1958), p.488 (reprinted in Glass and Eversley, *Population in History*, pp.147-158).

<sup>80</sup> Flinn, *British Population Growth*, p.20; Glass, *Introduction*, p.9.

<sup>81</sup> T.McKeown and R.G.Brown, *Medical Evidence Related to English Population Changes in the Eighteenth Century*, in: *Population Studies*, IX (1955), pp.119-141 (reprinted in Glass and Eversley, *Population in History*, pp.283-307).

<sup>82</sup> E.C.Snow, *Some Statistical Problems Suggested by the Sickness and Mortality Data of Certain of the Large Friendly Societies*, in: *Journal of the Royal Statistical Society*, LXXVI (1913), pp.445-510; Edward A.Rusher, *The Statistics of Industrial Morbidity in Great Brit-*

Societies, on average, suffered ten days sickness each year, except 'the more thrifty and the more temperate'.<sup>83</sup> Although further work in this field after the First World War was prompted by the Medical Research Council's Industrial Fatigue Research Board, there was no real consensus as to whether rates of sickness were actually higher than in the past.

#### 4. Migration

According to Carr-Saunders, most studies took migration movements into account, but research was constrained by the fact that the keeping of migration statistics was 'a formidable task' and data on emigration was incomplete.<sup>84</sup> His own work in this field focused on establishing different phases of both immigration and emigration from 1815 onwards, but with a primary emphasis on the interwar period.<sup>85</sup> By contrast, Marshall paid little attention to the role of migration because the numbers involved were relatively small, although he did acknowledge the existence of qualitative effects.<sup>86</sup> The compositional impact of migration on the 'sex constitution and healthiness' of both past and present populations was recognised and it was also accepted that nineteenth century urban mortality rates were positively affected by in-migration.<sup>87</sup> However, concern over the negative consequences of migration tended to be paramount. Irish immigrants were less healthy than the English poor; the migration of population was associated with the spread of pauperism (although urban immigrants were able to maintain themselves better); and lack of pleasure in the countryside together with improved communications had led to an 'alarming depopulation of our rural districts' with three Scottish counties reaching their peak population in 1831.<sup>88</sup> With the exception of mass migration resulting from famine or natural catastrophes, historical evidence seemed to confirm that the better endowed tended to migrate which was 'always racially disadvantageous'.<sup>89</sup> In fact, apart from some useful work on the role of trade unions in facilitating migration, and Redford's pioneering study of labour migration in the first half of the nineteenth century, research in this field was more concerned with devising a typology for studying the natural and migrational com-

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ain, in: *Journal of the Royal Statistical Society*, LXXXV (1922), pp.27-71.

<sup>83</sup> Buer, *Health and Prosperity*, pp.189-196.

<sup>84</sup> Carr-Saunders, *World Population*, pp.14-15; Newsholme, *The Elements of Vital Statistics*, p.35.

<sup>85</sup> A.M.Carr-Saunders, *Migration Movements to and from the British Isles*, in: *The Sociological Review*, XXIX (1937), pp.232-242.

<sup>86</sup> Marshall, *The Population of England and Wales*, p.66.

<sup>87</sup> Newsholme, *The Elements of Vital Statistics*, p.198.

<sup>88</sup> Buer, *Health and Prosperity*, p.191; C.S.Loch, *Statistics of Population and Pauperism in England and Wales, 1861-1901*, in: *Journal of the Royal Statistical Society*, LXIX (1906), p.312; G.B.Longstaff, *Rural Depopulation*, in: *Journal of the Royal Statistical Society*, LVI (1893), p.389.

<sup>89</sup> Carr-Saunders, *The Possible Effects of Germinal Change*, p.307.

ponents of population growth between 1841 and 1911, rather than analysing the underlying causes of out- or return migration.<sup>90</sup> Before the 1960s most studies of emigration were written primarily ‘from the point of view of the receiving countries’, and there was no understanding of the ‘considerable’ underlying mobility of England’s population until the early 1950s.<sup>91</sup>

## Research in Historical Demography: a critical reassessment

There can be no disputing the range and usefulness of many of the contributions to the demographic history of England and Wales in the period between the start of the twentieth century and the late 1950s. In terms of their operational hypotheses and individual research agendas, they helped to set out the direction for a great deal of future work in the post-1945 era and should not be viewed as simply being of historiographical interest. And yet, until the gradual undermining of Griffith’s standard interpretation of population change by Habakkuk and the creation of the Cambridge Group there is little sense of innovation or methodological development. If John Graunt was the father of modern demography, as Dupâquier admitted,<sup>92</sup> by the 1960s the French had a ten year lead over both their British and Italian counterparts in taking forward substantive research in demographic history. In the 25 years following the publication of Griffith’s classic study ‘little fresh evidence has appeared on English population movements in the eighteenth century’, and progress in analysing the demography of past populations had been ‘disappointing’ until the 1940s or, one might argue, even later.<sup>93</sup> In assessing the direction and limitations of historical research on population change in England and Wales prior to the late 1950s, a number of points should be emphasised.

First, despite periodic reviews of the development of the system of vital registration and its continuing deficiencies,<sup>94</sup> a wider utilization of different types

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<sup>90</sup> Charlotte Erickson, *The Encouragement of Emigration by British Trade Unions, 1850-1900*, in: *Population Studies*, 3 (1949), pp.248-273; R.V.Clements, *Trade Unions and Emigration, 1840-80*, in: *Population Studies IX* (1955), pp.167-180; A.Redford, *Labour Migration in England*, Manchester 1926; T.A.Welton, *England’s Recent Progress 1881-1901*, London 1911; A.K.Cairncross, *Internal migration in Victorian England*, in: *The Manchester School*, 17 (1949), pp.67-87.

<sup>91</sup> Richard Lawton, *Population Mobility and Urbanization: Nineteenth-Century British Experience*, in: Richard Lawton and Robert Lee (eds.), *Urban Population Development in Western Europe from the Late Eighteenth to the Early Twentieth Century*, Liverpool 1989, pp.149-177; Dudley Baines, *Emigration From Europe 1815-1930* (*Studies in Economic and Social History*), Basingstoke 1991; Buckatzsch, *The Constancy of Local Population*, p.68.

<sup>92</sup> Jacques Dupâquier, *Pour la Démographie Historique*, Paris 1984, p.10.

<sup>93</sup> Habakkuk, *English Population in the Eighteenth Century*, p.271; Glass, *Introduction*, p.3.

<sup>94</sup> Baines, *On Census-Taking*, pp.41-58; Newsholme, *The Elements of Vital Statistics*, pp.25-

of published records, such as material from various Friendly Societies, and the incorporation of time series data to establish the relationship between the individual components of demographic change and specific socio-economic variables, the choice of sources remained restricted. The analysis of long-run population change was still dependent to a large degree on Rickman's parish register abstracts which had dominated research 'for over a century': the eventual abandonment of this source meant 'the rejection of much of the work done before the late 1950s or at least its shelving pending confirmation of its findings by alternative methods'.<sup>95</sup> In reality, technical advances in using parish registers had been first developed in Germany and pioneered for academic purposes in France.<sup>96</sup> By contrast, English writers on demographic history prior to the 1950s had tended to ignore the existence of alternative archival sources, including the original parish registers, tax assessments and muster rolls, perhaps because the analysis of these record types was 'beyond the power of an isolated research worker'.<sup>97</sup> Although case studies were sometimes used to test specific hypotheses, such as the critical reassessment of Griffith's use of Manchester's mortality data by Barbara Hammond, the importance of a regional or local approach in order to present population statistics within their 'historical and physical context', as advocated by David Eversley, had yet to be recognised.<sup>98</sup> Indeed, it was only in the 1950s that a series of pioneering local studies by Beckwith, Chambers and Eversley began to appear, although in retrospect the latter was surprisingly modest in his claim that 'useful studies' could be made of parish registers given certain conditions (such as a relative absence of non-conformity).<sup>99</sup>

Second, the general direction of research on the past population of England and Wales was itself a result of a combination of discipline-specific interests and the extent to which the relatively new social sciences, including economics and sociology, were committed to developing a long-run analysis of socio-economic phenomena. In reality, statisticians and actuaries retained a dominant

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83; Grebenik, *The Source and Nature of Statistical Information*, pp.452-461.

<sup>95</sup> Flinn, *British Population Growth*, p.20.

<sup>96</sup> O.K.Roller, *Die Einwohnerschaft der Stadt Durlach im 18. Jahrhundert*, Karlsruhe 1907; Wrigley, *Preface*, p.xi.

<sup>97</sup> Buckatzsch, *The Constancy of Local Population*, p.62.

<sup>98</sup> Hammond, *Urban Death Rates*, pp.419-426; Eversley, *Population, Economy and Society*, pp.27, 67.

<sup>99</sup> F.Beckwith, *The Population of Leeds during the Industrial Revolution*, in: *Publications of the Thoresby Society*, XLI, *Miscellany*, Vol.xii, pt.ii (1948) and pt.iv (1953); J.D.Chambers, *The Vale of Trent, 1670-1800: A Regional Study of Economic Change* (*Economic History Review*, supplement No.3), 1957 (reprinted in Glass and Eversley, *Population in History*, pp.327-334); idem, *Population Change in a Provincial Town: Nottingham, 1700-1800*, in: L.S.Pressnell (ed.), *Studies in the Industrial Revolution presented to T.S.Ashton*, London 1960, pp.97-124 (reprinted in Glass and Eversley, *Population in History*, pp.334-353); D.E.C.Eversley, *A Survey of Population in an Area of Worcestershire from 1660 to 1850 on the basis of Parish Registers*, in: *Population Studies*, X (1957), pp.253-279 (reprinted in Glass and Eversley, *Population in History*, pp.394-419).

role in implementing studies on population history well into the twentieth century with little formal interaction with the developing social sciences, while only a few economists and sociologists were concerned with analysing past population trends, even as a basis for understanding contemporary phenomena. To this extent, the development of research in this field can only be understood within an institutional and scientific context where population history was never really a mainstream intellectual focus, perhaps until the period after the Second World War when economic history began to establish itself as a separate sub-discipline and individual scholars published a number of important studies in this field.

Prior to the outbreak of the First World War and well beyond 1918, most of the writers on past population trends were historically-minded statisticians, ranging from the medical statistician William Augustus Guy (1810-1885) to George Udny Yule (1871-1951), a lecturer in statistics at Cambridge University and subsequently Director of Studies in natural sciences. Major Greenwood (1880-1949), who contributed papers on disease-specific mortality trends, Graunt and Petty, and the vital statistics of Sweden and England and Wales, was a medical statistician and epidemiologist with strict biometrical convictions, who later held a chair in epidemiology and vital statistics at the London School of Hygiene and Tropical Medicine and produced an overview of the development of medical statistics from Graunt to Farr: according to a former colleague, 'he was a sensitive soul and often found refuge in doing sums'.<sup>100</sup> Their contributions were debated on a regular basis at meetings of the Royal Statistical Society (or the Manchester Statistical Society) frequently attended by Medical Officers of Health, actuaries, and representatives of government departments, including the Registrar-General's Office.<sup>101</sup> Moreover, the emphasis on statistical analysis was reinforced by historical contributions from a number of professional actuaries, such as Ogburn and Rusher, both of whom were fellows of the Institute of Actuaries, which gave rise, in turn, to a preference for mathematical models frequently based on census data.<sup>102</sup>

As for demography itself, it was only in 1938 that R.R.Kuczynski (1876-1947) was appointed to a readership at the London School of Economics and Political Science (LSE). This not only represented an example of knowledge transfer (as a result of enforced emigration from Nazi Germany), but it marked, in effect, the first step in the emergence of demography as a separate academic

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<sup>100</sup> Greenwood and Candy, *The Fatality of the Lower Extremity*, pp.365-397; Greenwood, Graunt and Petty, pp.76-81; M.Greenwood, *The Vital Statistics of Sweden and England and Wales: An Essay in International Comparison*, in: *Journal of the Royal Statistical Society*, LXXXVII (1924), pp.493-531; Greenwood, Major (1880-1949), *Oxford Dictionary of National Biography* ([www.oxforddnb.com/articles/5151797](http://www.oxforddnb.com/articles/5151797)); Obituary, in: *British Medical Journal* (15 October 1949), p.878.

<sup>101</sup> Glass, *Introduction*, p.2.

<sup>102</sup> Elderton and Ogburn, *The Mortality of Adult Males*, pp.1-20; Rusher, *The Statistics of Industrial Morbidity*, pp.27-71.

discipline.<sup>103</sup> This had been preceded by the foundation of the Population Investigation Committee (PIC) in 1936 under the chairmanship of A.M.Carr-Saunders (1886-1966), with David Glass as its research secretary.<sup>104</sup> Its forerunner had been the Positive Eugenics Committee (established in 1934), but it was commonly accepted that up until the early 1930s there had been 'too little population research'.<sup>105</sup> Moreover, there was no reference to demographic history or an explicit study of past populations in the stated aims of the PIC which was largely concerned with the persistent decline in the birth rate and contemporary fertility issues. Initial funding came almost entirely from the Eugenics Society and it is not surprising, therefore, that research in the pre-war period focused on policy-relevant issues such as the impact of educational costs on the birth rate, housing and the particular needs of large families, and the extent of maternity services.<sup>106</sup> However, David Glass did produce two contributions with an explicit historical context on marriage frequency and economic fluctuations since the mid-nineteenth century and long-run changes in fertility between 1851 and 1931.<sup>107</sup> But it is salutary to note that even by the mid-1960s the number of demographers in the UK were deemed to be too few to develop the analysis of past populations in an effective manner and it was suggested that the main burden of work 'will have to fall upon historians and sociologists'.<sup>108</sup> Moreover, the main focus of research between the mid-1950s and the early 1960s was on marriage, rather than long-run population change, and research funding encouraged work either overseas, or on anthropological and contemporary topics.<sup>109</sup>

The dominant role of statisticians and actuaries in interpreting and analysing aspects of long-run demographic change in England and Wales was only gradually displaced by representatives of other academic disciplines, including economics, sociology, and economic history. Although a number of economists demonstrated an interest in historical demography, they remained a minority. Edwin Cannan (1861-1935), who held a chair at the LSE between 1907 and 1926, published a number of papers on demographic statistics and population change between 1831 and 1931 (1895, 1898; 1931), but his main interest lay in the monetary controversies of his day. Edward Gonner (1862-1922), who was appointed to the newly endowed chair of economic science at Liverpool in 1891, contributed research on the population of England in the eighteenth cen-

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<sup>103</sup> D.V.Glass, *The Application of Social Research*, in: *The British Journal of Sociology*, 1 (1950), p.17.

<sup>104</sup> C.M.Langford, *The Population Investigation Committee. A concise history to mark its fiftieth anniversary* (London, 1988, p.5).

<sup>105</sup> *Population Investigation Committee, A Record of Research*, p.1.

<sup>106</sup> *Population Investigation Committee, A Record of Research*, p.3.

<sup>107</sup> Glass, *Changes in Fertility*, pp.161-212; *idem, Marriage Frequency and Economic Fluctuations*, pp.251-282.

<sup>108</sup> Glass, *Introduction*, p.19.

<sup>109</sup> Langford, *The Population Investigation Committee*, pp.17-18.

ture (1913), but as a historical economist, there was a great deal more of the economist than the historian in his approach to a wide range of subjects, including the development of the English farming landscape and commercial geography.<sup>110</sup> Adam Smith may well have been sceptical of the value of political arithmetic,<sup>111</sup> but the general commitment of most economists to establish universal nomothetic laws of economic behaviour could only be achieved at the price of theoretical abstraction which, by definition, implied a dilution of historical and contemporary reality. Malthus had criticised Ricardo for his ‘precipitate attempt to simplify and generalize’, while Thorold Rogers regarded political economy as a ‘collection of logomachies’, ‘strangling itself with definitions’.<sup>112</sup> It is not surprising, therefore, that few economists during the interwar period demonstrated any interest in the analysis of long-run population change. The *Economic Journal* only published five papers in this field by Darwin, George, Bowley, Bonar, and Cannan, and Leonard Darwin’s contribution essentially reiterated the fear of eugenicists that the rapid multiplication of the poorest section of the community would have an ‘injurious effect on our civilisation’: a view, it was alleged, that even Malthus would have supported as it would have taken but a little pressure to have made him become a keen eugenicist’.<sup>113</sup>

By contrast, research on past populations during the interwar period was increasingly influenced by a number of sociologists, in particular by the work of T.H.Marshall (1893-1981), Sir A.M.Carr-Saunders, and D.V.Glass (1911-1978). In a general sense, classical interpretative sociology had already developed a concern for the past and for the critical analysis of longer term processes, and many of the central problems of the discipline had been framed in an historical or developmental way.<sup>114</sup> Roy Harrod, as an economist writing on Britain’s future population could dismiss sociology and psychology as ‘infant sciences’ which ‘give us nothing on which to build’.<sup>115</sup> In reality, sociologists had played a key role in extending the contemporary research agenda in de-

<sup>110</sup> Gonner, Edward Carter Kersey, *Oxford Dictionary of National Biography*, Oxford 2004-05, p.728.

<sup>111</sup> D.C.Coleman, *History and the Economic Past*, Oxford 1987, p.10.

<sup>112</sup> W.W.Rostow, Professor Arrow on Economic Analysis and Economic History, in: W.N.Parker (ed.), *Economic History and the Modern Economist*, Oxford, 1986, p.71; J.E.T.Rogers, *The Economic Interpretation of History*, Oxford 1891, p.vi (cited in Coleman, *History and the Economic Past*, p.48).

<sup>113</sup> Leonard Darwin, Population and Civilisation, in: *Economic Journal*, XXXI (1921), pp.187-195, in particular pp.191-192; George, The Increase of Population, pp.325-352; A.L.Bowley, Births and Population in Great Britain, in: *Economic Journal*, XXXIV (1924), pp.188-192; James Bonar, Ricardo on Malthus’ ‘Principles of Political Economy’, *Economic Journal*, XXXIX (1929), pp.210-218; E.Cannan, The Changed Outlook in Regard to Population, 1831-1931, in: *Economic Journal*, XLI (1931), pp.519-533.

<sup>114</sup> J.D.Hunter and S.C.Ainlay, *Making Sense of Modern Times. P.L.Berger and the Vision of Interpretative Sociology*, London and New York 1986, p.4.

<sup>115</sup> Harrod, *Britain’s Future Population*, p.16.

mography and even in population history. The role of Carr-Saunders and Glass in the early development of the Population Investigation Committee has already been alluded to, but T.H.Marshall, then a reader in social science at the London School of Economics (LSE), was also one of the original committee members (together with R.R.Kuczynski).<sup>116</sup> Carr-Saunders, who became the Director of the LSE in 1937 having relinquished the Charles Booth professorship of social science at Liverpool, had established his career with an important contribution on contemporary population problems, but his later work was often characterised by the inclusion of comparative and historical perspectives.<sup>117</sup> Despite Lancelot Hogben's claim that 'the academic value of social research in our universities is largely rated on a futility scale', the innovative Merseyside Social Survey of the early 1930s carried out by Carr-Saunders and other sociologists at Liverpool also showed a concern to analyse issues within a broader, historical framework, although the direction of research was increasingly dominated by eugenic and genetic perspectives.<sup>118</sup>

But the extent to which sociologists in the interwar period were concerned with analysing past population trends should not be exaggerated. *The Sociological Review* certainly published a number of articles with an explicit demographic focus, but they were often concerned with the threat of over-population (Tayler; Fawcett), the apparent decline of 'national vitality' (Barlow), or the prospect of a significant fall in total population by the mid-1970s (Leybourne).<sup>119</sup> Only a very limited number of contributions contained an explicit reference to long-run population change, including a study by Glass on divorce patterns in England and Wales since 1858 and work by Enid Charles which utilised comparative historical data to analyse trends in differential fertility.<sup>120</sup> More surprisingly, although D.V.Glass and T.H.Marshall played an important role in the foundation and early development of the *British Journal of Sociology* (essentially based at the LSE), there was only one general article by Ogburn on social aspects of population change in its first decade of publica-

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<sup>116</sup> Langford, *The Population Investigation Committee*, p.5.

<sup>117</sup> Carr-Saunders, *The Possible Effects of Germinal Change*, pp.246-257; idem, *The Population Problem*; idem, *World Population*.

<sup>118</sup> Hogben, *Introduction*, p.39; Carr-Saunders, *The Possible Effects of Germinal Change*, pp.246-257; D.Caradog Jones, *Differential Class Fertility. A Further Report on the Merseyside Social Survey*, in: *The Eugenics Review*, XXIV (1933), pp.175-190; idem, *Mental Deficiency on Merseyside. Its Connection with the Social Problem Group*, in: *The Eugenics Review*, XXIV (1933), pp.97-105; idem, *Eugenics and the Decline in Population*, in: *The Eugenics Review*, XXVIII (1936-37), pp.213-215.

<sup>119</sup> J.Lionel Taylor, *Overpopulation*, in: *The Sociological Review*, XV (1923), pp.235-236; C.B.Fawcett, *On the Distribution of Population over the Land*, in: *The Sociological Review*, XVII (1925), pp.85-104; K.E.Barlow, *The Decline of National Vitality*, in: *The Sociological Review* XXIII (1931), pp.34-44; Grace C.Leybourne, *An Estimate of the Future Population*, in: *The Sociological Review*, XXVI (1934), pp.130-138.

<sup>120</sup> Glass, *Divorce in England and Wales*, pp.288-308; Charles, *Differential Fertility*, pp.243-257.

tion, and only two substantive contributions on historical topics (by Guttsman and Pinchbeck), neither of which were concerned with historical demography.<sup>121</sup> Indeed, the immediate post-war years were characterised by ‘developmental agnosticism’ – what Elias termed ‘the retreat of sociologists into the present’, while an increasing reliance on cross-sectional survey methods ultimately led to atemporal functionalism.<sup>122</sup> Marshall, whose later books dealt with non-demographic themes, such as citizenship and class and the development of social policy, appears to have been implicitly aware that the impetus for future research on past populations was likely to come not from sociologists, but from economic historians ‘interested in the rate of increase of a population in relation to the social and economic conditions of its country’, given that population, as a factor in economic history, ‘must be regarded as a cause and not merely as an effect’.<sup>123</sup>

In retrospect, such a prognosis (if it can be regarded in this light) was fairly accurate, although the main contribution of economic historians to the development of historical demography was only to be made manifest in the period after the Second World War when economic history began to establish itself as a separate sub-discipline within the existing university infrastructure. Marshall’s paper on the causes of population growth during the Industrial Revolution was the only contribution on population history to be published in *Economic History* prior to 1940, perhaps as a reflection of the dominant interests of the editors (J.M.Keynes, D.H.Macgregor and, later, E.A.G.Robinson).<sup>124</sup> But such a pattern was also evident in publication profile of the *Economic History Review* (edited initially by E.Lipson and R.H.Tawney). From its first issue in 1927-28 until 1946 there were only two papers, both on London, with an explicit focus on demographic history: an analysis of the role of migration in its overall growth between 1841 and 1891, and a study of its population in the late seventeenth century.<sup>125</sup> By contrast, the immediate post-war period witnessed a significant increase in research output in demographic history, with important

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<sup>121</sup> William F.Ogburn, On the Social Aspect of Population Changes, in: *The British Journal of Sociology*, 4 (1953), pp.26-29; W.L.Guttsman, The Changing Social Structure of the British Political Elite, 1886-1935, in: *The British Journal of Sociology*, 2 (1951), pp.122-134; idem, Aristocracy and the Middle Class in the British Political Elite 1886-1916, in: *The British Journal of Sociology*, 5 (1954), pp.12-32; Ivy Pinchbeck, The State and the Children in Sixteenth-Century England, in: *The British Journal of Sociology*, 7 (1956), pp.273-285.

<sup>122</sup> Stephen Mennell, *The Sociological Study of History: Institutions and Social Development*, in: C.G.A.Bryant and H.A.Becker (eds.), *What has Society Achieved*, London 1992, p.55.

<sup>123</sup> Thomas Humphrey Marshall, *Citizenship and Social Class, and Other Essays*, Cambridge 1950; idem, *Social Policy in the Twentieth Century*, London 1967 (2<sup>nd</sup> edition); idem, *The Population Problem*, p.435; idem, *The Population of England and Wales from the Industrial Revolution to the World War*, in: *Economic History Review*, V (1934), p.76.

<sup>124</sup> Marshall, *The Population Problem*, pp.429-456.

<sup>125</sup> A.A.Shannon, *Migration and the Growth of London, 1841-91*, in: *Economic History Review*, V (1934-35), pp.79-86; P.E.Jones and A.V.Judges, *London Population in the Late Seventeenth Century*, in: *Economic History Review*, VI (1935-36), pp.215-263.

contributions on Ireland, the use of parish registers to determine changing occupational structure, and the population of Elizabethan England utilising evidence from contemporary muster rolls.<sup>126</sup> Studies by Postan, Hallam, and Harley reflected a growing interest in the relationship between population trends and agricultural productivity in the Middle Ages, while Krause's contribution focused on household size and structure.<sup>127</sup> Both Eileen Power and M.M.Postan were concerned with building bridges between economic history, as it developed a separate intellectual identity, and other disciplines with the intention that its subject material should be made 'relevant to general and theoretical problems',<sup>128</sup> while the extensive concentration of research on the British industrial revolution inevitably involved a greater focus on the population variable. Habakkuk's seminal article published in 1953 on English population in the eighteenth century concluded that changes in industrial production stimulated demographic growth and seriously undermined the orthodox interpretation of population change reiterated by Talbot Griffith, while further work explored the complex interaction between economic and demographic development as population began to be seen as an integral part of the fabric of change.<sup>129</sup> But the work undertaken by economic historians in the post-war period also involved the explicit use of alternative source materials, including original parish registers, and their willingness to move beyond the operational paradigms of traditional research effectively laid the basis for significant future developments. Population, as Eversley argued was a 'central theme' in economic history and its increasing institutional strength from the 1950s onwards also implied greater cooperation between historians, in general, and demographers.<sup>130</sup>

Third, the development and direction of much research prior to 1960 on the past population of England and Wales often reflected wider agendas which were both discipline-specific and contemporary oriented. At one level, historical demography often served as an 'amiable preamble' to more serious discus-

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<sup>126</sup> K.H.Connell, *The Population of Ireland in the Eighteenth Century*, in: *Economic History Review*, XVI (1946), pp.111-124; idem, *Land and Population in Ireland, 1780-1845*, in: *Economic History Review*, II (1949-50), pp.278-289; E.J.Buckatzsch, *Occupations in the Parish Registers of Sheffield, 1655-1719*, in: *Economic History Review*, I, 1 (1948), pp.145-150; E.E.Rich, *The Population of Elizabethan England*, in: *Economic History Review*, II (1949-50), pp.247-265.

<sup>127</sup> M.M.Postan, *Some Economic Evidence of Declining Population in the later Middle Ages*, in: *Economic History Review*, II (1949-50), pp.221-246; H.E.Hallam, *Some Thirteenth-Century Censuses*, in: *Economic History Review*, X (1957-58), pp.340-366; J.B.Harley, *Population trends and Agricultural Developments from the Warwickshire Hundren Rolls of 1279*, in: *Economic History Review*, XI, 1 (1958), pp.8-18; J.Krause, *The Medieval Household: Large or Small?*, in: *Economic History Review*, IX (1956-57), pp.420-432.

<sup>128</sup> Coleman, *History and the Economic Past*, p.91.

<sup>129</sup> Habakkuk, *English Population in the Eighteenth Century*, pp.117-153; idem, *The Economic History of Modern Britain*, pp.486-501; idem, *Population Growth and Economic Development since 1750*, Leicester 1968; Eversley, *Population, Economy and Society*, p.23.

<sup>130</sup> Eversley, *Population, Economy and Society*, pp.24, 67.

sions, whether in economics, politics or sociology.<sup>131</sup> In a wider context, the study of long-run population change was frequently used as a means of testing specific hypotheses or for casting further light on the causes of contemporary demographic phenomena. The apparent threat of a rapid decline in population and the fall in the birth rate with its perceived eugenic, racial and social repercussions both required a careful evaluation of longer-term trends and a critical assessment of potential causative factors.<sup>132</sup> Both Brownlee with his concept of waves of germinal energy as a means of explaining changes in the birth rate and Blackmore and Mellonie in their criticism of contemporary family endowment schemes drew heavily on historical evidence to sustain their arguments.<sup>133</sup> Moreover, the analysis of the past by many of the leading authorities on population issues both before 1914 and during the interwar period was often subordinated to a primary concern with contemporary demographic issues. Carr-Saunders was chairman of the Positive Eugenics Committee and made explicit references to Nazi policies to raise the birth rate, while Glass was the Committee's first research assistant.<sup>134</sup> Whetham and Whetham used selective historical evidence to sustain their pro-natalist and eugenicist views, while Newsholme and Stevenson articulated a wider concern when he stated that 'It cannot be regarded as a matter of indifference whether the unfilled portions of the world shall be peopled by Eastern races (Chinese, Japanese, Hindus etc.), by Negroes...or other Eastern European peoples...'.<sup>135</sup> To this extent, research on the population history of England and Wales served a wider purpose. By contrast, although economic history was also concerned with testing general models and using historical evidence to understand the economic present, as a discipline it required a more detailed evaluation of earlier population trends and implicitly accepted population history in its own right as a means of understanding 'a wide segment' of economic and social development.

## Conclusion

In reviewing the development of population history in Great Britain between the early twentieth century and 1960 a number of points can be made. First, although Glass was largely correct in arguing that progress in demographic

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<sup>131</sup> Chevalier, *Pour une Histoire*, p.245.

<sup>132</sup> Hogben, *Introduction*, p.35.

<sup>133</sup> Brownlee, *Germinal Vitality* p.187; Blackmore and Mellonie, *Family Endowment*, pp.205-212, pp.412-414.

<sup>134</sup> Carr-Saunders, *World Population*, pp.327-328; Langford, *The Population Investigation Committee*, p.3.

<sup>135</sup> Whetham and Whetham, *The Family and the Nation*, pp.122-145; *idem*, *Heredity and Society*, pp.57-71; Newsholme and Stevenson, *The Decline of Human Fertility*, pp.57-58; Michael S. Teitelbaum and Jay M. Winter, *The Fear of Population Decline*, Orlando, San Diego, New York, Austin, London, Montreal, Sydney, Tokyo and Toronto 1985, p.39.

history was ‘disappointing’ before the 1940s,<sup>136</sup> such a view clearly underplays the range and extent of work in this field. In retrospect, some of the earlier publications based on the parish register abstracts can justifiably be classified as ‘unprofitable’ and only of historiographical interest,<sup>137</sup> but contemporary research represented an extensive body of work, some of which had a continuing relevance. The current paper has focused on published research in four key areas: the birth rate and fertility; marriage and nuptiality; mortality and morbidity; and migration. In every case, there is evidence of considerable research activity and output. Indeed, the range of contemporary work was extensive, from studies of long-run changes in morbidity to estimates of foetal wastage based on data from the early nineteenth century.<sup>138</sup> Work on different aspects of the past population of Great Britain (or more specifically England and Wales) covered almost all the main issues that have concerned historical demographers since 1960, although very little research was undertaken on family history or the internal dynamics of the household until the application of family reconstitution techniques: as a result the history of the family was ‘largely an untold tale’.<sup>139</sup>

But if English social scientists, as Laslett argued, had ‘little advantage over others in respect of data about past population and social structure’,<sup>140</sup> there had been a general unwillingness prior to the mid-1950s to move beyond traditional paradigms or to explore the potential for exploiting new source materials which were increasingly being put to effective use by their French counterparts. With few exceptions, a great deal of research continued to be based on Rickman’s parish register abstracts, census returns or other published material, and there few attempts to move beyond well-established parameters. The classic study by Talbot Griffith of demographic change in the late eighteenth and early nineteenth century remained unchallenged until Habakkuk’s incisive contributions of the late 1950s,<sup>141</sup> but these, in turn, represented an investigative interpretation of existing evidence, rather than the utilisation of new material to sustain an alternative hypothesis. Although it would be inappropriate to criticise contemporary social scientists, demographers or historians for methodological weaknesses or inconsistencies given the relatively late acceptance of Kuczynski’s calculation of net and gross reproduction rates,<sup>142</sup> it is important to note

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<sup>136</sup> Glass, Introduction, p.3.

<sup>137</sup> Flinn, *British Population Growth*, pp.20, 61.

<sup>138</sup> Snow, *Some Statistical Problems*, pp.445-510; Glass, Introduction, p.16.

<sup>139</sup> Michael Anderson, *Approaches to the History of the Western Family 1500-1914* (Studies in Economic and Social History), London and Basingstoke 1980, p.13; D.V.Glass, *Population and Population Movements in England and Wales, 1700 to 1850*, in: Glass and Eversley, *Population in History*, p.238.

<sup>140</sup> Peter Laslett, Introduction: *The Numerical Study of English Population*, in: Wrigley, *English Historical Demography*, p.2.

<sup>141</sup> Habakkuk, *English Population in the Eighteenth Century*; idem, *The Economic History of Modern Britain*.

<sup>142</sup> Kuczynski, *The International Decline of Fertility*, p.61; Glass, *Changes in Fertility*, p.162.

that the institutional infrastructure for exploiting alternative source materials was already present. The The Harleian Society had been established in 1869, with a specific section (from 1877 onwards) devoted to the transcription and printing of parish registers, while the British Record Society (later to be known as the Society of Genealogists) had been founded in 1888. When requested, the Society had no hesitation in publishing the request by the recently constituted Cambridge Group for volunteer support in counting the number of baptisms, marriages and burials on standard forms supplied by Dr. Wrigley and his team.<sup>143</sup>

Indeed, both the strengths and weaknesses of work on the past population of Great Britain during the first half of the twentieth century reflected the changing influence of different disciplines, their respective research agendas, and the specific nature of funding opportunities. The early dominance of statisticians and actuaries with a palpable interest in the past was gradually replaced by contributions from social scientists, in particular by economists and, to greater extent, sociologists. Demography as a formal discipline was still in its infancy, with the appointment of Kuczynski to a readership at the LSE only occurring in 1938, and the impetus behind contemporary research initiatives often came from a small group of sociologists – Carr-Saunders, Marshall and Glass. The latter, in particular, played a critical role in the overall development of demography and of population history. However, by 1939 M.M.Postan was already critical of ‘the syllogistic exercises of theoretical economics’<sup>144</sup> and empirical sociology in the immediate post-war period evinced little interest in long run analysis with an appropriate emphasis on historical evidence. Moreover, in a wider context work by social scientists on the past population of Great Britain almost always reflected dominant, discipline-specific research agendas. Most writers and academics approached the demographic past as a means of interpreting contemporary population trends, in particular the decline in the birth rate and specifically in marital fertility. Their work also reflected the limited availability of funding opportunities. Whereas Brownlee’s appointment as Head of Statistics (1914-1927) at the Statistics Department of the Medical Research Council enabled him to maintain his interest in theories of ‘germinal vitality’ (while carrying out, *inter alia*, important reports on pulmonary tuberculosis), funding from the Eugenics Society for the work of the Population Investigation Committee to a large extent reaffirmed its primary concern with fertility issues and perhaps explains the absence of any reference in its profile of research activity to work on historical demography.<sup>145</sup>

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<sup>143</sup> Cambridge Group for the History of Population and Social Structure; in *The Genealogists’ Magazine*, London 1965, p.122.

<sup>144</sup> As stated in his inaugural lecture of that year.

<sup>145</sup> Thomson A. Landsborough, *Half a Century of Medical Research*, Vol.2, *The Programme of the Medical Research Council (UK)*, London 1975, pp.8, 348; *Population Investigation Committee, A Record of Research*; Langford, *The Population Investigation Committee*.

The belated adoption of a new approach to population history and the emergence of historical demography as a recognised academic discipline were marked by the establishment of the Cambridge Group and the publication of *Population in History* by Glass and Eversley in 1965. These two events essentially reflected the growing role of another discipline, namely economic history, in developing a different research agenda which was less concerned with contemporary political agendas and more committed to analysing the changing relationship between economic, social and demographic variables. Economic historians were instrumental in undermining the established orthodoxy relating to modern population growth, in justifying the study of past populations in its own right (whether in the context of the Middle Ages or the Industrial Revolution), and in locating the interpretation of population change within its appropriate economic and social context, whether at a national, regional or local level. According to David Eversley, then reader in Social History at Birmingham University, population history ‘consists essentially of a series of connected and methodologically unified studies of one aspect of local history’: as a result, the demographic process could only be understood at the local community level.<sup>146</sup> The plea by Glass for more ‘meaningful analysis’<sup>147</sup> implied the adoption of more sophisticated methodological approaches (such as cohort or ‘generation’ analysis) using reconstitution data from parish registers, but it also necessitated effective cooperation between historians, specifically economic historians, and demographers.<sup>148</sup> To this extent, the creation of the Cambridge Group and the acceptance of new research paradigms in the 1960s were dependent on wider shifts in the weighted contribution of different disciplines to the development of demographic history as a whole. Perhaps, within this context, it is possible to evaluate more objectively the wide range of different contributions to demographic history in the decades prior to 1960 and to the understand why the clarion call from France in the mid-1940s for a new approach to the study of past populations remained unanswered in Great Britain for almost two decades.

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<sup>146</sup> Eversley, *Population, Economy and Society*, pp.14-15.

<sup>147</sup> Glass, *Introduction*, p.9.

<sup>148</sup> Eversley, *Population, Economy and Society*, p.69.