
Background
This project is part of a larger programme of research, The Occupational Structure of Britain 1379-1911. It builds upon, an earlier ESRC funded project, The male occupational structure of England c.1750 to 1851 (RES- 000-23-0131). The current project made possible the follow on project: The Occupational Structure of England and Wales c.1379 to c.1729 funded by the Leverhulme Trust. The underlying aims of the wider research programme are:

(1) To reconstruct the occupational structure of Britain in as much quantitative detail as the surviving sources permit from 1379 to 1911.
(2) To use these data to improve our understanding of the long run economic development which culminated in the nineteenth century with the maturation of the Industrial Revolution.
(3) To encourage scholars working on other countries to do likewise so that we are in a position to place our findings in a comparative context.

Objectives
The current project had six key objectives:

(1) To create a series of major datasets relating to occupational structure and population geography in nineteenth century Britain.
(2) To create a series of Geographical Information System (GIS) resources.
(3) To link the former to the latter to enable the datasets to be mapped, manipulated and analysed at a variety of spatial levels.
(4) To use these digital resources to shed new light on the maturation of the Industrial Revolution during the nineteenth century (c.1817 to 1911).
(5) To utilise the ‘census’ of male occupations c.1817 created for this project on the nineteenth century as the fulcrum of our work on earlier periods and in particular to allow us to re-weight non-random samples for earlier periods systematically.
(6) To compare systematically the evolution of Britain’s occupational structure with that of other industrialising economies.

The extent to which objectives have been met or modified
We ran into a number of unanticipated problems which are outlined below. The current position is that:

(1) On balance we have produced substantially more than anticipated in the way of datasets and GIS resources. The two exceptions are that we abandoned work on digitising the road network and maintaining the translation from PST (our own occupational coding scheme) to Booth-Armstrong (details below). For details, see ‘Outputs’ below and annexes 3-5.
(2) The fundamental importance of the headline findings is not in doubt (see ‘Results’). However, we are 18 months behind where we anticipated being, as

1 See the project website at http://www.geog.cam.ac.uk/research/projects/occupations/
regards more detailed analytical work and publications. Nonetheless, we have no doubt that we were right to focus on the completing the datasets and GIS resources as planned and that the final analytical outcomes will significantly exceed those set out in the original application. The value of what we have created and its analytical potential should be clear from the brief report on results below, the preliminary papers and other material on the website.

(3) We have achieved far more than we had planned with respect to putting our findings into a comparative framework since we have succeeded in kick starting a major international research effort which will lead to a monograph in the near future. See below: Activities 2, Impacts 1 and Annex 2.

Problems encountered

A number of problems slowed down the creation of the datasets and GIS resources and the linkage process between them. The problems were as follows:

(1) As reported to the ESRC previously (together with the very involved technical details which space precludes reproducing here) it turned out that the Southall-enhanced Kain and Oliver parish polygon GIS which we planned to use was not adequate for our purposes. So far as we know we are the first users of this dataset to try and use it for mapping parish level data for the whole of England and Wales. This brought to light many problems that could not have been detected previously because no-one had tried to link other datasets to the GIS in a comprehensive manner. Fixing and enhancing the GIS probably took about 16 months of Dr Satchell’s time and perhaps six months of Gill Newton’s time. No time had been budgeted for either task because we had not realised it would be necessary. This problem was much the largest source of delays to the project.

(2) We very substantially underestimated the work involved in linking the 1813-20 and 1881 datasets to the GIS. Our pilot study of six counties, cited in the application, turned out to be unrepresentative of the country as whole. The administrative complexity of reporting units in Northern England made this a much larger task than we had estimated and one which required a much larger input of casual labour than originally estimated and also required further time from Dr Satchell and Ms Newton which had not been budgeted for.

(3) We discovered significant discrepancies between the Essex coding of the 1881 CEB dataset and the published census reports for 1881. It was necessary to

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3 It proved necessary to make changes to 2,461 (10.8%) of the 22,729 lines of data; to re-digitise 644 of 22,729 polygons; to delete 81 polygons and digitise 525 new polygons. A considerable amount of research was required in many instances.
account for and eliminate these discrepancies before we could use the data for our purposes and this took up two months of Ms Newton’s time.\(^5\)

(4) We had anticipated making use of the machine-readable occupational tables from the 1911 census created for Histpop.org and had not planned on making these tables machine-readable ourselves. However, the form in which these had been digitised (to reflect individual pages in the published census rather than as a dataset), required significant further unplanned use of casual labour.

(5) A further complication was that the PI, Dr Shaw-Taylor, gained a permanent University lectureship six months into the project. He also acquired other new commitments during the course of the project. These include: two children, deputy-directorship of the Cambridge Group for the History of Population and Social Structure, and a large grant from the Leverhulme Trust to take the wider programme of research backwards in time. He was therefore able to spend substantially less time on the project than planned. Whilst this has further delayed the analytical work on the project, the PI acquiring a permanent lectureship did make it possible to hire substantial sums saved his salary to hire extra casual labour and to substantially increase Ms Newton’s time on the project which made it possible to ensure that we broadly met our resource creation targets.

**Methods**

The fundamental methodology employed by the project was simple in principle, (though not in practice):

(1) To create a dataset of male occupations for all c.11,400 parishes in England and Wales, c.1817 through a large-scale archival data collection exercise.

(2) To match that data to a series of GIS resources so that the data could be manipulated, analysed and mapped at the following spatial levels: quasi-parish, hundred, ancient county, registration sub-district, registration district and registration county to facilitate detailed geographical comparisons with datasets available for other time periods, notably in the later published census reports.

(3) To create machine-readable datasets of virtually all of the occupational data in the published census reports of 1841 to 1911 for all reported spatial units with the full published age breakdown. The spatial units were counties and registration counties 1841-1911; towns and principal towns 1841-1871 and registration districts 1851 and 1861 only.

(4) To create, from the 26 million records in the digitised CEBS for 1881 further datasets of male occupations and to re-organise these into 1851 registration districts.

(5) To code all of the data to the Primary, Secondary, Tertiary (PST) system devised by Tony Wrigley, so that all the occupational datasets created are comparable (at both sectorally aggregated levels and fine-grained levels) with each other and also with the datasets on earlier centuries created by

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\(^5\) UK Data Archive, SN4177, Schürer, K., and Woollard, M., *1881 Census for England and Wales, the Channel Islands and the Isle of Man* (Enhanced Version).
the previous ESRC funded project and the more recently funded Leverhulme Trust project on the c.1379-c.1729 period and with the datasets being created for other countries by the INCHOS project (see below).

(6) To create a quasi-parish level set of corrected population totals for the period 1801-1891 and link these to a series of GIS resources.

(7) To create a dynamic GIS of the railway system and the navigable waterways.

(8) To use all these datasets to analyse the changing occupational structure and population geography of England and Wales 1801-1911 and Scotland 1851-1911 to answer a series of major research questions in economic history (as set out in the original application) but with a primary focus on furthering our understanding of the second half of the Industrial Revolution and a secondary focus on the impact of the changing transport infrastructure.

(9) To use the c.1817 dataset as the fulcrum for all work on earlier periods, not least by allowing us to quantify robustly the nature of the change in the male occupational structure of England and Wales from c.1710 to c.1817.

Results

The results of the project may best be seen by looking at the two nominated outputs: a DVD containing over 70 datasets and GIS resources and a project website available at: [http://www.geog.cam.ac.uk/research/projects/occupations/britain19c/](http://www.geog.cam.ac.uk/research/projects/occupations/britain19c/)

Please note that although this website sits within the website of the broader research programme it is self-contained and only contains material directly relevant to this award.

The headline results of the project will require substantial rethinking of both the Industrial Revolution and of nineteenth century British economic history generally. The previous project, on the 1750-1850 period, was based on datasets for a restricted number of counties in England, though these did include the key industrial counties of Lancashire and the West Riding. However, this still left room for doubt as to how far those results could be generalised across the whole country. The new project leaves no room for such doubts and adds very important new findings:

(1) The earlier project established that in Lancashire and the West Riding the growth in the relative importance of secondary sector male employment had already taken place by 1750 (at which date it had reached over two-thirds of adult male employment) and was then stable or declining over the next 120 years. The current project shows that all the remaining industrial counties in England (Cheshire, Derbyshire, Leicestershire, Nottinghamshire, Staffordshire, Warwickshire and Worcestershire) mirrored the experience of Lancashire and the West Riding from c.1817. The industrial geography of most of England and Wales was remarkably stable across the nineteenth century. Northumberland and Durham were the only counties to develop new high levels of secondary sector employment during the period.

(2) Nationally the secondary sector was very substantially larger, as a share of male employment, at the beginning of the nineteenth century than has hitherto been thought. Whereas Crafts put the secondary sector at 24.7 per cent in
1803-4 our data suggest that it comprised over 42 per cent of the male workforce in c.1817.\(^6\) One implication of the foregoing is that productivity changes in the secondary sector during the classic industrial revolution period were much larger than the national accounts literature currently suggests and that new technology probably had a much bigger effect than has been argued in that literature to date.\(^7\)

(3) A number of historians have pointed to the neglect of the tertiary sector during the Industrial Revolution and have suggested that the tertiary sector was of fundamental importance, while C.H. Lee has pointed to the sector’s importance in the second half of the nineteenth century.\(^8\) Our data make it clear that the tertiary sector was the most dynamic sector over the whole of the nineteenth century and that this was a striking feature of nearly all parts of England and Wales (mining districts are a complex and partial exception). This has a number of implications. First, the geographical ubiquity of tertiary growth makes it clear that tertiary sector growth was indeed a fundamentally important element of structural change during the Industrial Revolution. Second, it is clear that the Industrial Revolution cannot be considered as a merely regional phenomenon, as it has often been argued, because structural change was affecting the whole of the country. Third, the growth of the tertiary sector may require some upward revision of the Crafts-Harley estimates for GDP per capita growth in the pre 1830 period.

(4) The quasi census of male occupations created by this project, in conjunction with data collected for c.1710 on the Leverhulme Trust funded project has allowed us both to make robust estimates of male occupational structure c.1710 and to examine change over the whole eighteenth century both at the aggregate national level and at a regional/county level. Our findings require a radical rethinking of the nature and timing of Industrial Revolution and of the sectoral productivity trends associated with it. In brief, the secondary sector was around twice as large c.1710 as has been thought hitherto accounting for as much as 39 per cent of adult male employment at that date, making it much more like the Netherlands at that date than has been appreciated. Growth over the eighteenth century was very modest nationally with secondary sector employment reaching 42 per cent c.1817. However, many counties in southern England experienced substantial de-industrialisation and this can now be measured for the first time. The tertiary sector grew very little, if at all, in relative terms in the eighteenth century. The rapid growth in the tertiary sector after c.1817 therefore marks a decisive break with the pattern of structural change in the eighteenth century.

A more extensive discussion of the finding of the project are reported in the papers available on the project website.\(^9\) We would particularly draw attention to three papers 3, 4 and 5 which provide much more detailed discussions of the research

\(^{9}\) See: http://www.geog.cam.ac.uk/research/projects/occupations/britain19c/papers/
findings than is possible here.\textsuperscript{10} However, it will take some years to analyse the data in full and it is likely that there will be a very extended debate over the interpretation of the results over a more protracted period.

One other area where important findings are already beginning to emerge concerns trends in female employment from 1851 onwards. This is not discussed fully in the any of the online papers and should be mentioned here.\textsuperscript{11} One major finding is that reported participation rates varied massively around the country and this makes it very unlikely that there were any uniform national trends either before 1851 or thereafter.\textsuperscript{12} It is generally accepted that female employment declined across the second half of the nineteenth century and a number of explanations have been advanced. Declining participation has been explained both by ‘positive’ factors – rising male working class earnings reducing the need for married women to work - and by negative factors – women being squeezed out in various ways.\textsuperscript{13} However, geographical and sectoral differences in such trends have received no detailed analysis in the literature. The new data reveal that between 1851 and 1871 reported female participation rates were growing in some parts of the country while declining in others.\textsuperscript{14} A sectoral analysis of male and female employment over the period 1851-1911 reveals a very important but hitherto overlooked feature of the decline in reported female employment. In 1851 female employment was heavily concentrated in four sectors: agriculture, textiles, making clothes, and domestic service. The first three sectors underwent a continuous decline in employment share between 1817 and 1911 for males and from 1851 to 1911 (when we can measure it) for females. The ratio of male to female employment within these sectors was surprisingly stable over time. In other words, female employment was concentrated in sectors which experienced a long-run decline in economic importance over the whole of the nineteenth century. The long-term decline in female employment may therefore, at least in part, be explained by a combination of a relatively unchanging sexual division of labour and a long-term structural change in the economy. This does not necessarily preclude the importance of the ‘positive’ and ‘negative’ attitudinal explanations advanced previously but certainly suggests a more complex process of change.

\textbf{Activities}

1 \textbf{Conference and Seminar presentations}

International Economic History Association (Helsinki, 2006); Hitotsubashi University, Tokyo (2007); Tokyo Metropolitan University (2007); Conference at Leuven University (2007); Economic History Society Conference (2008), 3 papers; Bulgarian Academy of Sciences (2008); University of Madrid (2008); Queens


\textsuperscript{12} See Shaw-Taylor, L., ‘Diverse experiences.’


\textsuperscript{14} The geographical analysis has not yet been taken beyond 1871.
University, Belfast (2008); University of Tasmania (2008); University of Vienna (2008); INCHOS Conference 2009, Cambridge. Within Cambridge three further papers were given, to different seminars, in 2006 and one to a workshop on geo-spatial modelling in 2009. Five papers, arising from the wider project were presented at the Economic History Society’s 2010 meeting. Three of these relate directly to this award and two relate to the broader programme. Two further papers will be given to international conferences being held in the UK in 2010 (on women’s work) and 2011 (on the development of agrarian capitalism). A further paper will be presented to the Local Population Studies conference later this year. This is a total of 21 papers arising directly from this award, eight of them presented outside the United Kingdom.

2 Network and Conference Organisation: INCHOS

The international network for the comparative history of occupational structure (INCHOS) was launched in late 2007 by Dr Leigh Shaw-Taylor (University of Cambridge) and Professor Osamu Saito (Hitotsubashi University). This followed on from a session at the International Economic History Association meeting in Helsinki in 2006 and a very successful workshop on occupational structure hosted by Hi-Stat at Hitotsubashi University in Tokyo in September 2007. The aim of INCHOS is to develop a genuinely comparative history of occupational structure by using a common occupational coding system and common methodologies to ensure commensurable results. Our interest is not in a particular period but on the long-run process of industrialization which means that the focus is on different time periods in different countries. All occupational data are being coded to PSTI (PST International), a modified version of the occupational coding scheme developed by Wrigley and Davies.

In July 2009 we hosted a very successful three day conference in Cambridge with 32 participants from 9 countries giving papers on 13 countries. The intention behind the conference was to produce a book containing the first systematic international comparison of occupational structure during the period of industrialisation. The book, to be edited by Osamu Saito and Leigh Shaw-Taylor, is provisionally entitled Occupational structure and industrialization in a comparative perspective. CUP have expressed an interest and our intention is to submit a manuscript for review in July. The book will contain chapters on fourteen different countries, eleven of which already exist in draft form. It should be emphasised that the book is the result of a major collaborative research effort not a set of conference proceedings. One key result of the project is that it is now clear that the centrality of service sector growth to industrialisation is not restricted to Britain.

The 2009 conference has led directly to two further international workshops on women’s work which will themselves be the springboard for further collaborative work. These are being organised by two INCHOS members: Dr Amy Erickson (Cambridge) and Professor Maria Agren (Uppsala). The first, which we are hosting, is to be held in Cambridge in September 2010, and will focus on the early modern period. There are currently 40 confirmed participants from eight countries and the British Academy has awarded Dr Erickson £10,000 towards the costs. The second and larger meeting to be held in Uppsala in 2011 will aim to bridge the gap between work on the early modern period and the nineteenth century (for which census records are generally available).

15 Further details and a full list of chapters is contained in Annex 2 of this report.
Outputs

1.1 Population datasets

Work on the previous project by E.A. Wrigley produced a dataset of parish level population series for England for the period 1801-1841. This has been improved and extended forward in time to cover the period 1801-1891 and geographically to encompass Wales. The data derive from existing digital transcriptions of census material but there were a large number of errors and the original files have been heavily corrected. The new dataset improves on the raw data in a number of important ways. Firstly, whereas the census units in which population was reported changed from one census year to another, we now have a set of units which are consistent over all ten censuses. Secondly, it is well known that the acreages reported in the census were highly unreliable until 1871 and not fully reliable until 1891. We now have accurate acreage data for parishes from 1801 onwards. This enables population densities to be calculated accurately for the nineteenth century and for earlier periods where population data are available for parishes. Thirdly, the new datasets can be organised both by hundred and ancient counties and by registration districts and registration counties. A much fuller account of the new datasets can be found in E.A. Wrigley, *The early English censuses* (forthcoming).

For further details see Annex 3: Datasets 1-3.

1.1 Occupational datasets

We have built on the start made during the previous ESRC project to create a ‘census’ of male occupations c.1817 that covers the whole of England and Wales deriving from 2.2 million baptisms recorded in Anglican registers.

Virtually all of the occupational data in the published censuses of England and Wales, and Scotland have been made fully-machine readable for the first time. The value of these datasets is best appreciated by looking at the papers and maps available on the project website. A full list of the datasets is available in Annex 3: Datasets 3-35.

1.3 Parish register codebook

As a precondition for collecting all the 1813-20 data it was necessary to compile a complete list of parish registers and of the parishes and chapelries which maintained those registers which is a valuable research aid in its own right. For details: see [http://www.geog.cam.ac.uk/research/projects/occupations/britain19c/anglicanregistration.html](http://www.geog.cam.ac.uk/research/projects/occupations/britain19c/anglicanregistration.html)

1.4 PST

The PST system of occupational coding developed under the earlier project has been revised and substantially extended to allow it to cope with twentieth century developments, in order to make it possible to use it for the INCHOS project. All the project occupational datasets have been coded to the new version of PST (April 2010) and the coding is built into the occupational datasets described in 1.1. A separate deposit will be made of the PST definition tables. A PST-HISCO translation has been developed in collaboration with the creators of HISCO Marco van Leewen and Ineke Maas (see dataset 36 in annex 3). We abandoned our intention to maintain the

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16 Early digital transcriptions covered only some of the census tables and represented partial transcriptions of many of those tables and contained large numbers of errors.
translation to Booth-Armstrong created under the previous project as this was deemed not worthwhile given other pressures on time and the evidence that other scholars are now using PST in preference to Booth-Armstrong. For further details see: 
http://www.geog.cam.ac.uk/research/projects/occupations/britain19c/pst.html

2 GIS boundary datasets

Annex 4 contains a complete annotated list of the 16 GIS datasets created by this project and these are on the ‘Data’ DVD.

GIS datasets 1-9 are general purpose resources which will be of use to many other scholars for mapping a variety of datasets. They will be available from ESDS in the near future. GIS datasets 10-16 are resources specifically for mapping the occupational and population datasets produced by the project. We will deposit these resources with ESDS but will be seeking an embargo on their release.

3 GIS transport datasets

We have created 10 GIS datasets relating to transport infrastructure, which we will be offering to ESDS. An annotated list can be found in Annex 5. All the datasets and their documentation are on the ‘Data’ DVD.

3.1 Rivers and Canals 1600-1857

We undertook to create snapshots of the navigable rivers and canals of England and Wales for c.1820, 1851, 1861 and 1881. As a result of obtaining further funding from the Leverhulme Trust to work on the earlier period it has proved possible to produce something profoundly more valuable at the minor cost of a slight delay in availability. We will shortly have a dynamic GIS which will allow us to map the extent of the navigable waterway system for any year between 1600 and 1857 and this will be deposited with ESDS.

3.2 Railways

In our proposal we undertook to create and deposit a GIS of all railway stations in 1851, 1861 and 1881. It has proved possible to go considerably further than this. We have a complete dynamic GIS of the whole railway network of the British Isles which derives from the digital data underlying Michael Cobb’s superb Atlas. This was turned into a GIS by our collaborator Professor Jordi Marti Heneberg. Our role was primarily an enabling one in that we identified the source and undertook the protracted negotiations. The GIS covers both stations and lines and allows us to map the network for any date between 1825 and 2001 and undertake network analysis. However, our agreement with Michael Cobb, which was a precondition for getting access to the data, currently precludes us depositing the full GIS for use by other scholars. We hope to negotiate further to make this resource more generally available. The GIS datasets which we can deposit now, are the three snapshots. Since these cover railways as well as stations this exceeds what we undertook to do.

3.3 Roads 1820-1881

In our original proposal (page 50) we expressed our intention to map the ‘principal elements’ of the national road network. Given that more than sixteen months of Dr Satchell’s time was taken up with the corrections and
enhancements to the Southall, Kain and Oliver dataset, something had to be cut and this was our choice. Trial mapping on the turnpike network in the south-east indicated that to create a roads GIS that was accurate and analytically useful would require a very large research project in its own right. As part of the follow-on Leverhulme project Dr Satchell will be creating a GIS of some 7,500 miles of post roads mapped by Ogilby in 1675. The great majority of these were later turnpiked and this work represents a substantial start towards mapping the turnpikes of England and Wales. Dr Satchell intends, in due course, to submit a proposal for a three year project to produce a GIS of all the turnpikes of England and Wales.

4 Website

There is a project website at

http://www.geog.cam.ac.uk/research/projects/occupations/britain19c/

Please note that this website sits within the website of the broader project but it is self-contained and only contains material directly relevant to the this award

5 Publications


It remains our intention to publish both a monograph and an historical atlas on occupational change during the nineteenth century and a monograph on the period 1675 to c.1817 as well as to pursue further funding to create an educational GIS resource for use in schools. The maps online give an indication of the scope for a historical atlas and an educational resource. In the short term we intend to send a series of papers, based on the working papers on the project website, to the Economic History Review for consideration as a special issue. A summary of the project findings will also appear in an edited book (see annex 2).

Impacts

It is not possible, with three significant exceptions, to document concrete intellectual impacts from the analytical element of the project at this stage though these are expected both to be very substantial in due course and to extend beyond academia. That said there was a clear mood after the presentations of the findings to the annual meetings of the Economic History Society in 2008 and 2010 that the findings of the

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17 Discussions are underway with Cambridge Enterprise and Cambridge Applied Research in Educational Technology (CARET) as to how best to operationalise this plan. A preliminary step might be to make a large number of maps available online, perhaps as power-points.
project are of very great importance. None of the datasets or GIS resources have yet been made publicly available so the impact of the resource creation is necessarily limited. However, a few of the datasets and GIS resources have been made available to individuals who have approached us and some examples are provided on the project website at: http://www.geog.cam.ac.uk/research/projects/occupations/britain19c/usage.html

It should be clear from a brief glance at that web page that the full set of resources are likely to be widely used in a large number of diverse research projects in the future.

Intellectual impact is evident from:

(1) the kick-starting of international research of a comparable nature which was directly inspired by our work. Over twenty scholars in ten different countries are using the PST definition tables to code occupational data on 16 different countries as part of the INCHOS project. See Activities 2 above and Annex 2 for further information. We would highlight the fact Osamu Saito’s work on Japan and Erik Buyst’s work on Belgium have already provided substantial revisions to current understandings of industrialisation in those countries.

(2) Steve Broadberry (Warwick) is using the estimates of labour force shares deriving from this project for c.1813-20 and c.1710 in his project with Jan Luiten van Zanden (Utrecht) “Reconstructing the National Income of Britain and Holland, c.1270/1500 to 1850”, funded by the Leverhulme Trust.

(3) Dr Emma Griffin (UEA) is about to publish an undergraduate textbook on the Industrial Revolution with Palgrave. One chapter is substantially taken up with the findings of this project.

Future research priorities

The project has given rise to:

(1) A forthcoming ESRC research fellowship application by Leigh Shaw-Taylor.

(2) A forthcoming research grant application on the old poor law. PI: R.M. Smith.

(3) A research grant application on women’s work c.1600-1800. PI: Amy Erickson


We would like to:

(1) Extend the creation of the 1881 CEB derived datasets to other census years 1851-1911

(2) Extend the local population data to include 1901 and 1911

For details of the above see annex 1.
Annex 1

Details of future research priorities

(1) There is very considerable further analytical work to be done on the datasets created by this and the earlier ESRC funded project. To get the most out of these data such work should make use of econometric techniques, GIS and spatial statistics. No-one within the project currently has the requisite combination of skills. To that end Dr Shaw-Taylor intends to apply for a two year ESRC mid-career research fellowship to acquire these skills, analyse the datasets further and publish the results. This work will also require input from Dr Satchell and Ms Newton. The Newton Trust, Cambridge, has already awarded Dr Shaw-Taylor £67k, conditional upon the award of a research fellowship, to employ Dr Satchell for 12 months and Ms Newton for three months to undertake this work.

(2) Professor R.M. Smith, Dr P.M. Kitson and Dr L. Shaw-Taylor will shortly be submitting an application to digitise all the parish level Poor Law data published in parliamentary reports between 1748-50 and 1833. Mapping and statistically analysing these data will allow the resolution of a number of recent debates in poor law historiography and represent a step change in our understanding of the timing and geography of practice under the old Poor Law. This application is only possible because (i) the GIS resources created for the current project makes mapping and spatial analysis viable; (ii) the population datasets generated will allow the calculation of per capita expenditure estimates; (iii) the occupational data created by the present structure will allow the systematic analysis of the relationship between patterns of poor law expenditure and occupational structure. Some preliminary mapping of these data has already suggested that that Steve King’s argument that major differences in poor law generosity existed between the north and the south of England is wrongly conceived. Rather industrial areas differed massively from rural areas. Patterns of per capita poor relief expenditure in rural Essex were not substantially different from those in the agricultural parts of the West Riding. The same exercise also suggests the need to re-examine Steve Hindle’s argument that micro-geographical differences in Poor Law practice were of much greater significance than regional differences. These points can best be appreciated by viewing the maps below. The first shows poor law expenditure per capita in 1831 in the Essex by parish and the proportion of adult males in secondary sector employment in c.1817. The second shows the same thing but for the West Riding. It is evident from these maps that whilst, at a county level, the two counties would look very different in terms of poor relief expenditure per capita, the non-industrial parts of the West Riding show patterns of poor-relief expenditure which are hard to distinguish from those in Essex both in terms of absolute level and inter-parish variation.

There is a very considerable amount of important analytical work still to be done analysing the census derived datasets created on female employment between 1851 and 1911. It is also clear that the data on female employment in agriculture are even more problematic than previous studies have suggested, however it should, in principle, be possible to generate male-female employment ratios in agriculture from surviving farm account books and, by combining these data with the relatively reliable male occupational data in the census, create new estimates of female employment in agriculture 1851-1911 and hence more robust estimates of female employment overall. This work has now been taken up by Mr Xuesheng You, a Ph.D. student attached to the...
broader project, supervised by Dr Shaw-Taylor and funded by the Cambridge Gates Trust. For details see:

http://www.geog.cam.ac.uk/people/you/

We are expecting another graduate student, Ms Sophie McGeevor, also working on female employment, to join the project in October 2010.

(4) Our improved understanding of both male and female occupational structure from 1851 to 1911 and of male occupational structure 1700-1851 serves to underline the lacunae in our knowledge of female employment in the pre-census period. Extensive pilot work has been undertaken by Dr Amy Erickson and Dr Jacob Field on the Leverhulme-funded project over the last 18 months. This has built upon earlier work by Erickson on the previous and present ESRC project. This work has revealed an abundance of sources with which to reconstruct the evolution of patterns of female employment over the period between the middle of the seventeenth century and the mid-nineteenth century. Erickson, Field and Shaw-Taylor plan to make a funding application to exploit the available source material. It is our expectation that, if funded, this project will make a transformative contribution to this fundamentally important subject.

(5) The I-CeM project currently underway at the University of Essex will, over the next three years, create CEB datasets equivalent to the one we used for 1881 for all census years between 1851 and 1911.20 Once that project is complete we could replicate what we have done for 1881 for other census years and we will evaluate doing so in due course. Whilst it would be attractive to do this all census years, 1851 and 1911 would be the most interesting datasets. It is clear from the work done on this project that outside textiles, the concentration or localisation of secondary sector production had not gone very far by 1881 which suggests that much of the move to factory production post-dated 1881. If we could produce a data set of male and female occupations in 1911 in 1851 registration districts, paralleling what we have done for 1881, we could see how far things had changed by 1911. 1851 would be particularly interesting because it is the earliest census with good data on female employment and there are many important question that can be answered with nominal data that cannot be answered with the data in the published tabulations.

(6) We have produced population data in consistent spatial units at a variety of spatial levels from the quasi-parish level up the registration county. It would be very valuable to extend this exercise to 1911 and Professor Wrigley may pursue this option through a Leverhulme Emeritus fellowship.

20 See http://www.essex.ac.uk/history/research/icem/
Annex 2

Comparative work

Osamu Saito and Leigh Shaw-Taylor (eds.)

*Occupational structure and industrialization in a comparative perspective*

Cambridge University Press have expressed an interest in publishing the book arising from the INCHOS network. The book will be edited by Osamu Saito and Leigh Shaw-Taylor. It will include an introduction written by the editors and two main sections. The first and much the longer section will consist of a series of chapters summarising what is known about individual countries written by individual researchers or research teams. The second section will contain a number of short thematic chapters written by Saito and Shaw-Taylor drawing out some preliminary conclusions from a comparison of the country chapters. It is our hope that the book will, in due course, be followed by more country studies, and much further sustained comparative work.

**The current line up for chapters is as follows:**

1. **Introduction:** Historical occupational structures: perception, data, descriptors. Population densities and changing occupational structures.

**Country chapters**

2. England 1750-1911, Leigh Shaw-Taylor
3. Belgium 1846-1910, Erik Buyst
4. Germany 1846-1907, Paul Warde
5. United States 1850-1990, Susan Carter
6. The Netherlands, Jelle van Lottum and Jan Luiten van Zanden
7. Sweden 1800-1920, Pernilla Jonsson and Fredrik Sandgren
8. Italy 1861-2001, Vittorio Daniele and Paulo Malanima
11. Japan, 1885-1940, Osamu Saito and Tokihiko Settsu
12. British India 1881-1931, Yoshifumi Usami
13. Taiwan 1905-1990, I-Ling Liu and Tadayoshi Taniguchi
15. Indonesia, 1880-2000, Daan Marks

**Thematic chapters**

16. Female employment (LST)
17. By-employment with sectoral labour productivity analysis (OS)
18. Industrialisation, secondary and tertiary sector growth (LST)
19. Occupational structure and economic development (OS)
Annex 3
Annotated list of Population and Occupational datasets produced by the project

1. 1801 to 1891 Census Report of England and Wales: Parish and Registration District Population

Microsoft Access 2000 database providing a continuous series of male, female and total population data for England and Wales at several spatial levels. The data are given in 1851-based registration districts for each decadal Census year from 1801 to 1851, and in Census places for each decadal Census year from 1801 to 1891. The database also contains the 1851 Census-based registration parish identifier(s) that have been matched to each place, and the place level population data has been rearranged into 12,641 quasi-parish level mappable units. This information was derived from corrected and improved versions of the 1801-51 Census Reports, and the published 1861-91 Census Reports. This dataset can be mapped using the Occupations Project 1851 England and Wales Parish Township Place GIS.

Filename: 1801to91CensusReportEngWalesParishRDPop.mdb

2. 1801 to 1851 Population Data for England and Wales

Microsoft Access 2000 database providing male, female, and total populations at each census date. At each census date the information is provided in two series, one using the ‘ancient’ administrative divisions (county, hundred, and parish), the other using ‘modern’ divisions (registration county, registration district, registration subdistrict, and parish). Each series is provided in two forms, one closely paralleling the census totals but correcting for arithmetic and printing errors, the other increasing the census totals to offset the effects of the under-registration infants, the treatment of men of militia camps (who were included in county totals but excluded from smaller units), and the absence of men in the army, navy, and merchant shipping. This information was derived from corrected and improved versions of the 1801-51 Census Reports.

Filename: Not yet available.

3. 1813-20 Parish Register Occupational Data for England and Wales

Microsoft Access 2000 database providing data for each of the 11,364 abstractions of the occupations of the father at baptism of children, collected from almost the entirety of the extant parish registers in England and Wales that were maintained between 1813 and 1820. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme.

Filename: 1813-20PREngWalesOccs.mdb

4. 1817 Estimated Census of Adult Male Occupations for England and Wales in 1851 Registration Districts

Microsoft Access 2000 database providing data on the estimated numbers of occupations for men aged over 20 for England and Wales in 1817 for 623 registration districts (all bar the Scilly Isles) used by the 1851 Census of England and Wales. The database itself was manufactured from the 1813-20 parish register occupational data for England and Wales (database 3, above), and the 1801 to 1851 Population data for England and Wales (database 2, above). The actual process of construction is fully
described in P. M. Kitson, L. Shaw-Taylor, E. A. Wrigley, R. S. Davies, G. Newton, and M. Satchell, ‘The creation of a ‘census’ of adult male employment for England and Wales for 1817’. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This dataset can be mapped using the Occupations Project 1851 England and Wales Registration Districts GIS. Filename: 1817EstCensusEngWalesRDOccs.mdb

5. 1831 Census Report of England: County and Parish Occupations

Microsoft Access 2000 database providing data on male and female types of employment in England in 1831 in 14,888 subhundredal, mainly parish level units, and at quasi-parish level in 13,762 units for mapping. This information was derived from the 1831 Census Report. This dataset can be mapped at county level using the Occupations Project 1831 England ancient counties GIS and at a quasi-parish level using the Occupations Project 1851 England and Wales Parish Township Place GIS.

Filename: 1831CensusReportEngCountyParishOccs.mdb


Microsoft Access 2000 database providing data on male and female occupations in England, Wales and Scotland at county level in 1841, for those aged under and over twenty years. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from corrected versions of 1841 occupational data prepared by H.R. Southall et al, which are based on the 1841 Census Report. This dataset can be mapped using the Occupations Project 1841 Britain Ancient Counties GIS.

Filename: 1841CensusReportEngWalesScotCountyOccs.mdb


Microsoft Access 2000 database providing data on male and female occupations in England, Wales and Scotland at town level for 236 towns in 1841, for those aged under and over twenty years. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from corrected versions of 1841 occupational data prepared by H.R. Southall et al, which are based on the 1841 Census Report.

Filename: 1841CensusReportEngWalesScotTownOccs.mdb

8. 1851 Census Report of England and Wales: Town Occupations

Microsoft Access 2000 database providing data on male and female occupations in England and Wales at town level for 78 principal towns in 1851, for those aged under and over twenty years. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1851 Census Report.

Filename: 1851CensusReportEngWalesTownOccs.mdb

9. 1851 Census Report of England and Wales: Registration County and National Occupations
Microsoft Access 2000 database providing data on male and female occupations in England and Wales for persons at all ages in five-year bands at registration county level and at national level (England and Wales together) in 1851. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1851 Census Report. This dataset can be mapped using the Occupations Project 1851 England and Wales Registration Counties GIS.

Filename: 1851CensusReportEngWalesCountyNatOccs.mdb

10. **1851 Census Report of England and Wales: Registration District Occupations**

Microsoft Access 2000 database providing data on male and female occupations in England and Wales for persons aged over twenty years in all 624 registration districts in 1851. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1851 Census Report. This dataset can be mapped using the Occupations Project 1851 England and Wales Registration Districts GIS.

Filename: 1851CensusReportEngWalesRDOccs.mdb

11. **1851 Census Report of Scotland: County and National Occupations**

Microsoft Access 2000 database providing data on male and female occupations in Scotland for persons at all ages in five-year bands at county level and at national level in 1851. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1851 Census Report. This dataset can be mapped using the Occupations Project 1851 Scotland Ancient Counties GIS.

Filename: 1851CensusReportScotCountyNatOccs.mdb

12. **1851 Census Report of Wales: County Occupations**

Microsoft Access 2000 database providing data on male and female occupations in Wales for persons over twenty years of age at the county level in 1851. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1851 Census Report. This dataset can be mapped using the Occupations Project 1851 Wales Counties GIS.

Filename: 1851CensusReportWalesCountyOccs.mdb


Microsoft Access 2000 database providing data on male and female occupations in England and Wales for persons at all ages in five and ten-year bands at the registration county level and at national level (England and Wales together) in 1861. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1861 Census Report. This dataset can be mapped using the Occupations Project 1851 England and Wales Registration Counties GIS.

Filename: 1861CensusReportEngWalesCountyNatOccs.mdb
14. 1861 Census Report of England and Wales: Registration District Occupations

Microsoft Access 2000 database providing data on male and female occupations in England and Wales for persons aged over twenty years in all 635 registration districts in 1861. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1861 Census Report. This dataset can be mapped using the Occupations Project 1851 England and Wales Registration Districts GIS.

Filename: 1861CensusReportEngWalesRDOccs.mdb

15. 1861 Census Report of England and Wales: Town Occupations

Microsoft Access 2000 database providing data on male and female occupations in England and Wales at town level for 78 principal towns in 1861, for those aged under and over twenty years. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1861 Census Report.

Filename: 1861CensusReportEngWalesTownOccs.mdb

16. 1861 Census Report of Scotland: County and National Occupations

Microsoft Access 2000 database providing data on male and female occupations in Scotland for persons at all ages in five-year bands at county and national level in 1861. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1861 Census Report. This dataset can be mapped using the Occupations Project 1851 Scotland Ancient Counties GIS.

Filename: 1861CensusReportScotCountyNatOccs.mdb

17. 1861 Census Report of Scotland: Town Occupations

Microsoft Access 2000 database providing data on male and female occupations in Scotland for 23 town districts in 1861, for those aged under and over twenty years. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1861 Census Report.

Filename: 1861CensusReportScotTownOccs.mdb

18. 1861 Census Report of Wales: County Occupations

Microsoft Access 2000 database providing data on male and female occupations in Wales for persons over twenty years of age at the county level in 1861. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1861 Census Report. This dataset can be mapped using the Occupations Project 1851 Wales Counties GIS.

Filename: 1861CensusReportWalesCountyOccs.mdb

Microsoft Access 2000 database providing data on male and female occupations in England and Wales for persons at all ages in five or ten-year bands at the registration county level and at national level (England and Wales together) in 1871. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1871 Census Report. This dataset can be mapped using the *Occupations Project 1851 England and Wales Registration Counties GIS*.  

Filename: 1871CensusReportEngWalesCountyNatOccs.mdb


Microsoft Access 2000 database providing data on male and female occupations in England (including islands in the British seas) and Wales at town level for 84 principal towns in 1871, for those aged over twenty years. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1871 Census Report.  

Filename: 1871CensusReportEngWalesTownOccs.mdb


Microsoft Access 2000 database providing data on male and female occupations in Scotland for non-pauper persons at all ages in five or ten-year bands at the county level and at national level in 1871. The same information for paupers is present at county level but separate from the non-pauper information. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1871 Census Report. This dataset can be mapped using the *Occupations Project 1851 Scotland Ancient Counties GIS*.  

Filename: 1871CensusReportScotCountyNatOccs.mdb

22. **1871 Census Report of Wales: County Occupations**

Microsoft Access 2000 database providing data on male and female occupations in Wales at the county level in 1871, for those aged under and over twenty years. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1871 Census Report. This dataset can be mapped using the *Occupations Project 1851 Wales Counties GIS*.  

Filename: 1871CensusReportWalesCountyOccs.mdb

23. **1881 Census Enumerators’ Books for England and Wales: Parish Occupations**

Microsoft Access 2000 database providing data on male and female occupations in England and Wales in 1881 for all persons (including the retired) in five-year age bands in all 15,132 registration parishes, and at quasi-parish level in 14,933 units for
mapping. This information was derived from a machine-readable version of the 1881 Census Enumerators’ Books dataset with occupational coding prepared by Kevin Schürer and Matthew Woollard. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. The dataset can be mapped using the Occupations Project 1851 England and Wales Parish Township Place GIS.

Filename: 1881CEBEngWalesParishOccs.mdb

24. 1881 Census Enumerators’ Books for England and Wales: Registration District Occupations

Microsoft Access 2000 database providing data on male and female occupations in England and Wales in 1881 for all persons (including the retired) in five-year age bands in 1851 (sic) registration districts. The 1881 Census Report does not contain registration district level occupational information. Therefore, this information was derived from a machine-readable version of the 1881 Census Enumerators’ Books dataset with occupational coding prepared by Kevin Schürer and Matthew Woollard. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This dataset can be mapped using the Occupations Project 1851 England and Wales Registration Districts GIS.

Filename: 1881CEBEngWalesRDOccs.mdb

25. 1881 Census Report of England and Wales: Registration County and National Occupations

Microsoft Access 2000 database providing data on male and female occupations in England and Wales for persons over five years of age at registration county level, and at all ages in five, ten or twenty-year bands at national level (England and Wales together), in 1881. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1881 Census Report. This dataset can be mapped using the Occupations Project 1851 England and Wales Registration Counties GIS.

Filename: 1881CensusReportEngWalesCountyNatOccs.mdb

26. 1881 Census Report of Scotland: County and National Occupations

Microsoft Access 2000 database providing data on male and female occupations in Scotland for persons at all ages in five, ten, fifteen or twenty-year bands at county and national level in 1881. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1881 Census Report. This dataset can be mapped using the Occupations Project 1851 Scotland Ancient Counties GIS.

Filename: 1881CensusReportScotCountyNatOccs.mdb

27. 1881 Census Report of Scotland: Town Occupations

To cite this output:
Microsoft Access 2000 database providing data on male and female occupations in Scotland for 42 parliamentary, municipal and police burghs in 1881, for all persons subdivided into seven age groups. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1881 Census Report.

Filename: 1881CensusReportScotTownOccs.mdb

28. **1881 Census Report of Wales: County Occupations**

Microsoft Access 2000 database providing data on male and female occupations in Wales for persons over five years of age at county level in 1881, and also giving the number of all persons including those under five years. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1881 Census Report. This dataset can be mapped using the *Occupations Project 1851 Wales Counties GIS*.

Filename: 1881CensusReportWalesCountyOccs.mdb

29. **1891 Census Report of England and Wales: Registration County and National Occupations**

Microsoft Access 2000 database providing data on male and female occupations in England and Wales for persons aged ten years and upwards at registration county level and at national level (England and Wales together) in 1891. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1891 Census Report. This dataset can be mapped using the *Occupations Project 1851 England and Wales Registration Counties GIS*.

Filename: 1891CensusReportEngWalesCountyNatOccs.mdb

30. **1891 Census Report of Scotland: County and National Occupations**

Microsoft Access 2000 database providing data on male and female occupations in Scotland for persons at all ages in five, ten, fifteen or twenty-year bands at county level and at national level in 1891. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1891 Census Report. This dataset can be mapped using the *Occupations Project 1851 Scotland Ancient Counties GIS*.

Filename: 1891CensusReportScotCountyNatOccs.mdb

31. **1891 Census Report of Wales: County Occupations**

Microsoft Access 2000 database providing data on male and female occupations in Wales for persons over ten years of age at the county level in 1891. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1891 Census Report. This dataset can be mapped using the *Occupations Project 1851 Wales Counties GIS*.
32. **1901 Census Report of England and Wales: County and National Occupations**

Microsoft Access 2000 database providing data on male and female occupations in England and Wales for persons ten years and over at county level and at national level (England and Wales together) in 1901, including marital status for females, age breakdowns and manner of employment for the counties of Yorkshire (all three ridings together), London and Lancashire, and age breakdowns and manner of employment for special occupations only, in certain counties. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1901 Census Report. This dataset can be mapped using the *Occupations Project 1851 England and Wales Registration Counties GIS*.

Filename: 1901CensusReportEngWalesCountyNatOccs.mdb

33. **1901 Census Report of Scotland: County and National Occupations**

Microsoft Access 2000 database providing data on male and female occupations and manner of employment in Scotland at county level and at national level, for persons over ten years in age groups in 1901. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This dataset was derived from the 1901 Census Report. This dataset can be mapped using the *Occupations Project 1851 Scotland Ancient Counties GIS*.

Filename: 1901CensusReportScotCountyNatOccs.mdb

34. **1911 Census Report of England and Wales: County and National Occupations**

Microsoft Access 2000 database providing data on male and female occupations in England and Wales for persons ten years and over at county level and at national level (England and Wales together) in 1911, including marital status for females, and age breakdowns and manner of employment in the national tables only. The occupations are coded to the Primary, Secondary Tertiary (PST) scheme. This information was derived from the 1911 Census Report. This dataset can be mapped using the *Occupations Project 1851 England and Wales Registration Counties GIS*.

Filename: 1911CensusReportEngWalesCountyNatOccs.mdb

35. **1911 Census Report of Scotland: County and National Occupations**

Due to an administrative oversight this dataset is not yet available. Details will follow in the near future.

36. **HISCO to PST Database Documentation**

Microsoft Access 2000 database for translating a three number Hisco occupational code into a PST (Primary, Secondary, Tertiary) occupational code equivalent.
Annex 4
Annotated list of GIS boundary datasets

GIS Boundary Datasets for General Use

1. 1851 England and Wales census parishes, townships and places

ArcGIS shapefile providing boundary and attribute data for the parishes and places of England and Wales as given in the 1851 census.

filename: 1851EngWalesParishandPlace.shp

2. 1831 England and Wales census hundreds and wapentakes

ArcGIS shapefile providing boundary and attribute data for the hundreds, wapentakes, wards, divisions, liberties and boroughs of England and Wales as given in the 1831 census. As such this represents the counties of England and Wales as they were before the boundary changes caused by the Counties (Detached Parts) Act of 1844 (7 & 8 Vict. c. 61) which led to changes in the hundred through the elimination of some of the detached portions of counties.

filename: 1831EngWalesHundred.shp

3. 1831 England and Wales ancient counties

ArcGIS shapefile providing boundary and attribute data for the counties of England and Wales as given in the 1831 census. As such this represents the ancient counties of England and Wales as they were before the boundary changes caused by the Counties (Detached Parts) Act of 1844 (7 & 8 Vict. c. 61) which eliminated some of the detached portions of counties.

filename: 1831EngWalesCounty.shp

4. 1851 England and Wales ancient counties

ArcGIS shapefile providing boundary and attribute data for the counties of England and Wales as given in the 1851 census. As such this represents the ancient counties of England and Wales as they were after the boundary changes caused by the Counties (Detached Parts) Act of 1844 (7 & 8 Vict. c. 61) which eliminated some of the detached portions of counties.

filename: 1851EngWalesCounty.shp

5. 1851 Scotland Ancient Counties GIS

ArcGIS shapefile providing boundary and attribute data for the counties of Scotland as given in the 1851 census. As such this represents the counties of Scotland as they were before the boundary changes caused by Inverness and Elgin County Boundaries Act, 1870 (33 & 34 Vict. c. 16) and the Local Government (Scotland) Act, 1889 (52 & 53 Vict. c. 50) which eliminated the detached portions of counties.
filename: 1851ScotCounty.shp

6. 1851 England and Wales Census Sub-districts

ArcGIS shapefile providing boundary and attribute data for the registration subdistricts of England and Wales as given in the 1851 census.

filename: 1851EngWalesRegistrationSubdistrict.shp

7. 1851 England and Wales Census Registration Districts

ArcGIS shapefile providing boundary and attribute data for the registration districts of England and Wales as given in the 1851 census.

filename: 1851EngWalesRegistrationDistrict.shp

8. 1851 England and Wales Census Registration Counties

ArcGIS shapefile providing boundary and attribute data for the registration counties of England and Wales as given in the 1851 census.

filename: 1851EngWalesRegistrationCounties.shp

9. 1851 England and Wales Principal Towns

ArcGIS shapefile providing boundary and attribute data for the principal towns of England and Wales as given in the 1851 census. Finished except for some minor editing. Available shortly

filename: 1851EngWalesPrincipaltowns.shp

GIS boundary datasets for mapping data from the Occupations Project

These GIS just consist of polygons and joining fields as all the other attribute data are in tables generated by the project’s databases. These GIS derive from the Occupations Projects enhanced GIS of Kain and Oliver’s digital maps of parish and township boundaries. For more details see the dataset documentation for each GIS.

10. Occupations Project 1851 England and Wales Parish Township Place GIS

This GIS can map the following datasets at the level of parish, township or place:-

1801 to 1891 Census Report of England and Wales: Parish and Registration District Population

1831 Census Report of England: County and Parish Occupations

1881 Census Enumerators’ Books for England and Wales: Parish Occupations

filename: OCCPROJ1813_1881EngWalesPTP.shp
11. Occupations Project 1831 England Ancient Counties GIS

This GIS can map the following dataset at the level of the county:

1831 Census Report of England: County and Parish Occupations

filename: OCCROJ1831EngCounty.shp

12. Occupations Project 1841 Britain Ancient Counties GIS

This GIS can map the following dataset at the level of the county:

1841 Census Report of England, Wales and Scotland: County Occupations

filename: OCCROJ1841EngWalesScotlandCounty.shp

13. Occupations Project 1851 England and Wales Registration Counties GIS

This GIS can map the following datasets at the level of the registration county for England and Wales:

1851 Census Report of England and Wales: County and National Occupations
1861 Census Report of England and Wales: Registration County and National Occupations
1871 Census Report of England and Wales: Registration County and National Occupations
1881 Census Report of England and Wales: Registration County and National Occupations
1891 Census Report of England and Wales: Registration County and National Occupations
1901 Census Report of England and Wales: County and National Occupations
1911 Census Report of England and Wales: County and National Occupations

filename: OCCROJ1851_1881EngWalesRegistrationCounty.shp

N.B. Registration county boundaries underwent minor change from 1871 and more radically after 1881. This GIS represents the registration county boundaries as they were in 1851. As a consequence, it maps the datasets with precision up until 1861 but more impressionistically thereafter.

14. Occupations Project 1851 England and Wales Registration Districts GIS

This GIS can map the following datasets at the level of the registration district for England and Wales:
1817 Estimated Census of Adult Male Occupations for England and Wales in 1851 Registration Districts

1851 Census Report of England and Wales: Registration District Occupations

1861 Census Report of England and Wales: Registration District Occupations

1881 Census Enumerators’ Books for England and Wales: Registration District Occupations

filename: OCCPROJ1851_1861_1881EngWalesRegistrationDistrict.shp

15. Occupations Project 1851 Scotland Ancient Counties GIS

This GIS can map the following datasets at the level of the county for Scotland:

1851 Census Report of Scotland: County and National Occupations

1861 Census Report of Scotland: County and National Occupations

1871 Census Report of Scotland: County and National Occupations

1881 Census Report of Scotland: County and National Occupations

1891 Census Report of Scotland: County and National Occupations

1901 Census Report of Scotland: County and National Occupations

N.B. Two Scottish counties underwent minor boundary change in 1870 and nearly all of them did in 1891. This GIS represents the county boundaries as they were in 1851. As a consequence, it maps the datasets with precision up until 1861 but more impressionistically thereafter.

filename: OCCPROJ1851_1891ScotlandCounty.shp

16. Occupations Project 1851 Wales Counties GIS

This GIS can map the following datasets at the level of the county for Wales:

1851 Census Report of Wales: County Occupations

1861 Census Report of Wales: County Occupations

1871 Census Report of Wales: County Occupations

1881 Census Report of Wales: County Occupations

1891 Census Report of Wales: County Occupations

filename: OCCPROJ1851WalesCounty.shp
Annex 5
Annotated list of GIS transport infrastructure datasets

1. **1851 England, Wales and Scotland rail lines**
   ArcGIS shapefile of railway lines open to public carriage of passengers and/or freight for England, Wales and Scotland in 1851.

2. **1861 England, Wales and Scotland rail lines**
   ArcGIS shapefile of railway lines open to public carriage of passengers and/or freight for England, Wales and Scotland in 1861.

3. **1881 England, Wales and Scotland rail lines**
   ArcGIS shapefile of railway lines open to public carriage of passengers and/or freight for England, Wales and Scotland in 1881.

4. **1851 England, Wales and Scotland rail stations**
   ArcGIS shapefile of railway stations for England, Wales and Scotland in 1851.

5. **1861 England, Wales and Scotland rail stations**

6. **1881 England, Wales and Scotland rail stations**

7. **1820 England, Wales and Scotland navigable waterways**
   ArcGIS shapefile of navigable waterways for England, Wales and Scotland in 1820.

8. **1851 England, Wales and Scotland navigable waterways**
   ArcGIS shapefile of navigable waterways for England, Wales and Scotland in 1851.

9. **1861 England, Wales and Scotland navigable waterways**
   ArcGIS shapefile of navigable waterways for England, Wales and Scotland in 1861.

10. **1881 England, Wales and Scotland navigable waterways**
    ArcGIS shapefile of navigable waterways for England, Wales and Scotland in 1881.