

ELECTRONIC RESOURCES FOR LOCAL POPULATION STUDIES

A VISION OF BRITAIN THROUGH TIME: MAKING SENSE OF 200 YEARS OF CENSUS REPORTS

Humphrey Southall

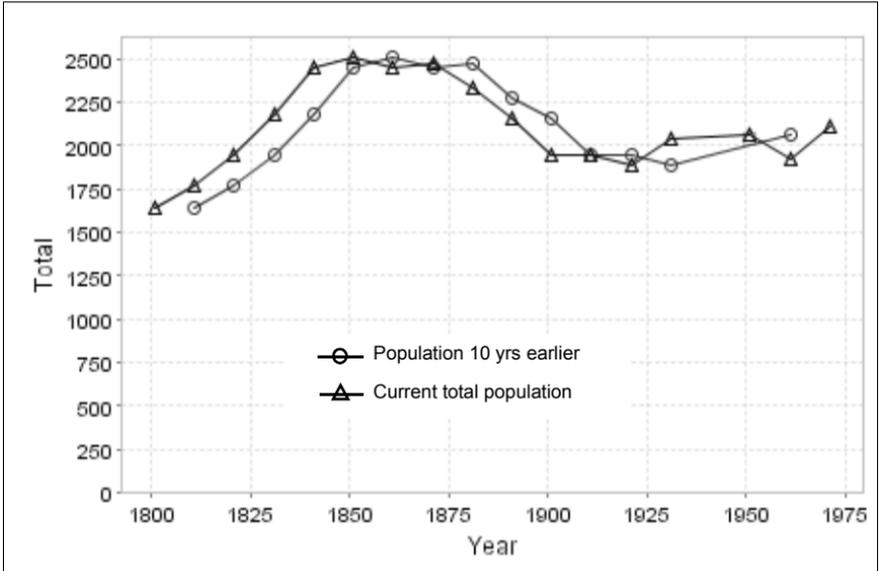
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Introduction

Conventionally assembling a time-series of population statistics for a particular parish from published census reports to compile a graph such as Figure 1 can be a tedious business. Complete runs of census and vital registration reports are rare, and most local population researchers will have long journeys to the copyright and academic libraries which hold such sets. Once located the volumes are vast, and simply finding the relevant tables in each of a series of reports can take hours. Statistical reporting units have changed greatly over time, so which nineteenth-century Registration District or sub-District, or which post-1911 Local Government District, covered the parish of interest has to be worked out, which can be very difficult when the necessary maps are even harder to find than the statistical reports. When eventually located, the data then have to be entered into a spreadsheet in order to create the desired graph or graphs. Mapping the data is probably impossible without boundary information.

As a result of this obstacle course, the published census and vital registration reports are under-used. However, thanks to a free web site, life has been made much easier for local population historians. A researcher can now enter the site, called *A Vision of Britain through Time*, type in the name of the town or village being studied or click the appropriate place on a map; decide whether to view basic population counts, occupational structure or some other aspect of local history; and be presented with a graph showing change over time in that variable for the chosen locality. The graph, or the actual numbers from which it is derived, drawn from the original census or vital registration reports, may then be cut and pasted for further study, or for inclusion in written work—with an appropriate citation, of course!

Figure 1 Population of Colyton, Devon, 1801-1971, from *Vision of Britain*



Vision of Britain, it will become clear, is a large site with many millions of pages and while a researcher may wish to simply ‘click and go’, and should be able to do so, it does help to realise the full scope of the content, and to understand a little of its structure. This article aims to provide just such an introduction.

From a historical GIS to a vision of Britain

Between 1994 and 2000, over 20 grants from a great variety of sources supported the construction of the Great Britain Historical GIS (Geographical Information System)—a systematic record of the changing boundaries of the main statistical reporting units over the nineteenth and twentieth centuries.¹ The GIS included the boundaries of Registration Districts and Counties between *circa* 1840 and 1911; Local Government Districts (Urban and Rural Districts, County and Municipal Boroughs) and Administrative Counties between 1911 and 1974; plus the evolving Civil Parish system from the 1870s onwards.

The grants also funded a large programme to computerise statistics from census reports between 1801 and 1961, and vital registration data from the 1840s to 1974. Many other researchers generously donated datasets they had already computerised. The end product was in two parts. The first comprises digital boundaries which have been made available to academic researchers via the UKBORDERS service operated by Edinburgh University.² The second contains computerised versions of hundreds of statistical tables which are

documented on the GBHGIS web site and are down-loadable via AHDS History.³

However, in 2001 the GBHGIS team were awarded a new grant by the UK national lottery, via the Big Lottery Fund. The work to be undertaken included some new digitising of boundaries and statistics, but was mainly concerned with making the existing resources accessible to a wider audience of 'life-long learners', especially those interested in local history. To this end, conventional Geographical Information Systems technology was abandoned and a one-of-a-kind system built, organising information in new ways.

Organising population statistics for on-line access

The world is full of 'statistical databases', and they *all* hold their data in many separate tables, each organised just like the tables in printed reports. This works well as long as the purpose of the system is to let users download whole tables, but *Vision of Britain* needed to be able, for example, to extract the population totals for a particular parish from the many original tables they appeared in and to present them as a single time series. To do this it focuses on individual data values, storing them all in a single column of one very large table. Currently this table contains about 11.5 million rows. Further columns in the table then explain what each number means. These cover five elements: Source, When, Where, What and Thanks.

Source indicates where the data came from. The *Source Documentation System* lists every census from 1801 to 1971; every report published from each census; and each table within each report. Each individual data value can therefore be linked to the *source table* from which it was drawn. The row and column position of the variable within its source table are also recorded, so that one part of the web site can reconstruct the original tables. Non-census data are covered by a simpler system.

When indicates the date to which the statistics relate. Dates are stored within a *date object*, which can hold anything from a simple year value, for a census, to a period defined by two calendar dates.

Where defines the location from which the statistics were compiled. In a conventional GIS, statistics are treated as 'attributes' of 'polygons', which represent locations, but in the new system location is an attribute of the statistic. Furthermore, location is specified primarily as an *administrative* area, not as a geographical point, so data can be held for units such as ancient Hundreds, whose boundaries are uncertain, or for nineteenth-century Sanitary Districts for which electronic maps do not currently exist. The *Great Britain Historical Gazetteer* of administrative units was created by computerising existing reference sources, including Frederick Youngs' *Guide to the Local Administrative Units of England*.⁴ The *Gazetteer* defines over 50,000 units with information on variant names, boundary changes and so on. The system also stores actual boundaries for about half the units, based on earlier research by the GBHGIS team, plus Kain and Oliver's mapping of the ancient parish

system.⁵ Several different boundaries can be stored for each administrative unit, distinguished by date. It is also worth noting that the system is capable of generating approximate boundary maps for certain types of administrative unit for which precise boundaries are lacking. Thus those studying hundreds, wapentakes, registration sub-districts, sanitary districts or Scottish poor law combinations can find boundary maps for these units derived from the boundaries of their constituent parishes.

The **What** columns in the table describe the meaning of a particular variable via a *Data Documentation System*.⁶ This is quite separate from the *Source Documentation System* and can be directly explored within the web site. It knows, for example, about the relationships between the individual occupations reported on by the 1841 census and the Booth-Armstrong classification of occupations. More importantly, it enables the site to turn those 1841 data into simple histograms, or to present age structure data from multiple censuses as sequences of population pyramids.⁷

Where data have been obtained from other researchers **Thanks** are given. Data are checked back against the original reports and the latter are treated as the source, but the donors are acknowledged and any restrictions on use are indicated.

The 'five elements' are a simplified guide to a complex system, with the main sub-systems being substantial reference sources in their own right. However, the overall architecture of the system really is as simple as it sounds: one big table with all the numbers in one column, and other columns recording 'source', 'when', 'where', 'what' and 'thanks'. The deepest level of the web site consists of *data value pages*, each presenting a single row from the 'big' table. But how does one get at them?

Accessing statistics through *Vision of Britain*

Places and units

The *Vision of Britain* site is large and includes subsidiary home pages focused on particular content types: 'Historic Maps', 'Travellers' Tales' and 'Census Reports'. Although the latter are apparently most relevant to *LPS* readers, don't go there! The whole architecture of the site is designed to bring together in one place everything the system knows about each locality, and so long as your concern is with a particular town or village you should start at the web site's main home page, where you will find the form shown in Figure 2. Type the name of your chosen place into the form and you should be taken straight to a **place page** which is all about the location you have specified.

The **place page** includes a link to the modern local authority which covers the place. Even though you are seeking historical data, you may wish to follow this link. There are also two maps, one showing the place as a point on an outline of Britain, the other showing an excerpt from a historical map covering that particular location. Clicking on the second map takes you into the web site's

Figure 2 From the *Vision of Britain* home page: specifying places by name, postcode or map

STEP ONE - SELECT A LOCATION ?

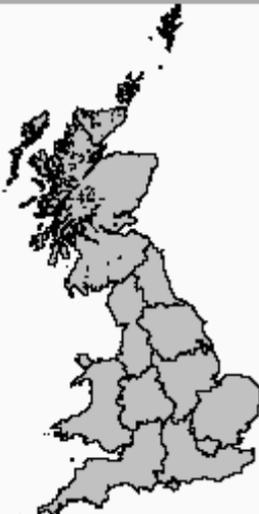
There are three easy steps to finding detailed historical information on Britain. The first is to select a location:

Enter either a *full* **postcode** or a **place name** (just a name, no county) in the box below to find information on a location.

Alternatively click on a region of the **map**.

Place or postcode search: →

[national overview](#) →



'historical maps' area and lets you either zoom in further or look at maps from different dates.⁸

You are further provided with information on what has been said about the place in three late nineteenth-century descriptive gazetteers and by 12 historical travellers including William Cobbett, Daniel Defoe, Celia Fiennes, Arthur Young and Charles Wesley.⁹ All these texts have been fully computerised and linked to the main gazetteer. The **place page** also displays a list of *administrative units* associated with your chosen place. The distinction between administrative units and places is a real problem in working with *Vision of Britain*, but one with which anyone who has worked with historical censuses will be familiar. The *places gazetteer*, apparently searched from the home page, is in fact a thin overlay on the main gazetteer of units, constructed by a program which groups together units sharing names and locations. Although Defoe and Fiennes each visited a *place* called Reading, by the Thames, our historical statistics relate to one or other of the 14 *units* called Reading (or Reading St. Giles, Reading St. Lawrence or Reading St. Mary), all of which are listed at the bottom of the **place page** for Reading.

Clicking on any of the units at the bottom of the page, or on the link for the modern Unitary Authority of Reading at the top of the place page, will take you to a **unit page**. Each of these is a kind of home page in itself and *Vision of Britain* has one for every unit in the system although some, such as those for

ecclesiastical parishes, are fairly sparse.

Unit pages again link to a variety of information. Each begins with a general location map, with the larger administrative units shown as areas, not just points. Units are not always small and local: 'England', 'Wales', 'Scotland' and 'Great Britain' are all defined as units and have statistical data. Next to the map is a brief summary of the unit's relationships with higher-level units, so from most of the 'Reading' units you get a link to some kind of Berkshire: the system knows about four different kinds of county—Ancient, Registration/Union, Administrative and Current, post-1976.¹⁰

There is then an area where links to up to eight different statistical themes appear. Each tries to include a snippet of useful information, so for example the text for the 'life and death' theme for Reading Registration District says, 'In 1851, 135 babies in every thousand died in their first year. In 1911 it was 105.'

Finally links to non-statistical topics are listed, depending on what data is available. The *Historic Boundaries* link, where provided, shows the boundaries of the unit superimposed on historical maps. *Related sites* provides links to other web sites. *Reading, in general* simply returns you to the place page. *Historical descriptions* is another way into the descriptive gazetteers, and for parishes includes entries for places *within* the parish. *Census reports* takes you straight to reconstructions of the original tables for the current unit, as explained below. The *Relationships and changes* link, delivers very formal information about the history of the administrative unit, including boundary changes, the names it went under, including all variants encountered in census reports and its relationships within the administrative hierarchy. Every reference to another unit on a **relationships page** is itself a hyperlink, taking you to the equivalent page for that unit.

What kind of unit?

Anyone working with statistics in *Vision of Britain*, just like anyone using the original census reports, has to understand that statistics are for administrative units, not vague 'places', but with 14 different 'Readings' to choose from, which one do you select?

The system deliberately pushes non-expert users towards the 408 **modern districts** (and unitary authorities) which were reported on in detail by the 2001 census. This is, of course, only possible if we take the data as originally reported for historical units and, using our detailed knowledge of the boundaries of both historical and modern units, produce 're-districted' data that apply to the modern units. If all the historical units fitted neatly inside the modern ones this would be a matter of simple addition, and in fact for 1971, 1981 and 1991 we used the separate *Linking Censuses through Time* system to simply merge wards into modern units, but with nineteenth-century Registration Districts and twentieth-century Local Government Districts the original units had to be chopped up and re-combined. This was done using parish-level data on population distribution, but even so the results are clearly

more reliable when the final geography is simpler than the original reporting geography. With anything other than the simplest demographic variables, this work also involved converting and simplifying classifications, such as those for occupations.

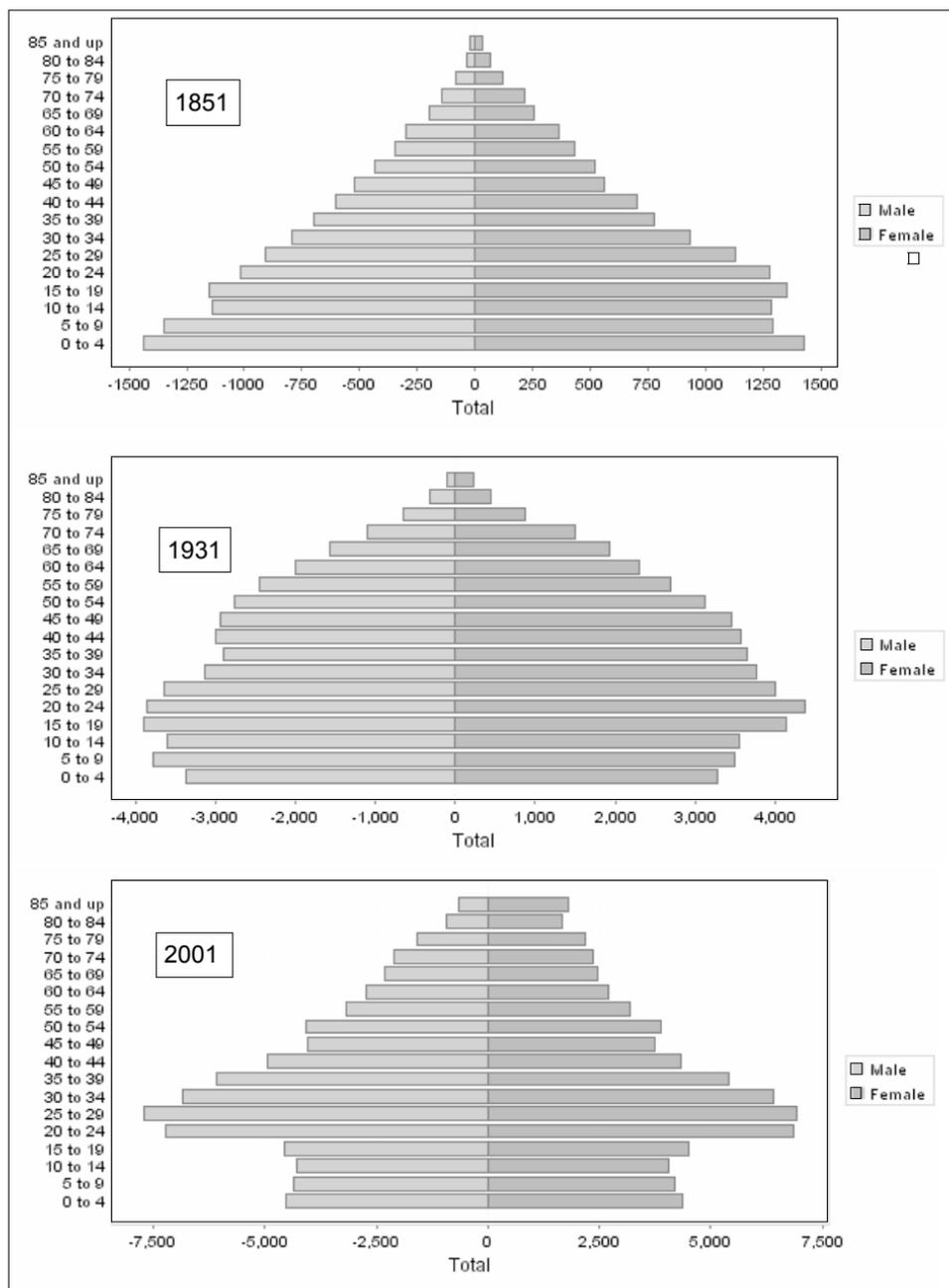
If you just want to find total population figures, select **parish-level units** and, for many parishes, you will find time-series covering every census between 1801 and 1971 inclusive. However, the reason the units are not called simply *parishes* is that many were only townships or chapelries until the creation of the Civil Parish system in the third quarter of the nineteenth century.¹¹ There are unavoidable gaps in coverage: the data for all years from 1801 to 1851 are drawn from the 1851 census tabulations, but are affected by confusion about reporting units in the earliest censuses; in 1861 and 1871 the transition to Civil Parishes confused the listings; and from 1961 onwards, the census authorities ignored parishes within cities in favour of wards. Available variables at **parish-level** are always limited but there are often data on numbers of houses, including vacant houses and houses under construction. For 1831, David Gately, of Staffordshire University, has supplied quite detailed parish-level occupational data.

If you need access to the original historical statistics and want more than basic totals, most of the data are for either **Registration Districts**, which run from 1851 to 1911, or for **Local Government Districts** (Rural and Urban Districts, Municipal and County Boroughs) which run from 1911 to 1971. The latter is one example of how *unit type* is treated separately from *unit status*: a map of the boundaries of all units with *type* 'Local Government District' is a complete map of England and Wales, but it is also essential that it is recorded which were 'Urban Districts' and which were 'Rural Districts', as the older Registration Districts were typically divided into an Urban District covering the town at the centre and a Rural District covering the surrounding parishes, both with the same name and in the same county. 'Registration District' is in fact a *status* within a *type* called 'Poor Law/Registration District', as the system is designed to also hold pauperage data and the small number of differences between the two geographies are recorded.¹²

At present most of the county-level statistics held, whether for **Ancient, Registration** or **Administrative Counties**, are aggregates of the district-level data but there are already important exceptions, notably for occupational data. Some less well-known *unit types* were used at certain dates: age-structure data for **Sanitary Districts** in 1891, for example, and **Registration Sub-District** age-structure data between 1851 and 1881 and mortality data from 1871 to 1911. Generally, *ad hoc* reporting geographies independent of administrative structures have not been included, but an exception was made for **1841 occupation reporting areas** so that the census's enormously detailed data for selected towns in that census could be included. Data for **Ancient Districts**, such as Hundreds, Wapentakes, and Boroughs, are limited, while none at all is included for **Manors** and various **ecclesiastical units**.

The above historical units are all for England and Wales. *Vision of Britain*

Figure 3 Graphical view of an nCube: age structure of Reading (2001 census boundaries), 1851, 1931 and 2001



excludes Ireland but aims for equal coverage of Scotland, holding information for **counties, parishes, burghs and poor law combinations**. Unfortunately, Scottish 'district'-level geographies varied greatly over time, and the census reports often used *ad hoc* selections of units for particular tables. More work is needed, but the bulk of the parish-level tables are on-line, as are useful data for counties.

Themes, rates and nCubes

The *Data Documentation System* defines various kinds of entity that are used to organise the statistics, but three are most visible to users: **themes, rates and nCubes**. **Themes** are unremarkable: *Population, Industry, Social Structure, Housing, Learning and Language* and *Roots and Religion* cover Population Census data; *Life and Death* holds vital registration data, while *Employment and Poverty* covers unemployment and pauperage statistics. Two more themes, *Agriculture and Land Use* and *Political Life*, wait in the wings to cover other types of non-census data.

Rates give the most accessible view of the data, as they are listed at the start of each theme page and cover such topics as 'population density', 'infant mortality', 'percentage working in agriculture' and so on. Rates for particular units are initially plotted against a national total, and currently they are the only statistics that can be mapped.¹³ Clicking on a particular date within a time series graph takes you to the statistical maps, but you can get directly to the maps via *National Overview* on the home page. Each *Data Map Page* lets you select one of the historical maps as a backcloth, essential once you zoom in on a particular area. The date, unit type, or the rate being viewed may be changed from within the theme; but in each case options are limited to those for which data exist. *National overview* maps initially present 2001 data, and the only available unit types are modern ones, but if you go back, say to 1911, historical units become available. You may also find that other rates which have not been re-districted to the modern units start to appear.

However, users wanting access to the raw numbers from which the rates are calculated must go deeper—to the **nCubes**. This piece of terminology will be unfamiliar, but is used to distinguish the multi-dimensional structures used to present data from the *source tables* in the original published report and from the underlying *database tables* in which everything is stored. An nCube is defined as a combination of *variables*, each variable consisting of *categories*. For example, most of the data from the Registrar General's *Decennial Supplement* for 1861–70 form a three-dimensional nCube based on two sex categories, twelve age categories and twenty-five cause of death categories. However, the same source table also populates a second nCube with the same sex and cause categories, but decomposing the under-fives into five single-year categories.¹⁴ Available nCubes are listed at the bottom of theme pages, for both units and national overviews.

The initial view of an nCube is graphical, the type of graph depending on the dimensions of the nCube and on whether multiple dates are covered. An alternative view presents associated information on sources, with links to the

Figure 4 A 'data value page' from *Vision of Britain*, covering the number of female textile workers in Derbyshire as reported by the 1931 Census of Population

Attribute	Value	Meaning									
Identifier	7110898	This number locates the particular value within the data table; it is like an accession number in a conventional library.									
Value	19,477	This is the data value itself.									
Date(s) covered	1931	We store dates within a <i>date object</i> , which can hold anything from a simple year value, for a census, to a period defined by two calendar dates.									
Administrative area covered	10061428	<p><u>Derbyshire AdmC</u></p> <p>Derbyshire was an <u>Administrative County</u> in <u>England</u>. It was created in 1889 and abolished in 1974. It was also known as Derby.</p> 									
Meaning (DDS cell reference)	OCC_ORD1931_XII_F	<p>Cell within nCube N_OCC_ORD1931: <u>Persons of Working Age by Sex and 1931 Occupational Order</u></p> <table border="1"> <thead> <tr> <th>Dimension</th> <th>Variable</th> <th>Category</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><u>Sex</u></td> <td><u>Female</u></td> </tr> <tr> <td>2</td> <td><u>1931 Occupational Classification</u></td> <td><u>Textile Workers</u></td> </tr> </tbody> </table> <p>Universe: <u>All Workers</u></p>	Dimension	Variable	Category	1	<u>Sex</u>	<u>Female</u>	2	<u>1931 Occupational Classification</u>	<u>Textile Workers</u>
Dimension	Variable	Category									
1	<u>Sex</u>	<u>Female</u>									
2	<u>1931 Occupational Classification</u>	<u>Textile Workers</u>									
Table in census reports	EW1931OCC_M16	<u>1931 Census of England and Wales, Occupations, Table 16, 'Occupations of Males and Females, showing also total Operatives and the total Out of Work'</u>									
Column in census table	2	Column label from original table: Females									
Row in census table	217	Row label from original table: XII TEXTILE WORKERS									
Status	P	Public. Visible in both graphics and tables.									

original census tables, acknowledgments and restrictions on use. Everything in *Vision of Britain*, including the most modern data, can be used pretty freely in not-for-profit local studies. A further view presents the numbers themselves, labelled using the variables and categories we have defined. Small blue triangles beside each number link to *Data Value Pages*, presenting individual data table rows, as shown in Figure 4.

Other ways of getting to units

Unlike most on-line databases, there are many different ways of moving around the *Vision of Britain* system, depending both on the ultimate goal, and

on what initial knowledge is possessed. Many *LPS* readers will already know a good deal about historical administrative units, and which ones are likely to have useful data available. Thus, with practice, they can bypass the home page and places page, instead using an alternative *administrative units search*.¹⁵ This offers many more options, including wild card and 'sound-alike' specification of names and the narrowing of searches by geographical area and by type of unit. Narrowing searches by area exploits the underlying structure of the system. For example, if you search for 'Tidenham' within Gloucestershire you will find the parish of that name; but you will get to exactly the same parish if you specify Monmouthshire, because Tidenham was in Chepstow Registration District which lay in the Registration County of Monmouthshire. Using this search interface takes you to the *relationships pages* for the units you find, but you can then use the *crumb trail* links at the top of the page to go to the main *unit page*.¹⁶

However, if you do not have a place-name, or are unsure what administrative unit covered your location, *Vision of Britain* can still give you a lot of help, via clickable maps and postcode-based searching. The map on the main home page shows the nine English 'government office regions' used today, plus Wales and Scotland. Clicking on any of these produces a more detailed map showing modern local authorities within the selected area, and clicking on one of those takes you to the unit home page for that authority. However, more precise and detailed access to information by location is available via the 'historical maps' pages. Keep clicking on the maps to zoom in on the place you are interested in. Then, once it can be seen clearly, select 'Tell me more' instead of 'Zoom in' from the menu at the bottom right and click once again on your location.

The final click triggers a 'point in polygon' search using the system's spatial capabilities, and will take you to a **location page** which resembles the place page. The first link is, as usual, to the modern local authority, and both a general location map and an excerpt from the historical maps are provided. For those seeking qualitative information, links are given to the five nearest 'places' for which descriptive text, from gazetteers or travellers, are held. Crucially, the system lists the historic units which covered the point indicated, including the dates for which they covered it. Thus you can go from a particular building depicted on an historic map to the Ancient Parish within which it sat, and on to the later Registration District. One obvious limitation is that this can only be done for units whose boundaries are held within the system: Registration Sub-Districts are not included, for instance. In addition it should be noted that the historic boundaries are accurate only to 100 or 200 metres, although the boundaries for modern districts are much more precise.

Census Reports

The *Census Reports* area of the site, rather than supplying local level statistics, is about the census itself, and the highest level information is the full text of a guide to the reports.¹⁷ Selecting a particular census year takes you to a page listing the precise day of the census, and the reports published from it. A distinction is sometimes drawn between reports and individual publications,

which allows source tables scattered across individual county reports to be treated as one. The text of every *Preliminary* and *General Report* has been computerised, along with the introductions to other selected reports such as those on Fertility (1911) and Occupations (1931), although much of this material is not yet on-line.

All numbered or otherwise clearly distinguishable tables from the published census reports are listed. Although *Vision of Britain* currently holds just a small fraction of all census tables, they are generally those with the greatest geographical detail and therefore also the largest, often occupying most of a report. Exact reconstructions of the original report pages would be almost unusable on-line, so instead the national totals and, if there is space, the county figures are presented. However, a researcher can 'drill-down' to a county via the down-arrow icons next to county names, or by using a drop-down menu. From the county it is possible to move down to districts and sometimes to parishes. The arrangement of the columns and their labelling reproduces the source table. Unit names are hyperlinks taking you to the relevant home page, and triangles next to individual numbers again link to *data value pages*.¹⁸

These reconstructions of census tables are closely linked to the gazetteer structure and each page is focused on a particular unit, starting with 'Great Britain'. Navigating to a parish table listing for a particular Rural District and its component parishes may be tedious from the *Census Reports* home page, but the *Census Reports* option on the relevant unit home page will take you straight there. If a population time series is wanted, then it would be better to follow themes and nCubes, but it should be noted that not all statistics are covered by the Data Documentation System. Detailed occupational statistics are, for example, often accessible only via the census table reconstructions.

Conclusion

The overall aim, in creating the *Vision of Britain* web site, has been to computerise and then integrate varied systematic surveys of Britain to create, primarily, a powerful representation of the nation's diverse localities. The recreation of particular sources was only a secondary goal. That said, the Census of Population is the most important of our sources, and the whole site is generated from the underlying database by a surprisingly small number of programs. Similar-looking pages within the system will therefore work consistently, and clicking on links will always lead somewhere sensible, although this often means moving between *Place Information* and more specialised content.

Although *Vision of Britain* is a useful reference source for genealogists or casual enquirers about local history, this article has tried to show that it is also a powerful research aid for, very specifically, those interested in historical local population studies. Many researchers associated with *LPS* have already contributed to the site, and this article concludes with both an offer and a request for help. *Vision of Britain* is highly extensible, absorbing any amount of statistical data without design changes to the database or web site. However,

major funding opportunities are now pretty much exhausted. Volunteer assistance is thus being sought to extend the site, partly by cleaning and documenting existing transcriptions, partly by adding whole new data sets: if you transcribe them they can be published on the web site. The aim is obviously to add more national tables rather than local time series, but the system's purpose is to convert national surveys into resources for local research.

NOTES

1. The construction of the Vision of Britain site was funded by the Big Lottery Fund, but the contents were also funded by 28 distinct grants and contracts from 17 different bodies, plus contributions from many other researchers.
2. <http://edina.ac.uk/ukborders>.
3. The GBHGIS may be found at: <http://www.port.ac.uk/research/gbhgis/aboutthegbhghistoricalgis/database>. The census statistics at may be found at: <http://ahds.ac.uk/history/collections/census-statistics.htm>.
4. Royal Historical Society, 1979 and 1991. A major aim of the lottery funding was to create an integrated on-line version of the name authorities identified by the National Council on Archives in their *Rules for the construction of Personal, Place and Corporate Names* (1997). We also incorporated Melville Richards' *Welsh Administrative and Territorial Units* (Cardiff, 1969), the Scottish Archives Network Gazetteer and, for available counties, the National Register of Archives' *Manorial Documents Register*. Loading census data and especially the parish tables into the system provided a cross-check on both names and relationships, and the final gazetteer contains many additional variant names that appeared in census reports and, for Wales, whole administrative layers that were missing from Melville Richards but which we added mainly from the census.
5. R.J.P Kain and R.R. Oliver, *Historic parishes of England and Wales: Electronic Map – Gazetteer – Metadata* (Colchester, 2001).
6. The *Data Documentation System* is the most abstract part of the whole system. For the technically minded it is a relational implementation of the Aggregate/Tabular Data Extension developed by the Data Documentation Initiative (DDI); see <http://www.icpsr.umich.edu/DDI>.
7. <http://www.VisionOfBritain.org.uk/data>.
8. Another resource within the system is three complete sets of one mile to the inch maps of Great Britain: the original Ordnance Survey *First Series*, the 1940s *New Popular* edition, and the inter-war Land Utilisation Survey of Great Britain.
9. The three gazetteers are: John Bartholomew's *Gazetteer of the British Isles* (Edinburgh, 1887), John Marius Wilson's *Imperial Gazetteer of England & Wales* (Edinburgh, 1872) and Frances Groome's *The Ordnance Gazetteer of Scotland* (Edinburgh, 1885); computerising this last was a collaborative project with the Gazetteer for Scotland. A specialised search interface for this material, which is the only way to reach entries for physical features, landed estates, etc., may be found at <http://www.VisionOfBritain.org.uk/descriptions>.
10. Registration and Union counties were assembled using Registration Districts and Poor Law Unions respectively, without any administrative existence. Although there were some differences between Registration Districts and Poor Law Unions, no differences are known between the two types of county.
11. Until the mid-19th century, parishes were primarily ecclesiastical units, although often used for other kinds of statistical reporting. Especially in the north of England these Ancient Parishes often covered several settlements, individually defined as Chapelries and Townships within a mother parish named after the main settlement. Between 1851 and 1881, a new system of Civil Parishes was defined in which Chapelries and Townships generally became separate parishes. Thereafter Civil and Ecclesiastical Parishes evolved separately. *Vision of Britain* treats Ancient and succeeding Civil Parishes as one and the same, but Ecclesiastical Parishes as a separate kind of unit. This is historically incorrect, but enables us to present parish-level census data in

continuous time series from 1801 onwards.

12. Details of our unit typology may be found at: <http://www.VisionOfBritain.org.uk/types>.
13. The comparison unit can easily be changed for modern districts, counties, etc., via the unit home page. You can change the comparison for historical units by typing a different comparison unit ID ('c_id') value into the URL, finding the ID numbers on the *relationships* pages, but it is then your responsibility to ensure the necessary data exist for both units.
14. Decennial cause of death data for 1851–1900 were supplied by Robert Woods (Liverpool University), although 1901–10 were added by the GBHGIS team. The original data use five different cause of death classifications, but a simplified nCube, ignoring sex and using a twelve-way categorisation of causes, designed by Graham Mooney (Johns Hopkins University), spans all six decades.
15. This search can be found at <http://www.visionofbritain.org.uk/units>.
16. A 'crumb-trail' is the set of hyperlinks just below the main title bar, for example: 'Your Location: Home > The Isles > UK > England > Devon > Colyton > Relationships'.
17. Office of Population Censuses and Surveys, *Guide to Census Reports: Great Britain 1801–1966* (London, 1977).
18. This is obviously not the most elegant interface possible, but our site had to be usable with any imaginable browser, and not necessarily on a PC.