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Occupation and demography: a study of the Isle of Purbeck, Dorset, in the nineteenth century

by

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ABSTRACT

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OCCUPATION AND DEMOGRAPHY: A STUDY OF THE ISLE OF PURBECK, DORSET, IN THE NINETEENTH CENTURY

By Michael Joseph Dacre Edgar

The thesis examines the notion of 'occupational community', which has been used to characterise agricultural rural villages in England in the mid-nineteenth century. It explores the extent to which the existence of a second industry alongside an agricultural sector might lead to the development of two distinct 'communities' within the same population, particularly in terms of their demographic characteristics.

The area studied is the Isle of Purbeck in Dorset, which contained a prosperous agricultural sector and also a long-established stone industry. In order to identify differences between the two occupational groups, a community reconstruction was undertaken. A computer assisted method was developed to assist in linking the census, vital registration and ancillary data for the populations of three parishes for the period 1841-1891.

The results were mixed, in that some demographic behaviour, notably migratory patterns and infant mortality trends, were markedly different between the two groups. Other demographic measures were less clearly differentiated between the two occupational groups. It was found that whilst the stone workers formed a very tight-knit economic community, they were much less exclusive in the social sphere, in areas such as marriage and religious worship.

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ABBREVIATIONS

BPP	*British Parliamentary Papers*
CEBs	Census Enumerators' Books
CRG	Co-residing group
DRO	Dorset Record Office
NRL	nominal record linkage
pp.	pages
TNA	The National Archives
vol.	volume

Chapter One

Introduction

This study examines the concept of 'occupational community' and the occupational structure of rural England in the nineteenth century. It uses the demographic characteristics of different occupational groups to investigate whether occupational communities can be defined on a demographic basis.

The study begins with a critical review of the literature on nineteenth-century rural England, much of which appears to be focused on the south and east of the country. This geographical bias is strongly criticised on the basis that to generalise from one particular area to the whole country produces a distorted picture of the past. Even today, rural England is sharply differentiated regionally and sub-regionally; it was arguably more so in the nineteenth century. The nature of rural society and changes in it over time are examined and discussed. Migration, for example, was perhaps the most important demographic factor affecting rural society in the nineteenth century, especially after 1850, which is where much of the focus of this work lies. Before 1850, more than half of England's population lived in the countryside. After 1850 this proportion began a rapid and sustained decline. The impact of this on rural society, and the concept of occupational community are highlighted and discussed.

Inevitably, in a discussion of rural society, particular attention is given to the role of farming in the countryside. Howard Newby uses the term 'occupational community' to describe the villages of rural England in the mid-nineteenth century. It appears that his use of this term is designed to convey two things. Firstly, that the populations of such villages, were dependent on a single economic activity – agriculture, and therefore the social and economic life of these villages was dominated by the agricultural cycle. Secondly, that social relations in rural villages were defined and understood on the basis of occupational relationships within agriculture. There are, I propose, a number of problems with this conceptualisation. Newby's view of the social and economic structure of English villages in 1850 appears to be derived from his own empirical work on East Anglia, and is intended to apply to the majority of rural villages in which the population depended wholly, or largely, on agriculture for their living. However, I present evidence that in many rural

areas, the population did not rely solely upon agriculture for its economic existence. This is reinforced by an analysis of a hitherto largely neglected source that utilises data from the printed census abstracts, the *Registrar General's Annual Report* for 1861, the *Registrar General's Decennial Supplement* for 1861, and the *Returns of the Poor Law Commissioners* for July 1861. Among the data included are numbers of males aged 20+ in various occupational categories and the population density of each registration district in England and Wales. The results of the analysis strongly support the view that the employment structure of males in many parts of England contained a substantial non-agricultural element. Newby does acknowledge the existence of such places, but appears to underestimate how widespread they actually were. I suggest that rural industry survived for longer and was more widespread than the literature generally or traditionally assumes.

In Newby's conceptualisation of rural society it is mediated by the relations between landowners, tenant farmers and landless labourers. No other groups are considered to exist, or at least matter. However, this ignores not only those engaged in rural industry, but also the rural trades/craftsmen and small farmers who existed in large numbers in the countryside. Small farmers are often dismissed in much writing on nineteenth-century rural England as a kind of anachronistic survival from an earlier age, living on the outer margins of the agricultural world. With their families, they were, in fact, much more numerous and widespread than many historians, including Newby, appear to assume. The acreage they farmed was small by the middle of the nineteenth century, and of itself frequently not economic. However, many adopted a whole variety of strategies to maintain their self-employed status. In many rural villages they will have constituted an important section of the community.

The period between 1850 and 1875 is often referred as the 'high farming' period. This was a time of considerable prosperity for many farmers, if not their labourers. Newby appears to assume that by 1850 English agriculture was largely a fully commercialized business. Although he does concede that high farming was not simply about farming as a commercial enterprise. It was also about status and the aspirations of the landed and farming class. My own view is that although farmers made a lot of money during the high farming period, they did not, on the whole, actually pursue capitalist principles of profit and loss. I would argue that the high farming period was actually a transitional one. This transition probably started with the implementation of the New Poor Law in 1834, which

undermined many of the mutual ties of paternalism and obligation that had mediated rural relations up to that time. Increasingly, thereafter, relations between labourers and farmers were becoming more purely economic in character. But they did not become overwhelmingly so until the agricultural depression that began in the mid-1870s. This forced a major restructuring of farming and the agricultural and rural economy – boosted by factors such as increasing foreign imports, mechanisation and out-migration from rural areas, plus a definite decline in rural industry. Farmers and landowners were forced to face commercial realities and increasingly run their farms as true capitalist enterprises. I suggest that high farming was essentially a transitional phase between traditional farming methods and labour relations and a fully capitalist, commercial agricultural industry. Following this process, many rural villages did become 'occupational communities'. My revision is therefore about timing and process, rather than that Newby is incorrect.

The following chapter examines the concept of 'community' itself. Unfortunately there is no commonly agreed definition of the term. Social scientists and anthropologists have expended considerable time and energy on this question without success. Dozens of definitions of community have been promulgated, but none have achieved common acceptance (other, perhaps, than that it involves people). Some of the main strands in social scientific and anthropological thinking in this area are described and discussed. Their efforts are contrasted with those of historians who, with a few notable exceptions, have engaged in relatively little debate on this subject. This intellectual inertia on the part of many historians appears to stem from a somewhat romantic tradition that sees the pre-industrial past as a kind of golden age, where everyone lived in almost perfect communal harmony. The rise of capitalist industrialisation is considered to have progressively destroyed this social idyll. Closely related to this is the almost universal assumption that rural villages in the past were 'close-knit communities'. Whether the evidence exists to support such a view is, I would argue, very much open to question, as in reality we know very little of the thoughts and sentiments that motivated people's actions. Indeed, I suggest that social relations in such places were much more complex than is often allowed.

The chapter then comments on the state of history in recent times. The fragmentation of history into increasingly specialized sub-disciplines is strongly decried, on the grounds that such compartmentalization inevitably inhibits our ability to fully understand and appreciate historical context and process. Also discussed is the unfortunate association of local

history with antiquarianism, and recent efforts to place it on a sounder academic footing are applauded. It is strongly argued that local studies should be integrative, multi-disciplinary, involve synthesis, and be firmly rooted within local, regional and national contexts. Such a framework, I suggest is fundamental if we are to fully appreciate and understand how people lived their lives in the past.

Indeed, the importance of understanding context is the raison d'être for Chapter 4, which comprises a review of the social and economic history of the study area, the Isle of Purbeck in Dorset. The purpose of any historical enquiry is surely to illuminate the past, furthering our understanding of the ways in which people lived their lives and how their life experiences affected them over time. Unfortunately, I would suggest, much historical demography fails to adequately engage with the past. It tends to be set insecurely, at best, in its historical context. The reader is informed about the nature of people's demographic characteristics at a particular time, but, regrettably, is often told little about the historical development of their behaviour and the factors that may have acted to influence it. There needs to be a much greater synthesis between history and demography, between the narrative of social and economic history and the science of historical demography. Where this can be achieved the whole will surely be greater than the sum of the two parts. That is certainly one of the aims of this study, and I would argue that the demographic characteristics of the Purbeck stone workers who are its focus, are only truly understandable, as will be evident, because we know about their history and the history of the place they live in.

Chapter 5 has two main functions. Firstly, it complements the previous chapter by including a brief outline of the social and economic situation in the nineteenth century for the three parishes that form the main focus of this study. Among the factors discussed are acreage, land ownership, economic structure, and population trends 1801-1901. Secondly, it presents a number of detailed tables that illuminate various aspects of the demographic characteristics of all three parishes between 1851 and 1891, based on data from the census enumerators' books. These tables address several areas of enquiry, amongst which are mean household size, (including by occupation), household structure, occupational structure, and age distributions. Each table is accompanied by a brief summary of the results, which are also related to particular details of social and economic life in the three parishes.

Nominal record linkage is fundamental to the kind of demographic enquiry being undertaken here, and Chapter 6 describes the sources used and examines their strengths and weaknesses. The census enumerators' books and the Anglican parish registers are the mainstay, and their attributes are investigated in some detail. These are complemented by a number of more minor sources, such as land tax records, tithe apportionments, trade directories and records of the Company of Purbeck Marblers and Stonecutters. Three potential strategies for undertaking the nominal record linkage are then reviewed. The techniques discussed are family reconstitution, total reconstitution and community reconstruction. They are subjected to a critical examination of their utility given the objectives of the research, and the conclusion is that community reconstruction offered the best means of achieving these.

The scale of the study is such that doing the record linkage by hand was simply not feasible. The obvious alternative was to utilise the power of the personal computer, and their use in studies based on nominal record linkage is looked at in some detail. The conclusion arrived at was that the best way to proceed would be via a semi-automated method combining the analytical power of the computer with the knowledge, intuition and expertise of the researcher. A full description of the database developed to underpin the linkage process is provided. This is accompanied by a discussion of various problems inherent in the use of database software with historical nominal data, along with the strategies, such as coding, that were employed to alleviate them.

Once the initial database had been constructed the next task was to devise a mechanism for linking together the disparate records it contained. Inevitably this was quite a complex undertaking, and was achieved by developing several sets of algorithms based on the sources to be linked. The algorithms were then run in a strictly defined sequence as select and update queries against the various tables in the database. This constitutes the automated part of the process. Once complete, the links thus produced were subjected to a manual review procedure on the computer, which confirmed or rejected them as appropriate. The algorithms used are fully described and their rates of success in automatically linking individuals from the various sources are presented in a number of tables. These also include the numbers of linkages confirmed, rejected and found during the manual review procedure.

In Chapter 7 various facets of the migration behaviour of the population of the stone working parishes in Purbeck are examined and discussed. During the nineteenth century England saw massive changes in the residential structure of its population. Rural areas experienced considerable decreases in population through out-migration, particularly after 1850. Conversely, urban areas grew rapidly, through a combination of in-migration and natural increase. Migration, therefore, was a huge influence for change in nineteenth-century England and it has been a focus of demographic enquiry for many years.

The chapter begins with a brief overview of migration trends in the nineteenth century. Early studies explored migration largely via aggregative analysis based on data at the county or registration District level. Since the 1960s a huge number of studies derived from the individual-level data contained in the census enumerators' books have been produced. More recently, work based on residential life histories supplied by genealogists and family historians have provided a fresh perspective on migration in the nineteenth century. All three approaches have different strengths and weaknesses and these are examined and discussed, as the scope and nature of the sources inevitably affects the way in which migration is defined.

The work presented here is not a comprehensive detailed analysis of all aspects of population mobility in the three stone working parishes of the isle of Purbeck. With its dual dependence on agriculture and quarrying Purbeck is a potentially informative locality for the analysis of occupational variations in migration patterns. This is a topic that seems, on the whole, to have been somewhat neglected in the literature. The analysis undertaken is, therefore, a focused examination of particular facets of the migration patterns and networks found among a specific rural occupational group – the stone workers of Purbeck. Although the latter are the main focus of attention, their migration patterns are compared with those of other occupational groups in the area, most notably agricultural workers. The analysis utilises elements of both the aggregative- and individual-level approaches to migration. It also deals mainly with the migration of men, largely due to the problems surrounding the accurate identification of women who marry and thus change their surname.

Firstly, net migration figures for all the parishes in Dorset were calculated for the period 1801-1901, and the migration trends for the three stone working parishes compared to the

county average. Migration for the three parishes is also analysed at the individual level, using the CEBs for 1851, and classified by place of birth and occupation. The CEBs, in conjunction with parish registers, were then used to study out-migration from the area; specifically, the out-migration of males born in Langton Matravers between 1841 and 1861. All the male children born between these two census dates were identified and then searched for in subsequent censuses up to and including 1881, and also in the Langton Matravers burial register. Where they could not be found in either source they were assumed to have migrated. In most cases it was possible to identify the occupation of the fathers of these children, which allowed an examination of persistence rates by occupational group.

Until relatively recently it was difficult to trace the destinations of out-migrants. However, in the 1990s volunteers from the Church of Jesus Christ of Latter Day Saints completed the transcription and indexing of the entire set of CEBs for 1881. These were made available on microfiche in local archives and online. Two targeted searches of the microfiches were then undertaken. The first was for all members of the 1841-1861 cohort and was confined to Dorset, Hampshire and Surrey (which included a large area of south London). The second covered a much wider area of England and was limited to those bearing one of eleven surnames. The hereditary nature of the stone industry meant that there was a considerable degree of homonymy in Langton Matravers. Indeed, the eleven surnames mentioned above accounted for almost 90 per cent of the stone workers recorded in Langton Matravers in the six censuses from 1841 to 1891. The great majority of out-migrants from Langton Matravers were found to be living in areas that possessed historic links with the stone trade. Factors such as the small surname pool and the destinations of out-migrants highlight the importance of an awareness of historical context, as set out in Chapter 4 and elsewhere in this thesis.

Having discussed the migration behaviour of the stone workers, attention then turns to their mortality characteristics. Occupational mortality differentials in nineteenth-century England have long stimulated the interest of historians and historical demographers. Contemporaries believed that the mortality of those working underground in extractive industries such as coal, lead and tin mining was higher than average, a belief confirmed by subsequent studies of the issue. As Chapter 4 reveals, the stone quarriers in the Isle of Purbeck worked underground in what were effective stone mines. One might reasonably

expect, therefore, that the mortality structure exhibited by the Purbeck stone workers would echo that of those working in other mining occupations. The corollary of this, of course, is that their mortality behaviour would also differentiate them from other occupational groups in Purbeck, and Chapter 8 investigates whether this was indeed the case.

The chapter begins by summarizing the system of recording deaths and burials in nineteenth-century England. Current estimates are that mortality in England and Wales began to decline, albeit slowly, in the mid-eighteenth century. By 1800, life expectancy at birth was approximately 37 years. Seventy years later it had risen, fitfully, to something around 40-41 years. After 1870, however, the rate of decline picked up markedly and life expectancy at birth reached 50 years in the first decade of the twentieth century. These are, of course, national figures and they conceal wide variations regionally, between different occupational groups and different age-groups. Factors acting to stimulate the national-level decline in mortality are discussed, particularly the relative contributions of food and waterborne diseases, childhood infectious diseases, respiratory diseases and pulmonary tuberculosis or phthisis. Child and infant mortality were an important component of overall mortality and are discussed in some detail.

Following this discussion of national trends, the mortality of the stone working population of the parishes of Langton Matravers and Swanage is measured. Unfortunately the population of Worth Matravers was too small to produce statistically viable figures, so the parish was excluded from the investigation. The analysis utilises published aggregate data along with a data extracted from the database described in Chapter 6. This data includes material from the five censuses taken between 1851 and 1891, and from the baptism and burial registers for the same period. A two-state model of the transition from life to death was then applied to the data to produce age-specific death rates (ASDRs) at all ages for both males and females. The ASDRs were then used to construct life tables for the stone workers in each of the two parishes and, in the case of Swanage, which had a significantly larger population, for other manual workers as well.

The results of this exercise are discussed first in the context of general levels of mortality in the Wareham Registration District, within which Purbeck is located. Discussion then turns to differences between the mortality of stone workers and other occupational groups

within the same settlements. The results are somewhat unexpected, in that they reveal no evidence to suggest that the stone workers experienced higher adult male mortality than the general population, in the way that other types of mine workers did. In Purbeck itself, on the other hand, the results show that the stone working population did experience higher levels of mortality than did the population as a whole, including other manual workers. The difference, however, was confined to males and was almost entirely due to very high levels of infant and child mortality among the sons of stone workers. What may have caused this striking excess of mortality among male infants and young children in the stone working population remains unresolved, however. Some possible reasons are mooted in the final section of the chapter, but it is difficult to find any convincing explanation for this phenomenon.

Chapter Two

Literature Review - Part One: 'Occupational Community'

Introduction

In his book, *Country Life: A social history of rural England*, Howard Newby uses the term 'occupational communities' to describe the villages of rural England from the mid-nineteenth century.[1] His intention was simultaneously to convey two notions. Firstly, that by the mid-nineteenth century, rural villages had become places 'whose whole existence was intimately bound up with the fortunes of a single industry – farming'.[2] Secondly, that as a consequence, social relationships in such villages were defined and understood exclusively on the basis of occupational hierarchies and relationships within agriculture.[3]

Newby argues that the urbanisation of British manufacturing industry allied to the 'onset of a fully commercialized agrarian society', brought about this development in the social and economic structure of the countryside.[4] In his view,

> the industrial and commercial development of the British economy during the nineteenth century produced a pattern of urban and industrial concentration that succeeded in "ruralizing" the countryside - that is, much of the small-scale manufacture and domestic handicraft which had previously been located in villages was rendered obsolete by the new system of factory production that was taking place in the new industrial towns and cities.[5]

The evolution of English rural villages into occupational communities was further reinforced with the advent of the 'High Farming' period, covering roughly the third quarter of the nineteenth century and described by Newby as 'the culmination of more than a century of self-confident, aggressively commercial, agricultural "improvement"'.[6] From this perspective, the English countryside (particularly lowland arable areas in the south and

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[1] H. Newby, *Country Life: A social history of rural England* (London, Weidenfeld & Nicolson, 1987). Also see his earlier work, H. Newby, *Green and Pleasant Land? : Social change in rural England* (London, Wildwood House, 1985).
[2] Newby, *Country Life*, 77.
[3] Newby, *Country Life*, 81-2.
[4] Newby, *Country Life*, 77.
[5] Newby, *Country Life*, 77.
[6] Newby, *Country Life*, 76.

east) was essentially devoid of industry, populated only by landowners, tenant farmers and agricultural labourers, and serviced by a few tradesmen and craftsmen.

Conceptualisation of rurality

Newby's conceptualisation of the social and economic structure of English rural villages in the Victorian period is largely derived from, it seems, his own empirical work on East Anglia. It is meant to apply to the majority of rural villages in which the population depended wholly (or very largely) on agriculture for their livelihood. Yet while it may be appropriate for purely agricultural villages (and particularly those of East Anglia), this view is open to challenge on the grounds that it takes no account of non-agricultural activities, such as fishing, various extractive industries, and other rural industries and by-employments, such as lace-making and gloving. In many places such activities were important modifiers of the local economy and social structure.

Newby does acknowledge that, despite the general urbanisation of British industry in the first half of the nineteenth century, 'the countryside did not become completely agricultural' and notes 'the continuing importance of mining and quarrying in many localities'.[7] However, he perhaps underestimates the proportion of the countryside in which mining, fishing, quarrying and other primary activities co-existed alongside agriculture. In the West Country, tin mines and china clay extraction were a major source of employment and in the North Pennines a sizeable lead-mining industry had existed for hundreds of years.[8] Many of the lead miners in the North Pennines combined their work in the lead mines with running agricultural small-holdings.[9] Similarly, lead mining was a significant factor in the local economy of the Peak District of Derbyshire, another area in

[7] Newby, *Country Life*, 77.

[8] See G.R. Lewis, *The Stannaries: A study of the medieval tin miners of Cornwall and Devon* (Truro, D. Bradford Barton, 1908, reprinted 1965). Also, R. Burt & S. Kippen, 'Rational choice and a lifetime in metal mining: employment decisions by nineteenth-century Cornish miners', *International Review of Social History*, 46 (2001), 45-75.

[9] A. Raistrick & B. Jennings, *A History of Lead Mining in the Pennines* (London, Longmans, Green & Co., 1965), 311-16. Also see C.J. Hunt, *The Lead Mines of the Northern Pennines* (Manchester University Press, 1970).

which 'mining and agriculture were to a large measure complementary'.[10] A further example is the Forest of Dean in Gloucestershire, home to the free miners, who had dug coal in the forest for hundreds of years.[11]

Moreover, Newby effectively ignores the diverse secondary manufacturing activities, often female by-employments, which supplemented agriculture in many rural areas. Much female employment in agricultural areas was never recorded in censuses, as it tended to be seasonal or viewed as peripheral. As Edward Higgs has shown, 'the process of accumulating, arranging and analysing census data was not a value-free exercise, especially with regard to the work of women.'[12] Female by-employments included, for example, lace-making in parts of Devon,[13] gloving in Somerset,[14] and straw plaiting in the Home Counties.[15] The present study is set in Dorset, one of the most rural counties in England in the nineteenth century; but even here a wide range of locally, quite substantial non-agricultural industries operated alongside agriculture in various parts of the county. Net making, clay mining, stone quarrying, fishing and gloving were among the industries

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[10] R. Gurney, 'Population change and population structure, 1801-1861, in the Peak District of Derbyshire' (Unpublished PhD Thesis, University of Liverpool, 1970), 248. Other studies also highlight the mixed nature of employment in the Peak District. See, for example: A.J. Fletcher, 'The Hope Valley in 1851', *Derbyshire Archaeological Journal*, 91 (1977), 169-82; G.F. Fuller, 'Lead-mining in Derbyshire in the mid-nineteenth century', *East Midland Geographer*, 3 (1965), 373-95; and R. Hall, 'Occupation and population turnover in part of the Derbyshire Peak District in the mid-nineteenth century', *East Midland Geographer*, 6 (1974), 66-78.

[11] In addition to their mining activities, the free miners also had the right to feed their pigs on the forest, R. Samuel (ed.), *Miners, Quarrymen and Saltworkers* (London, Routledge & Kegan Paul, 1977), 64. They also took timber and bark from the forest, and many enclosed land (illegally) and ran sheep and donkeys in the forest, see C. Fisher, 'The free miners of the Forest of Dean, 1800-1841', in R. Harrison, *Independent Collier: The coal miner as archetypal proletarian reconsidered* (Hassocks, Harvester, 1978), 17-53.

[12] E. Higgs, 'Women, occupations and work in the nineteenth century censuses', *History Workshop Journal*, 23 (1987), 59-80. For another discussion of women's work in relation to censuses, see B. Hill, 'Women, work and the census: a problem for historians of women', *History Workshop Journal*, 35 (1993), 78-94. Also see S. Horrell & J. Humphries, 'Women's labour force participation and the transition to the male-breadwinner family, 1790-1865', *Economic History Review*, XLVIII, 1 (1995), 89-117.

[13] For a general history of the lace industry, see H.J. Yallop, *The History of the Honiton Lace Industry*, (Exeter University Press, 1992).

[14] Details of the gloving industry in Somerset can be found in W. Hull, *The History of the Glove Trade* (1834); S. Mackay, *Milborne Port in Somerset*, (Milborne Port, Wyvern Building, North St., Milborne Port, Somerset, 1986); and W. Page (ed.), *Victoria History of the County of Somerset*, (London, Constable, 1906), 427-9.

[15] C.A. & P. Horn, 'The Social Structure of an "Industrial" Community: Ivinghoe in Buckinghamshire in 1871', *Local Population Studies*, 31 (1983), 9-20.

operating successfully in this particular corner of rural southern England in the mid-nineteenth century and later.[16]

To some extent these issues revolve around what we would define as 'rural'. The *Compact Oxford English Dictionary* defines 'rural' as 'relating to or characteristic of the countryside rather than the town'.[17] This is not terribly illuminating and leaves a number of issues outstanding. What constitutes the countryside and what constitutes a town? Where are the boundaries drawn? Does the same settlement size apply to all areas? After all, a town in one county or region might be characterized as merely a village in another. Indeed, Barbara Kerr quotes a letter of 1830 dismissing Dorchester, the county town of Dorset, as nothing more than a large village 'consisting of three streets and one or two lanes'.[18] While it is almost certainly impossible to quantify what qualifies as rural, particularly as such a thing may well change over time, it was decided to try and provide at least an indication of 'rurality' in the mid-nineteenth century. David Gatley has produced a database for 1861 that includes information from the printed census abstracts, the *Registrar General's Annual Report* for 1861, the *Registrar General's Decennial Supplement* for 1861, and the *Returns of the Poor Law Commissioners* for July 1861. These data have been compiled for the 635 registration districts in England and Wales, plus three registration districts covering the Isle of Man and the Channel Islands.[19]

Among the data available are the number of males aged 20+ employed in a number of categories, including agriculture, and the population density of each registration district, expressed as persons per hectare. Male employment was used, since the recording of female employment in the nineteenth-century censuses is generally considered to be seriously deficient.[20] It was felt that looking at the proportions of males employed in

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[16] P. Stanier, *Dorset's Industrial Heritage* (Truro, Twelveheads Press, 1989); M.J.D. Edgar, 'Occupational diversity in seven rural parishes in Dorset, 1851', *Local Population Studies*, 52 (1994), 48-54; J.L. Green, *The Rural Industries of England*, (London, 1895), 71-75; M.M. Crickland & C.H. Vellacott, 'Industries' in W. Page (ed.), *The Victoria History of the County of Dorset*, Vol. 2, (London, Constable, 1908), 325-66.

[17] www.askoxford.com/concise_oed/rural.

[18] H.O. 40/27. Letter dated Dec. 16th, 1830, from Captain Frederick Hovenden to the Home Office, quoted in B. Kerr, 'The Dorset agricultural labourer 1750-1850', *Dorset Natural History Society Proceedings*, 84 (1962), 158-77.

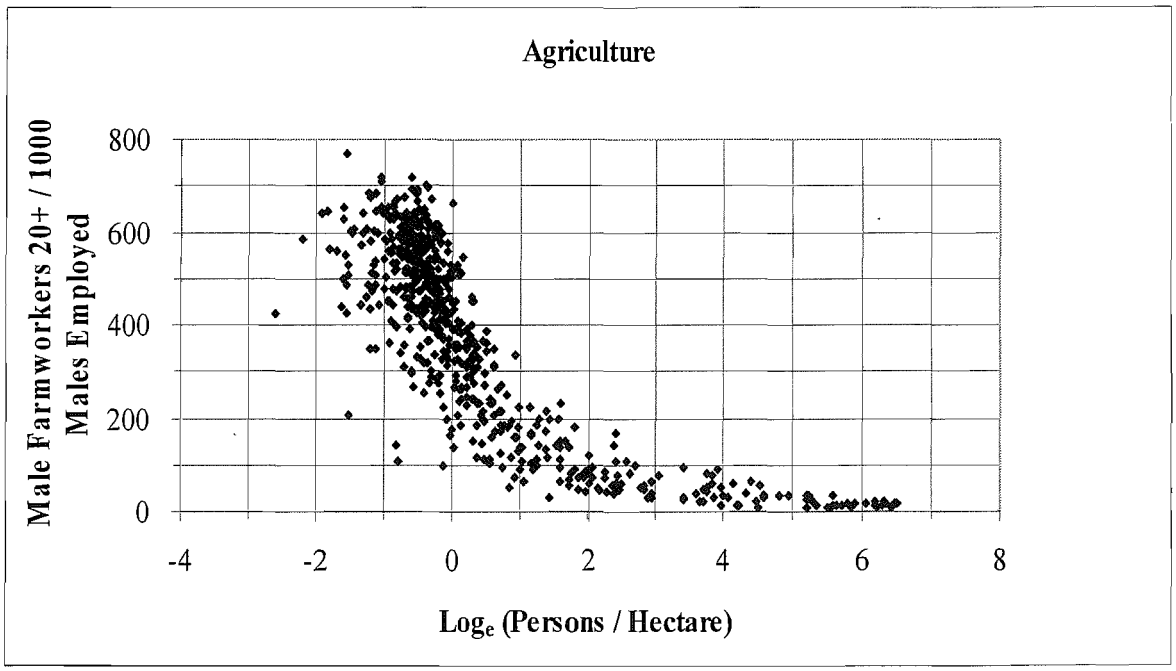
[19] For further details of the database see D.A. Gatley, 'Computerising the 1861 census abstracts and vital registration statistics', *Local Population Studies*, 58, (1997), 37-47.

[20] This issue is discussed in more detail in Chapter 5.

agriculture against population density for each registration district would provide some sense of what might be considered to be 'rural'.

Of the 638 registration districts, 59 per cent had a population density of less than one person per hectare; a further 16.45 per cent had a density of between one and two persons per hectare. The proportion of males aged 20 years and over employed as farm workers ranged from 0.07 per cent in Stepney and St George-in-the-East in London to 77 per cent at Hoo, Kent. One quarter of registration districts had less than 20 per cent of their adult males engaged in agriculture, and, in total, under half of all registration districts (44.36 %) had less than 40 per cent of adult males employed as farm workers. The agricultural workforce comprised between forty and sixty per cent in over one third (37.46 %) of registration districts, while registration districts where more than 60 per cent of adult males worked as farm workers accounted for 18.18 per cent of the total. Such figures suggest that in many areas of the country, substantial non-agricultural elements must have existed within the employment structure of adult males. Figure 2.1. provides a visual expression of these results.

Figure 2.1. Male farm workers aged 20+ per 1,000 males employed and persons per hectare, by registration district, 1861

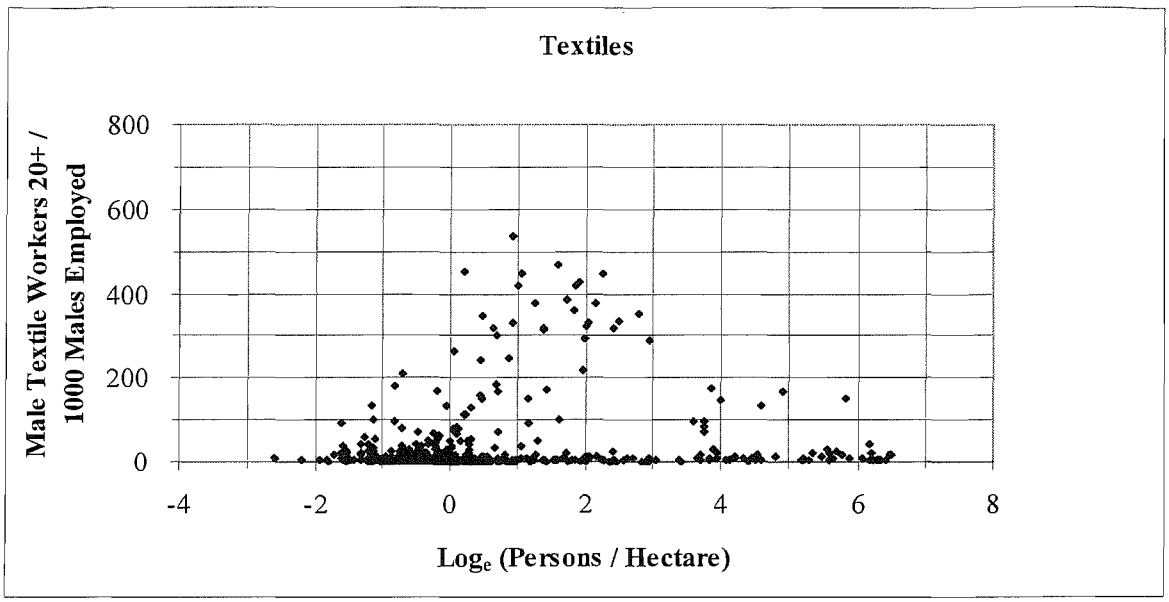


Source: Gatley Database.

This graph illustrates a number of things. As might be expected, the majority of registration districts with low proportions of farm workers are comprised of areas with a population density in excess of one person per hectare (population density has been plotted on a logarithmic scale, so '0' on the X axis = 1 person per hectare). These will have been the more urbanized areas of the country. A significant minority of registration districts with proportions of farm workers of over 20 per cent also have population densities of more one person per hectare. These are likely to be areas like the East Riding of Yorkshire, where the pattern of industrialization led to a large concentration of small urbanized towns based on local specialization of production, interspersed with agricultural areas. The same structure was also a feature of many coal-mining areas.[21] A much larger number of registration districts combine proportions engaged in agriculture of less than 50 per cent, with a population density of less than one person per hectare. Clearly, the employment structure of these areas cannot have been based solely on agriculture, and their population density suggests that they are not urban areas. This indicates, very clearly, that in large parts of the English countryside, industries other than agriculture existed on quite a substantial scale. This is further illustrated in Figures 2.2 – 2.5 below, which, like Figure 2.1, graph the proportions of adult males engaged in four of the largest non-agricultural industries against population density in each registration district.

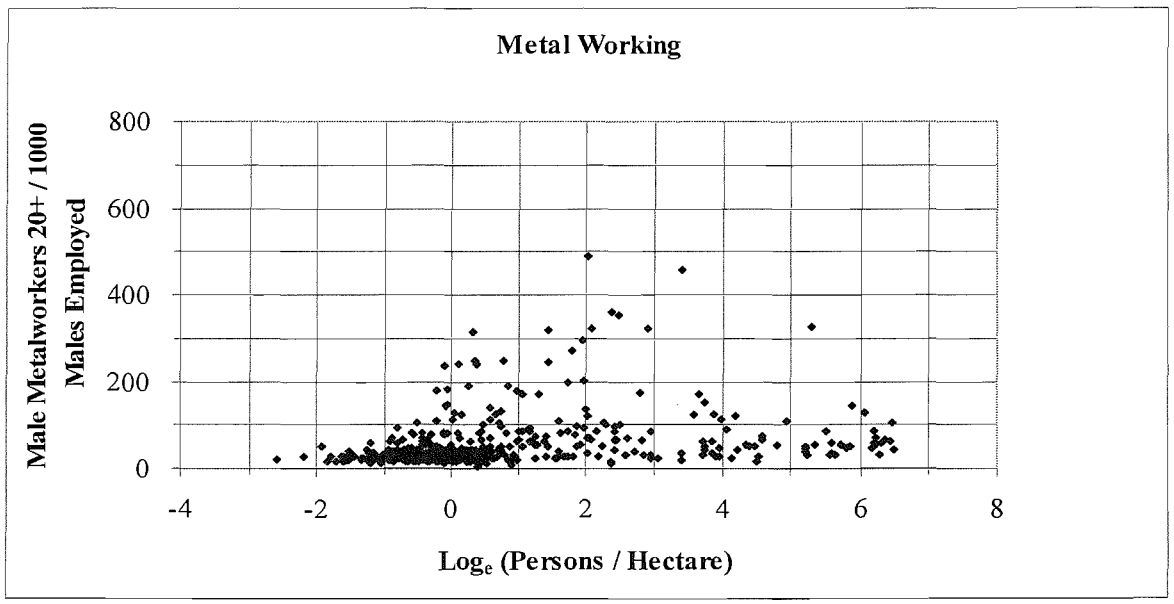
[21] S. Caunce, 'A golden age of agriculture?', in I. Inkster (ed.), *The Golden Age: Essays in British social and economic history, 1850-1870* (Aldershot, Ashgate, 2000), 46-60.

Figure 2.2. Male textile workers aged 20+ per 1,000 males employed and persons per hectare, by registration district, 1861



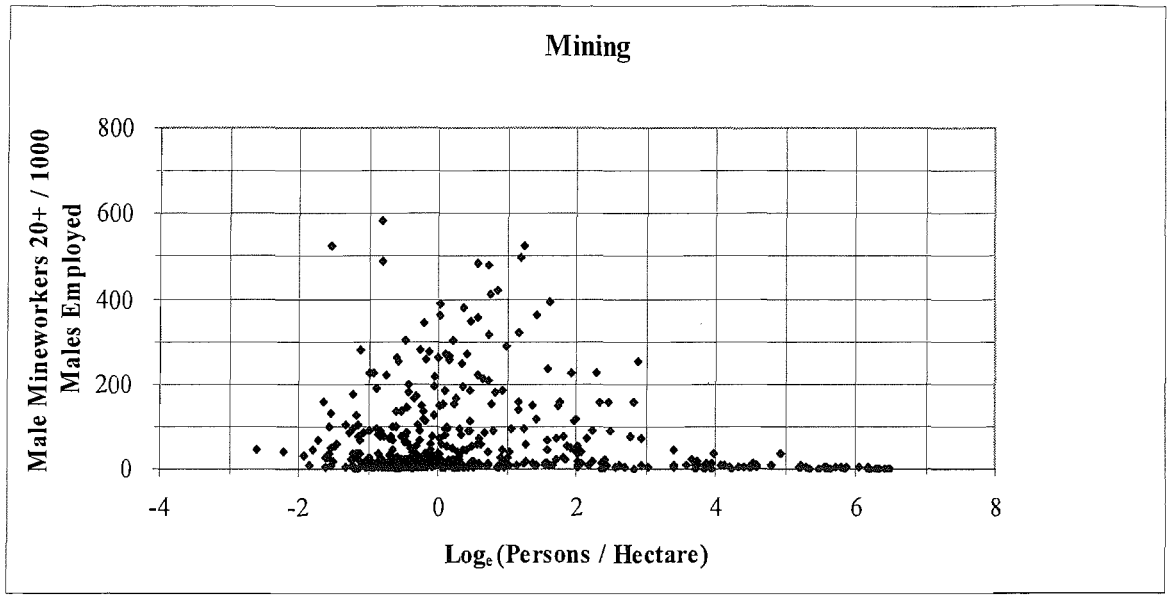
Source: Gatley Database.

Figure 2.3. Male metal workers aged 20+ per 1,000 males employed and persons per hectare, by registration district, 1861



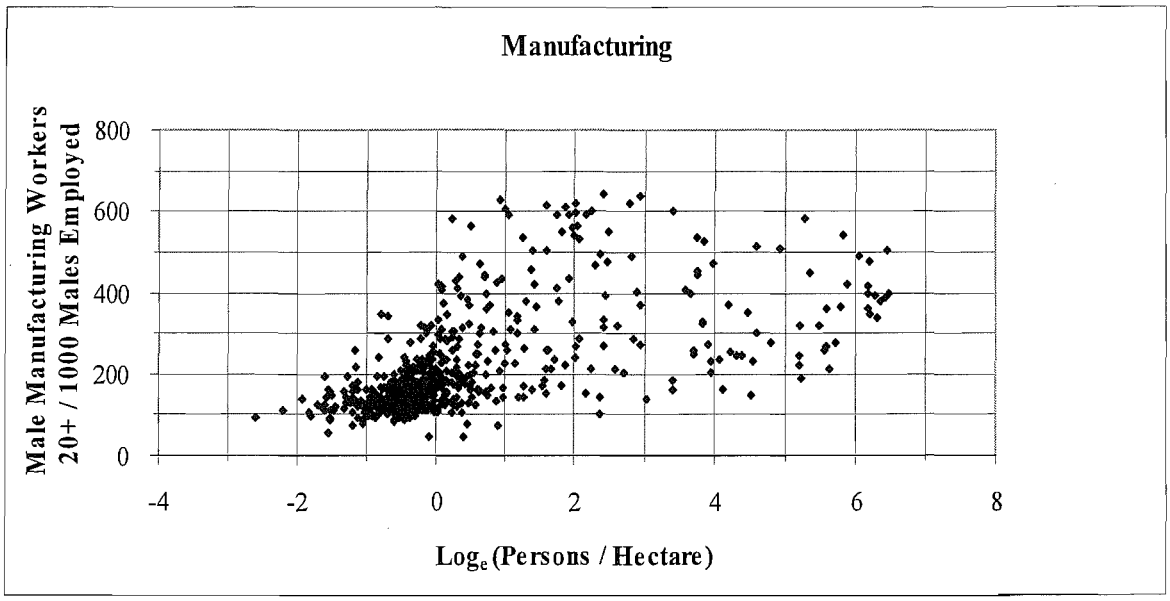
Source: Gatley Database.

Figure 2.4. Male mining workers aged 20+ per 1,000 males employed and persons per hectare, by registration district, 1861



Source: Gatley Database.

Figure 2.5. Male manufacturing workers aged 20+ per 1,000 males employed and persons per hectare, by registration district, 1861



Source: Gatley Database.

Figures 2.2 – 2.5 above illustrate very clearly the point that, in 1861, much non-agricultural industrial activity was carried on in areas of relatively low population density that were almost certainly largely rural in character, albeit frequently as a relatively small percentage

of the employed population. This trend is most striking in manufacturing. The great majority of registration districts with a population density of less than one person per hectare have between ten and forty per cent of their adult working population engaged in manufacturing of some kind. Of course, 'manufacturing' covers a wide range of activities; even so, it is perhaps instrumental to remember that Britain was known as the 'workshop of the world' at this time, and, indeed, that a large proportion of Britain's industrial production came from small workshops. The evidence above also suggests that, in 1861, a substantial proportion of Britain's manufacturing was carried on outside the big urban centres.

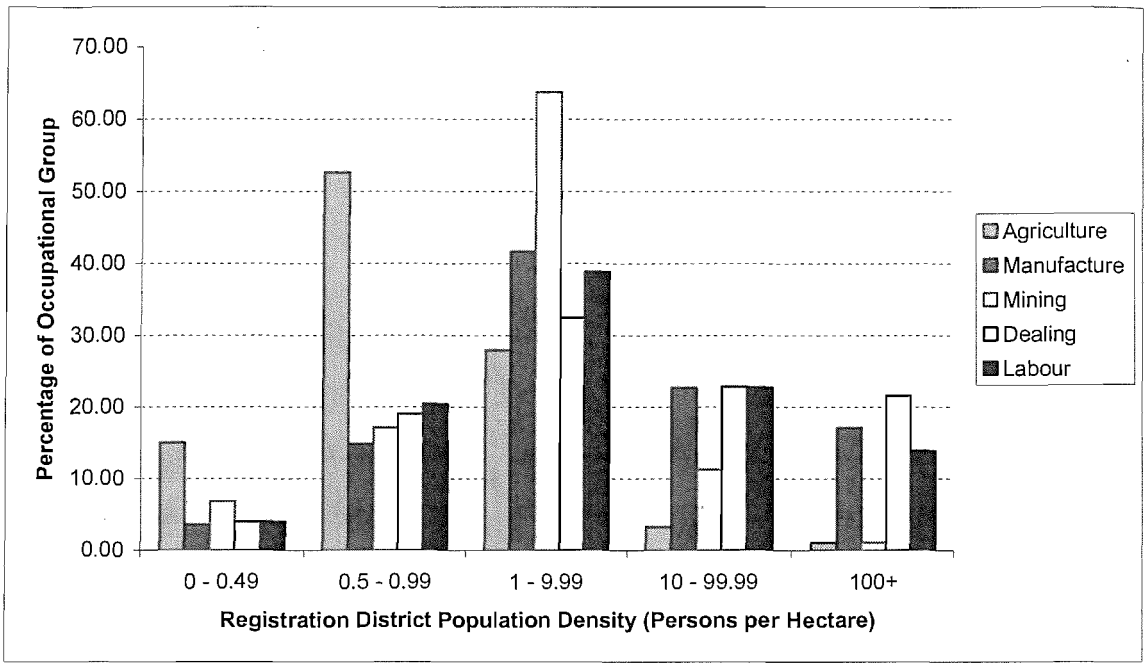
However, these figures may be slightly misleading if there are large variations in population size between registration districts. If the rural registration districts are notably smaller in population terms than urban districts, it is possible that while a majority of rural districts possessed a substantial manufacturing sector they accounted for a minority of total manufacturing employment. In order to cast some light on this, the Gatley database has been used to look at the share of total employment in England and Wales in selected occupational groups accounted for by registration districts of different ranges of population density. This analysis is presented in Table 2.1 and graphically in Figure 2.6.

Table 2.1 Percentage of total employment in England and Wales in selected occupational groups by population density of registration districts

	0 - 0.49	0.5 - 0.99	1 - 9.99	10 - 99.99	100+
Agriculture	15.03	52.61	27.93	3.30	1.10
Manufacture	3.62	14.86	41.65	22.73	17.14
Mining	6.87	17.14	63.76	11.30	1.11
Dealing	4.03	19.07	32.44	22.86	21.6
Labour	4.01	20.44	38.82	22.79	13.94

Source: Gatley Database.

Figure 2.6 Perception of total employment in England and Wales in selected occupational groups by population density of registration districts



Source: Gatley Database.

Unfortunately, the data for figures 2.1 – 2.5 were constructed using a subset of data extracted by David Gatley and provided as part of the database. This included textile workers and metal workers as separate categories, presumably extracted from manufacturing. However, the main Gatley database does not include employment totals for some of the categories, including textiles and metalworking, which he extracted for the subset of data used to create Figures 2.1 – 2.5. The analysis in table 2.1 therefore uses the categories of agriculture, mining and quarrying, dealing, labour and manufacturing from the main Gatley database and for which national employment totals are provided. Although not an ideal solution, this does allow me to contrast the proportions of agricultural and non-agricultural workers in registration districts of different population densities.

The results of this analysis do seem to modify the impact of Figures 2.1 - 2.5 a little. Table 2.1 shows that just fewer than 20 per cent of those employed in manufacturing lived in registration districts with a population density of less than one person per hectare. A clear majority of manufacturing workers are found in districts with a population density of between one and ten persons per hectare. Just less than 25 percent of those employed in

mining and quarrying, dealing and labour are found to be living in districts with a density of less than one person per hectare. As one would expect, agricultural workers are by far the biggest group living in districts of this size. Although only a shade fewer than 20 per cent of those who earned their living in the manufacturing sector lived in such districts, this still means that almost one in five of the male manufacturing population were located in rural districts. It is also likely that some of those living in districts with a population density of 1 – 9.99 persons per hectare resided in rural areas.

It does seem, then, that a significant minority of rural villages in nineteenth-century England retained some kind of non-agricultural activity even after agriculture moved into its high-farming phase. This being the case, several questions present themselves. Where village populations depended wholly or largely on a non-agricultural activity for their living, did they too constitute 'occupational communities'? Such villages certainly existed in mining districts, for instance. In other places the population might be divided between farming and another economic activity. If both sections of these populations depended entirely on their particular industry for their livelihood, did two 'occupational communities' co-exist within the same place? There were several such occupationally divided villages in Dorset, for example.[22] More commonly, perhaps, agriculture might predominate, but a secondary industry, such as a female by-employment, also existed. How does this affect Newby's 'occupational community'?

Conceptualisation of Agriculture

Although he acknowledges the possible existence in some localities of a non-agricultural labour force and the presence of a few tradesmen and craftsmen, Newby largely ignores the non-agricultural elements in rural society. Indeed, he also neglects a significant element of the farming industry itself – the small farmer who owned and occupied his own land. Newby's conceptualisation revolves around the 'characteristically tripartite class structure which 'ordered' the Victorian countryside'.[23] He accepts almost uncritically the idealised Victorian credo in which 'The three classes of landowners, tenant farmers and

[22] Edgar, 'Occupational diversity'; D.R. Mills, M.J.D. Edgar & P.R.A. Hinde, 'Southern historians and their exploitation of Victorian censuses', *Southern History*, 18 (1996), 61-86.
[23] Newby, *Country Life*, 56.

landless farm labourer became regarded as the natural hierarchy of rural society'.[24] The other groups noted above are, at best, dismissed as insignificant.

Newby is not alone in this. Other scholars have followed a similar line when commenting on the social and economic structure of rural England. Alan Armstrong, for example, in his otherwise excellent study of farm workers between 1770 and 1980, concentrates mostly on the arable south and east.[25] Again, he sees nineteenth-century rural society as being shaped exclusively by what he terms 'the classic triad of rentier landlord, capitalist tenant farmer, and the virtually landless labourer, dependent on wages'. Small family farms are dismissed as being significant only in Wales and outlying upland areas such as Cumberland, Westmorland and the Yorkshire Dales.[26] Rural industry is almost completely ignored, although the existence of female by-employments is conceded, as, when speaking of the 1850s, he comments that 'Ever since the 1780s hand-spinning had been contracting...though straw-plaiting and lace-making continued to hold up well.'[27] Similarly rather cavalier treatment is meted out to tradesmen and craftsmen. Only when contrasting the rise in the rural population between 1815 and 1851, with the much lower increase in agricultural employment, as evidenced by the censuses, does he concede that 'To some extent the slack was taken up by an expansion of village trades and crafts....'[28]

In Dorset there is some evidence that this expansion was concentrated mainly in the less-skilled trades and crafts, such as general carpentry, tailoring and shoemaking. Kerr has noted a huge increase in the number of carpenters in Dorset villages in the second quarter of the nineteenth century. She ascribes this largely to dispossessed smallholders moving into trades and crafts, and to the fact that out-migration in many areas of Dorset did not begin in earnest until after the middle of the century.[29] Evidence from a study of four parishes in the Blackmore Vale in north Dorset tends to support this view. Taking the four parishes as a whole, 26 per cent of the occupied population were employed in

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[24] Newby, *Country Life*, 56.
[25] W.A. Armstrong, *Farmworkers: A social and economic history 1770-1890* (London, Batsford, 1988). Armstrong is a historian with a good grasp, a good sense of the passage of time. He believes in a story, albeit a rather simplistic one at times.
[26] Armstrong, *Farmworkers*, 28.
[27] Armstrong, *Farmworkers*, 67
[28] Armstrong, *Farmworkers*, 63.
[29] B. Kerr, *Bound to the soil: a social history of Dorset*, 1750-1918 (London, John Baker, 1968), 132-3.

trades/occupations.[30] Many of these were enumerated in 1851 as 'employing no men', and the frequency of this description, together with a lack of servant-keeping, suggests that they were basically one-man bands and probably relatively poor.[31] The figures for trades and crafts in these parishes were boosted by a number of what could be termed 'localised micro-industries'. In Stourton Caundle, for example, there were a group of nine 'plasterers', presumably engaged in some sort of building work. And in Childe Okeford, 4.6 per cent of the occupied population were described as 'sawyers'. The same parish also contained 11 men working for a brick, tile and pottery manufacturer.[32] These were substantial enterprises for villages of this size, and must have been important in the local context. It should also be remembered that transport was a major employer that grew rapidly at this time – rail workers, carters, carriers etc. The growth of the transport sector has perhaps been under-emphasised in the literature.

There is little doubt that the social and economic structure of rural society in many areas was, as Alun Howkins says, dominated by landowners, tenant farmers and farm labourers.[33] This is particularly true of arable farming districts in the south and east. However, it is arguable, at the very least, that rural society (even in places like East Anglia) was considerably more complex and variegated than the work of Armstrong and Newby would suggest. Indeed, Raphael Samuel has claimed that there exists

> ... a whole spectrum of occupations which historians (following the census enumerators) have overlooked, either because they were too local to show up prominently in national statistics, like coprolite digging in Cambridgeshire and Bedfordshire, or because they were too short-lived to rank as occupations at all.[34]

He goes on to point out that 'Occupational boundaries in the nineteenth-century countryside were comparatively fluid', and were necessarily so, with many men working by the day, as over-population led to under-employment in many areas.[35] Samuel also argues that 'The notion of occupation in the countryside is one that needs to be

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[30] Table 3 in Edgar, 'Occupational diversity', 51.
[31] Edgar, 'Occupational diversity', 51-2.
[32] Edgar, 'Occupational diversity', 51.
[33] A. Howkins, *Reshaping Rural England: A social history 1850-1925* (London, Harper Collins, 1991), 9
[34] R. Samuel, 'Village labour', in R. Samuel (ed.), *Village Life and Labour* (London, Routledge & Kegan Paul, 1975), 3.
[35] R. Samuel, 'Village labour', 5.

complicated and refined' as 'many of those who worked in the harvest fields had other jobs besides.'[36] Christine Hallas, in a study of craft occupations in North Yorkshire, concludes that 'industrialization did not cause a uniform decline in rural crafts either in terms of spatial distribution or within specific crafts.'[37] She also suggests that 'albeit to a limited extent, many country craftsmen were able to adapt and take advantage of some of the changes brought about by industrialization'.[38] These views are reinforced by Stephen Caunce, who points out that 'true mass production was a long way off for most things' in the third quarter of the nineteenth century, and argues that craftsmen 'mostly adapted and developed links with the new producers'.[39]

It is arguable that Newby's characterisation of the farming industry (and agrarian society generally) at mid-century, is also somewhat flawed. The notion that by the mid-nineteenth century Britain had experienced the onset of a 'fully commercialized agrarian society' is a substantial generalisation.[40] Certainly, some sections of British agriculture in some areas were increasingly being run in a business-like fashion by the 1850s, but the industry as a whole was far from being fully commercialized. Newby appears to have taken the experience of East Anglia, where the high input–high output system of agriculture known as High Farming was at its most advanced and most widespread, and generalised from there to other parts of the country. He also seems to be referring mainly to arable farming. Yet livestock production was an important and integral component of the High Farming system, even in East Anglia. Apart from anything else, livestock produced the manure that made high arable yields possible.[41] Indeed, one of High Farming's key features in East Anglia was that the use of oil-cake feed and artificial fertilisers allowed farmers to maintain livestock production at the same time as reducing the area of pasture in favour of arable tillage.[42]

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[36] R. Samuel, 'Village labour', 5.
[37] C. Hallas, 'Craft occupations in the late nineteenth century: some local considerations', *Local Population Studies*, 44 (1990), 18-29.
[38] Hallas, 'Craft occupations', 18. For some of the survival strategies employed by rural trades/craftsmen, see R. Mackelworth, 'Trades, crafts and credit in a Victorian village: a trading family in Milford, Surrey, 1851-1881', *Family and Community History*, 2:1 (1999), 33-43.
[39] Caunce, 'A golden age of agriculture?', 56.
[40] Newby, *Country Life*, 77.
[41] S.Wade Martins & T. Williamson, *Roots of Change: Farming and the landscape in East Anglia, c.1700-1870* (The Agricultural History Review Supplement Series 2, British Agricultural History Society, 1999), 130, 134.
[42] Wade Martins & Williamson, *Roots of Change*, 134, 152.

There is no doubt that Britain experienced a substantial increase in agricultural productivity during the nineteenth century. After all, the population continued to be fed, despite a phenomenal increase in numbers, without any great rise in imports of foreign grain or other foodstuffs until the mid-1870s. As Newby says, 'In the early 1870s Britain was more than 85 per cent self-sufficient in temperate foodstuffs.'[43] However, these productivity increases do not necessarily mean that agriculture as a whole became more commercialized. Certainly, in many areas, notably East Anglia, improved methods of farming were introduced and applied, along with a more flexible use of labour and the gradual introduction of agricultural machinery. It does not necessarily follow from this that farms became more business-like in their operations. Farmers in East Anglia and elsewhere clearly embraced innovations in farming methods as a means of increasing productivity, and thus their profits. They achieved both, in the medium term, at least. However, the fact that many farmers made a lot of money in the third quarter of the nineteenth century is not the same as saying that farms, and agriculture generally, operated in a way that was purely capitalist in nature.

Newby's phrase 'fully commercialized' suggests that subsistence agriculture had been superseded completely; farms were being operated as full-blown capitalist enterprises, driven by profit and the balance sheet. It further implies that relations between those involved in the industry (landowners, large tenant farmers and landless labourers) were based entirely on economic considerations or, at the very least, that economic relations between those involved in the industry were defined solely in terms of hard cash. Yet this was patently not the case. The point has been made in relation to East Anglia, for example, that farmers were not good book-keepers and that many of them probably did not know themselves what profit, if any, they had made in a given year.[44] Newby himself makes a similar point regarding their commercial acumen, commenting that 'most farmers were poor entrepreneurs'.[45]

Even in East Anglia, universally accepted as the heartland of High Farming, it was not unknown for farmers and landowners to co-operate in establishing employment policies

[43] Newby, *Country Life*, 112.
[44] Wade Martins & Williamson, *Roots of Change*, 152.
[45] Newby, *Country Life*, 116.

that were specifically designed to mitigate the effects of unemployment and underemployment amongst labourers in their parish. There were a number of reasons for doing so. In some instances there was undoubtedly a paternalistic concern for the poor, possibly allied to fears about potential social unrest. More commonly, perhaps, such policies may have been adopted in an attempt to minimise the poor rate and reduce poor law expenditure generally. To this extent, at least, the interests of employers and employees coincided. Farmers, for example, would preferentially employ married men with families who were settled in a parish, because, if a married man became unemployed, the parish had to support his family as well. Inevitably, of course, such policies had losers as well as winners. In this instance, they comprised the non-settled poor and unmarried, single, men who were preferentially *not* employed when demand for labour was low.[46]

Nor does the preoccupation of many large tenant farmers with image and status sit well with the notion of a fully commercialized agrarian society. Nineteenth-century commentators were scathing about the social pretensions of many large farmers. The latter's obsession with form and style had important consequences for the way in which farming was undertaken. The decline of service in husbandry and the development of 'open' and 'close' parishes, for example, are considered to have been strongly influenced by the growing importance among farmers and landowners of ideas about social status.[47]

Small farmers

Also overlooked is the large number of small farmers who continued to make their living, wholly or in part, from agriculture. These farmers, many of them owner-occupiers, employing solely or mainly family labour, are almost completely ignored in Newby's conceptualization, and very often in the wider literature generally. However, some commentators have argued that small, owner/occupier farmers and tradesmen and craftsmen survived in far greater numbers than is generally allowed, and that their role in rural society was a substantial one. Stephen Caunce, for example, has argued that 'small

[46] Armstrong, *Farmworkers*, 82. The effects of Poor Law legislation on rural society is discussed more fully later in this chapter.

[47] K.D.M. Snell, *Annals of the Labouring Poor: Social change and agrarian England 1660-1900* (Cambridge University Press, 1985) cites this preoccupation as a reason for the decline of service in husbandry, as farmers no longer wanted to eat with servants, 70, 394. This is also discussed in A. Howkins, *Reshaping Rural England*, 42-5.

family farms multiplied and flourished in the north.', not only on hill-land but on prime arable land in Lancashire and West Yorkshire.[48] Christine Hallas has found that in Wensleydale and Swaledale in the northern Pennines, small landholders flourished throughout the nineteenth century.[49] Dennis Mills states that 'Small farmers, even in arable areas, frequently had secondary occupations, such as publican, shopkeeper or craftsmen'.[50] Mick Reed asserts that 'small holdings were numerous all over the country after 1850' and agrees with Mills that 'The small farmer...in many parts of the country, throughout the century, often engaged in a variety of occupations in addition to agriculture'.[51] In a similar vein, Howkins observes that in 1880 '71 per cent of agricultural holdings in England were under 50 acres.'[52] In Dorset, in 1873, there were 2,613 holdings under 50 acres, or 76 per cent of the total.[53] Writing in the early 1960s, Grigg concludes that there was 'a striking similarity between the distribution of large and small farms in 1957-8 and 1851.'[54] He goes on to assert that 'Most authorities are agreed that farm size structure has been remarkably stable over the last hundred years'.[55] It appears, then, that small farms persisted throughout the nineteenth century. Howkins also estimates that in England there were just over 254,400 of what he terms 'peasant "workers"' at this time.[56] If these figures are correct, they, with their families, comprised a sizeable proportion of the rural and agricultural population. The suspicion must be that they have tended to be neglected by agricultural historians because, although they (with their families) were substantial in number, their acreage was not.[57]

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[48] Caunce, 'A golden age of agriculture?', 53.
[49] C. Hallas, 'Yeomen and peasants? Landownership patterns in the North Yorkshire Pennines c. 1770-1900', *Rural History*, 9:2 (1998), 157-76.
[50] D.R. Mills, 'The quality of life in Melbourn, Cambridgeshire, in the period 1800-1850', *International Review of Social History*, 23 (1978), 382-404.
[51] M. Reed, 'Nineteenth-century rural England: a case for "Peasant Studies"?', *Journal of Peasant Studies*, 14 (1986), 78-99.
[52] A. Howkins, 'Peasants, servants and labourers: the marginal workforce in British agriculture, c.1870-1914', *Agricultural History Review*, 92 (1994), 49-62.
[53] *Return of Owners of Land, 1873, England and Wales (Exclusive of the Metropolis),* (London, 1875).
[54] D.B. Grigg, 'Small and large farms in England and Wales: their size and distribution', *Geography*, 48 (1963), 268-79.
[55] Grigg, 'Small and large farms', 271.
[56] Howkins, 'Peasants, servants and labourers', 57.
[57] For example, this distinction between the number of people involved and acreage they farmed is made in Wade Martins & Williamson, *Roots of Change*, 77, 81.

The evidence suggests that these small farmers operated a number of strategies in order to make a living. Some, particularly those close to large urban centres, specialized in particular products and were highly capitalistic in outlook.[58] They were essentially family concerns, and most of their production was family-based. Outside labour was only employed in particular circumstances, such as 'shortfalls due to the family lifecycle, sickness, seasonal peaks and so on.'[59] Very rarely did small farmers produce solely for subsistence, 'although many contained a high proportion of production for subsistence or barter either with other family producers or with more market oriented groups.'[60] The importance of informal and formal systems of barter and exchange in the survival strategies of these small producers has been highlighted by Mick Reed.[61] At times, members of these small family-production units might go and work for cash wages. Small farmers from the high Weald of Kent and Sussex commonly worked as migrant labourers on larger farms nearer the coast at harvest time.[62] In East Anglia it has been noted that it was not uncommon for small farmers to work at times for larger farmers, sometimes in a managerial capacity, being paid in loans of equipment and/or labour.[63] Although the precise mix of strategies would depend on local circumstances, it is clear that small farmers were innovative and flexible in devising strategies for their continuing survival.

According to Howkins, small farmers and rural trades/craftsmen 'stood in a symbiotic relationship to agrarian capitalism.'[64] Their work and cultural practices meant that in many ways they were separate from it. On the other hand, they often depended, in part, on the capitalist market and its employment structure for cash wages and various goods and services, albeit on a seasonal or life-cycle-stage basis.[65] Effectively, they straddled the

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[58] Caunce, 'A golden age of agriculture?', 54-5.
[59] Reed, 'Nineteenth-century England', 84.
[60] Howkins, 'Peasants, servants and labourers', 54.
[61] M. Reed, '"Gnawing it out": a new look at economic relations in nineteenth-century rural England', *Rural History*, 1:1 (1990), 83-94; M. Reed, 'Social change and social conflict in nineteenth century England: a comment', in M. Reed & R. Wells (eds.), *Class, Conflict and Protest in the English Countryside 1700-1800* (London, Frank Cass, 1990), 100-14; M. Reed, 'The peasantry of nineteenth-century England: a neglected class?', in B. Stapleton (ed.), *Conflict and Community in Southern England: Essays in the social history of rural and urban labour from medieval to modern times*, (Stroud, Alan Sutton, 1992), 210-39. Also see Mackelworth, 'Trades, crafts and credit', 33-43.
[62] Howkins, 'Peasants, servants and labourers', 56.
[63] Wade Martins & Williamson, *Roots of Change*, 154.
[64] Howkins, 'Peasants, servants and labourers', 57.
[65] Howkins, 'Peasants, servants and labourers', 57.

divide between farmer and labourer, many existing as both at different times, depending on economic circumstances and the need to provide a living for themselves and their families.

It is unlikely that many small farmers or trades people were ever going to accumulate much in the way of capital; it was not normally a route to riches. Indeed, Caunce states that, in the North, the higher wages paid to labourers in response to competition from industrial occupations, meant that small farmers 'probably lived worse than a labourer and worked harder.'[66] The condition of the small farmer was probably somewhat better in the impoverished rural south, but not a great deal. So why did these small family units persevere as they did? I would suggest that there are perhaps two main elements to this – the family and independence. As Reed says, 'Unlike capitalist producers, who sought to obtain a return on capital invested, household producers' primary concern was to obtain a living and to maintain the household autonomy and equilibrium.'[67] Or, put another way, it was because of 'the willingness of families to exploit themselves in search of independence and a rural life which sustained them'.[68] They wished to preserve their autonomy, their way of life, 'free of the constraints imposed by well-established systems and agricultural communities',[69] such as those embodied in Newby's 'occupational community'.

Taken together, factors such as these suggest that the operation of large parts of the agricultural industry in rural areas was not therefore an entirely capitalistic enterprise. I would propose that, in fact, British agriculture did not become anything like fully commercialized until *after* the High Farming period came to an end in the 1870s, and that the agricultural recession which ended High Farming was the main catalyst for this reform of the farming industry. One of the main requirements of arable farming was large inputs of labour. Demand for arable labour was markedly seasonal, but, overall, arable farmers employed considerably more labour than their pastoral counterparts. The massive population increase during the first half of the nineteenth century, together with a decline of rural industry in some areas, meant that much of the countryside was effectively over-

[66] Caunce, 'A golden age of agriculture?', 55.
[67] M. Reed, 'Class and conflict in rural England: some reflections on a debate', in M. Reed & R. Wells (eds.), *Class, Conflict and Protest in the English Countryside 1700-1880* (London, Frank Cass, 1990), 1-28.
[68] Caunce, 'A golden age of agriculture?', 55.
[69] Caunce, 'A golden age of agriculture?', 55.

populated. Farmers in the southern and eastern counties of England therefore had the luxury of a huge pool of surplus labour from which to take their workforce. The competition for jobs in these areas, despite considerable out-migration, allowed employers to keep wages at a very low level compared to urban industrial wages. In the north, because of competition from urban manufacturing centres, the wages of agricultural labourers increased. In other words, we have the paradox (apparently) that wages were lower in regions where demand for labour was highest. The explanation is that competition from manufacturing was also least where the demand for agricultural labour was highest, and variation in the degree of competition from urban manufacturing employment more than outweighed variations in the demand for rural labour.

After 1850, however, population growth in the countryside declined considerably. At the same time, out-migration from rural areas steadily gathered momentum, aided by the rapid expansion of the rail network. The populations of many rural parishes actually fell during the second half of the century, which brought the numbers of jobs and labourers closer to equilibrium (though underemployment still existed in some places). In 1861 the agricultural workforce was 19 per cent of the total workforce; by 1901 they accounted for just nine per cent.[70] At the same time, agricultural labourers' wages increased steadily, if modestly, from the 1850s. High demand from the rapidly-growing urban industrial regions kept prices buoyant, and farmers were able to absorb higher wages quite comfortably. By the mid-1870s, however, the British market was increasingly being penetrated by cheaper foreign imports, and commodity prices began to fall. Even a series of disastrous harvests starting in the late 1870s failed to improve the price farmers received for their products. Traditionally, this would have raised commodity prices as supply fell below demand. However, now, imports of cheap foreign grain filled the gap, and prices continued to fall. In 1894 the price of wheat was less than half what it had been in 1874.[71] As a result, arable farming in particular entered a prolonged period of depression. High Farming as an agricultural system depended upon large (and therefore expensive) inputs of labour, fertilisers and so on, the cost of which was offset by high grain prices. In this new era of low grain prices, arable farmers were no longer able to sustain the cost of these inputs.

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[70] P. Deane & W. Cole, *British Economic Growth 1688-1959* (Cambridge University Press, 2nd edition, 1967), 142-4.

[71] R.E. Protheroe (Lord Ernle), *English Farming Past and Present* (6th edition, London, Heinemann & Frank Cass, 1961), 489.

Inevitably there was a period of readjustment as farmers were forced to face the commercial realities of their position. The high rents and high inputs that had underpinned High Farming were not viable in such an economic climate. Many farmers were forced to lay off labour and, as arable farms employed the bulk of agricultural labourers, huge numbers of the latter, with their families, left the land during the last quarter of the nineteenth century. They were not the only ones to leave. Many farmers also left their farms; even in Dorset, which was much less affected than some counties, it has been estimated that around 20 per cent of all Dorset farmers left their farms as a result of the depression between 1875 and 1902.[72]

The high demand and high prices of the High Farming period could be seen as having, to a great extent, insulated farmers from competition. They were therefore under no particular pressure to pay close attention to costs and accounting procedures, and could afford to indulge their fixation with image and status, to be paternalistic, to ape the gentry. Indeed, it has been suggested that

> The High Farming of mid-Victorian England was very much a state of mind which exhibited that same confident faith in progress which was to be found in so many fields, rather than a wholly rational system of agriculture based on careful considerations of profit and loss.[73]

I would argue that, in fact, High Farming might be best viewed as a transitional period between a traditional farming system and society, and a newer, more business-like and commercially-minded rural society. Not until agriculture, and in particular arable farming, recovered from the depression did a fully-commercialized agrarian society become a reality for most of rural England. By the 1890s, much (though by no means all) of the remaining rural industry had succumbed to competition from cheap imports and domestic factory production. In addition, so many labourers had left the countryside by then that those who remained had relatively little fear of unemployment. Farmers were encouraged to make more use of machinery on their farms because there was no longer a vast reserve of underemployed labour, often opposed to mechanisation, on which they could draw. The increased use of machinery is one manifestation of the more business-like approach adopted by many farmers by the end of the nineteenth century.

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[72] P.J. Perry & R.J. Johnston, 'The temporal and spatial incidence of agricultural depression in Dorset, 1868-1902', *Journal of Interdisciplinary History*, 3 (1972), 297-311.
[73] Wade Martins & Williamson, *Roots of Change*, 152.

A by-product of the structural changes brought about by the agricultural depression was that by this time many rural villages *were*, on the whole, 'occupational communities' as defined by Newby. Although he is undoubtedly correct in arguing for the development of such communities, I would suggest that the agricultural 'occupational community' really only became a phenomenon generally throughout England *following* the High Farming period, rather than by 1850 as Newby suggests. My revision is therefore about timing, rather than that Newby was simply incorrect in his analysis. A marked decline in rural industry and the trades/crafts sector in the countryside, and the growing commercialisation of British agriculture following the collapse of High Farming, meant that by the late 1880s and 1890s rural villages *were* largely inhabited solely by those working in agriculture and their dependants.

Rural Society

If one accepts the existence of the 'occupational community', questions then arise about relationships within such communities. For example, to what extent were they reduced to the purely economic? And if they were, what does that imply for the use of the word 'community' to describe these places? In one important sense, relationships within rural villages *were* largely economic in character. Rural life was not, on the whole, a life-style choice. Very few people residing in nineteenth-century rural villages lived there for reasons other than that of employment. There may have been 'core communities' – families who were bound together by common ties of prolonged residence, marriage and kinship. Many of these were likely to have belonged to the group of small farmers and trades people described above. Dennis Mills, in a study of Melbourn, Cambridgeshire, has noted that small owner-occupiers appeared 'to have been much longer established in the village than the large tenant farmers.'[74] But even these could not and would not remain if they were unable to earn a living. A good proportion of a village's inhabitants at any given time would probably only live in that village for a few years before moving elsewhere.

[74] D.R. Mills, 'The residential propinquity of kin in a Cambridgeshire village, 1841', *Journal of Historical Geography*, 4:3 (1978), 265-76.

The large-scale out-migration of labourers, which accompanied the agricultural depression, meant that over time the number of jobs available and the work force to do them must inevitably have drawn closer to a state of equilibrium. It might have been expected that out-migration from rural areas would have slackened as a result. One might have thought therefore that the populations of many rural villages may actually have been more stable and settled after 1880 than they had been in earlier decades. There would have been less competition for jobs, less underemployment, less unemployment, and so less reason for labourers to move around in search of work. It did not; if anything it increased.[75] As agriculture became more capitalistic in its focus, so, in a sense did its labourers. The villages may have become occupational communities, but labourers became even more mobile as they sought to improve their economic lot, many moving into the new industries and service occupations that were expanding rapidly at the end of the nineteenth century.

The issue of migration is an important one, as many historians have an unfortunate propensity to assume, rather romantically, I fear, that nineteenth-century rural villages automatically formed 'close-knit' communities. Newby, for example, characterises rural villages in the nineteenth century as forming 'a very close knit society'.[76] Given the high levels of in- and out-migration experienced by most rural areas for much of the nineteenth century, such a notion seems difficult to justify or sustain. Of course, human beings are social animals; even those who lived in a village for only a short period would construct social relationships, friendships, ties of marriage, and so on. But underpinning it all is the stark fact that most of those who lived in a rural village did so because they worked for one of the local employers, usually a farmer, and they stayed there for the same reason. Economically, they would be forced to move if they did not have a job – unless they preferred the workhouse. The evidence is that, overwhelmingly, they did not. Studies of workhouse populations at the 1851 and 1881 censuses have shown that their populations consisted largely of children, the elderly and unmarried mothers.[77] In recent years there has been increasing interest in and discussion of the role played by the poor law in shaping

[75] A. Perkyns, 'Migration and mobility: six Kentish parishes 1851-1881', *Local Population Studies*, 63 (1999), 30-70.
[76] Newby, *Country Life*, 81-2.
[77] P.R.A. Hinde & F. Turnbull, 'The populations of two Hampshire workhouses, 1851-1861', *Local Population Studies*, 61 (1998), 38-53; D.G. Jackson, 'Kent workhouse populations in 1881: a study based on the census enumerators' books', *Local Population Studies*, 69 (2002), 51-66.

local social and economic structures and relationships. It seems quite clear that the poor law and its operation were woven deep into the fabric of rural society.[78]

The prevalence and place of so-called 'open' and 'closed' parishes in nineteenth-century rural society has been the subject of considerable debate. On the face of it, closed estate villages would seem to exemplify Newby's vision of the 'occupational community'. However, were such places actually a product of the 'agriculturalisation' of rural England? Were they just about agriculture? Or did other factors impinge? What part, for example, did the social aspirations of landowners play in their creation and survival?[79] The existence of rural industry in a locality could well have, and almost certainly will have, affected the demographic structure of these areas. Even if the non-agricultural activity was secondary to agriculture – for example, a female domestic by-employment – there were likely to be significant demographic consequences. In the latter case, for instance, there may well have been less out-migration of young women from the area.[80]

I have outlined some important and substantive reservations concerning Newby's conception of the structure of English rural society in the nineteenth century. The notion that 'occupational community', if it exists, is simply about agriculture, especially agriculture based around the classic nexus of landowner – tenant farmer – landless labourer, is certainly open to question. Moreover, if Newby's conceptualisation of 'occupational communities' is problematic, then so is his use of the village to define the bounds of these 'communities'. Chapter 3 discusses the nature of 'community': what it means, and how it is defined.

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[78] An important work here is, L.H. Lees, *The Solidarities of Strangers: the English poor laws and the people, 1700-1948* (Cambridge University Press, 1998). Also see R. Wells, 'Migration, the law, and parochial policy in eighteenth and early nineteenth century southern England', *Southern History*, 15 (1993), 86-139.

[79] See, for example, D.R. Mills, *Lord and Peasant in Nineteenth Century Britain* (London, Croom Helm, 1980); D.R. Mills & B. Short, 'Social change and social conflict in nineteenth-century England: the open-closed village model', *Journal of Peasant Studies*, 10 (1983), 253-62; D.R. Mills & B. Short, 'Social change and social conflict in nineteenth-century England: the use of the open-closed village model' in M. Reed & R. Wells (eds.), *Class, conflict and protest in the English countryside 1700-1880* (London, Frank Cass, 1990), 90-99; S. Bankes, 'Nineteenth-century scandal or twentieth-century model? A new look at "open" and "close" parishes', *Economic History Review*, 2nd Series XLI, 1 (1988), 51-73; D. Spencer, 'Reformulating the "closed" parish thesis: associations, interests, and interaction', *Journal of Historical Geography*, 26:1 (2000), 83-98; M. Reed, 'Class and conflict', 23-27; M. Reed, 'Social change and social conflict', 100-114.

[80] P.R.A. Hinde, 'The use of nineteenth-century census data to investigate local migration', *Local Population Studies*, 73 (2004), 8-28.

Chapter Three

Literature Review - Part Two: The Concept of 'Community'

In the previous chapter, Newby's concept of the 'occupational community' was examined mainly from the viewpoint of the economic structure of rural society. The second part of the term, i.e. 'community', requires further discussion and explanation. Newby seems to be using 'community', as is common, as a synonym for the population of a rural village. He appears to be suggesting that the population of these villages comprised a 'community' of people involved in a single industry; in this case, farming.

The concept of 'community', however - what it is, how it comes about, how it is sustained, and so on – has been and remains problematic for historians. Much of the difficulty lies in the fact that 'community' is indeed a *concept*, a mental abstraction. It therefore has a tendency to mean all things to all people. This is exemplified by the fact that as long ago as the 1950s the American Sociologist George A. Hillery identified some 94 different definitions of the term.[81] Unsurprisingly, he concluded that there was no complete agreement as to the nature of community except that 'people are involved'.[82] The difficulties are further compounded by an almost universal idealistic or romantic belief that a sense of community *should* exist, especially among rural village populations in the past. Alan Macfarlane has noted the existence of this phenomenon:

> "communities" tend to lie in the eye and methodology of the beholder....This is reinforced because of the strong belief in the objective existence of communities....The investigator will find community bonds and community sentiments because he expects to do so.[83]

Little wonder, then, that the concept has proved 'illusive and difficult to define'[84].

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81 G.A. Hillery, 'Definitions of community: areas of agreement', *Rural Sociology*, 20, (1955), 93-118.

82 Hillery, 'Definitions of community', 117.

83 Alan Macfarlane, 'History, anthropology and the study of communities', *Social History*, No. 5, (1977), 631-652.

84 Jim Etherington, *The Bonfire Societies of Lewes, 1800-1913: a study in nominal record linkage*, (Harrogate, The Local Population Studies Society, 1996), 12.

Notwithstanding the abstract nature of the concept, there has been relatively little debate among historians (from any of history's many sub-disciplines) about the meaning of community. This is in stark contrast to the efforts of anthropologists and sociologists, who have discussed its meaning at some length over the last 60 years or so. Historians, on the whole, have failed to interact with this debate, or to engage in a meaningful academic discourse amongst themselves. However, despite, a lack of conceptual clarity and rigour, there are common elements in the ways in which the term 'community' has been utilised by many historians of rural England. These are largely derived from the traditional dichotomy of *gemeinschaft* and *gesellschaft*, as defined by the German sociologist Ferdinand Tönnies in the late nineteenth century.[85]

Gemeinschaft is generally translated as 'community' and has three basic elements - blood, locality and mind or will. Of these, Tönnies saw the family as the most perfect expression of *gemeinschaft*. But he also envisaged that *gemeinschaft* could be based on shared place and shared belief. Indeed, he included globally dispersed religious communities as possible examples of *gemeinschaft*. In *gemeinschaft*, human relations are close and intimate, characterised by strong personal relationships, strong familial ties, and relatively simple social institutions. The motives driving human action and interaction are commonly strongly altruistic in character – individuals tend to act in the spirit of the public good. In such societies there is seldom a need to enforce social control externally, due to a collective sense of loyalty felt by individuals towards their society or community. *Gemeinschaft* relations also have temporal depth – they are familiar, comfortable and enduring. Stability, security and predictability are the norm in *geminschaft* societies. *Gemeinschaft* can be summed up as being 'built on close human relationships, developed through kinship, linked to place through a common habitat, and sharing co-operation and co-ordinated action for a common good.'[86]

Gesellschaft is the complete antithesis of *gemeinschaft*. Translated as 'society' or 'association', it describes relations in which wider associations are subordinated to individual self-interest. The level of shared mores integral to *gemeinschaft* is absent in *gesellschaft*. Actions and motives are mainly egotistical in nature and execution.

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[85] F. Tönnies, *Community and society*, (New York, Harper and Row, 1955, originally 1887).
[86] Sarah Harper, 'The British rural community: an overview of perspectives', *Journal of Rural Studies*, 5, 2 (1989), 161-184.

Secondary relationships are emphasised rather than familial or community ties. There is generally much less individual loyalty to society. Social interactions in *gesellschaft* are more superficial and transient. Consequently, relations tend to be peripheral and exclusive in character, compared with those in *gemeinschaft* societies. Social cohesion in *gesellschaft* typically derives from a more complex division of labour than exists in *gemeinschaft*. *Gesellschaft* is seen as developing with industrialisation, whereby human interaction becomes increasingly impersonal, with relationships based on formal exchange and contract. In short, the world of *gesellschaft* is very different to the harmonious, organic world of *gemeinschaft*. It is a world dominated by insecurity, unpredictability and variation.[87]

Gemeinschaft and *gesellschaft* were introduced by Tönnies as purely conceptual sociological categories for two normal types of human association. He conceived them as broad analytical themes, to be built up logically through theoretical discourse. He did not view them as mutually exclusive, however. He expected that empirical research would actually find a mix of them in the 'real world'. For Tönnies, the *gemeinschaft-gesellschaft* principles were not an either/or dichotomy; they were interwoven and intertwined. He envisaged that the two forms of social interaction would coexist within any given local context, but in varying degrees. Unfortunately, however, they became closely identified with particular forms of settlement - *gemeinschaft* with rural villages and *gesellschaft* with urban populations. Ultimately they became distorted to the point where they were generally perceived as being synonymous with the actual social structures themselves.[88]

This distortion of Tönnies' typology is clearly discernable in the work of the Leicester School of local historians. In 1948 the University of Leicester established England's first Department of Local History, headed by W.G. Hoskins. He was succeeded by H.P.R. Finberg who, in a lecture in 1952, set out his vision for the study of local history thus: 'The business of the local historian...is to re-enact in his own mind, and to portray for his readers, the Origin, Growth, Decline, and Fall of a Local Community.'[89] Essentially, this characterised a local community as having an organic existence over time, whereby a

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[87] Harper, 'The British rural community', 163; Tonnies, *Community and society*, 87.
[88] Harper, 'The British rural community', 163.
[89] Finberg, H.P.R., *The Local Historian and His Theme*, Department of English Local History Occasional Papers, no 1, (Leicester, 1952), 3-4.

community initially attains an ideal state and then departs from it as more time goes on, until it eventually disintegrates altogether. Finberg suggests that 'the people of nearly every English town and rural district' comprised 'a self-conscious local community'.[90] He allows that 'many of them survived as local communities into the age of railways and motor transport'[91] but argues that they are mostly 'now either dead or moribund'.[92] In Finberg's view, 'There is not the old degree of social cohesion', and he suggests that 'the family, once so powerful a unit, has withered into social impotence'.[93] He clearly considers that industrialisation and urbanisation have largely destroyed a way of life and set of social relations that were intrinsically superior to those that have developed since those processes began. Indeed, much of Finberg's lecture seems to be a lament for '...all those places which embody, in varying degrees of perfection, a social life that is fast vanishing, if it has not already gone.'[94] This is clearly the *gemeinschaft-gesellschaft* dichotomy in action; effectively Tönnies' typology has been used to focus attention on what appears to be a clash between the demands and mores of modern society, and a past where 'community' was perceived as the dominant force in social relations.

The Leicester School quickly achieved a pre-eminent position in the academic study of local history during the second half of the twentieth century. This success was in no small part due to the quality of those appointed to head the Department: W.G. Hoskins, H.P.R. Finberg, Hoskins again, Alan Everett, Charles Phythian-Adams, and currently Christopher Dyer. Its influence has been, however, criticised on occasion. For example, as part of a sustained polemic on the state of local history, J.D. Marshall examines the concept of community as it has been utilised by local historians.[95] Marshall argues that for decades local historians have more or less blindly followed the definition of community advocated by H.P.R. Finberg and the Leicester school of historians since the 1950s.[96] He severely castigates local historians for their intellectual timidity in not challenging and debating the

[90] Finberg, *The Local Historian and His Theme*, 2.
[91] Finberg, *The Local Historian and His Theme*, 4.
[92] Finberg, *The Local Historian and His Theme*, 3.
[93] Finberg, *The Local Historian and His Theme*, 3.
[94] Finberg, *The Local* Historian *and His Theme*, 7.
[95] J.D. Marshall, *The tyranny of the discrete: a discussion of the problems of local history in England*, (Aldershot, Scolar Press, 1997).
[96] Marshall, *The tyranny of the discrete*, 63-67.

issue, finding it 'astonishing that a number of contentions by Finberg relating to the "local community" have gone almost unchallenged during that period.'[97]

The Leicester scholars were describing something more than a group of people with similar ties of attachment to a given place. They were discussing a local society, a social entity, which shares similar goals, and which can act collectively in a number of situations. Clearly, then, they were describing a social entity which was, on the whole, based on harmony of belief and opinion, and which worked as a 'self-sustaining and self-producing whole - religiously, educationally, and agriculturally or economically.' Although, as Marshall concedes, this formulation no longer represents the explicit Leicester position, he argues that the notion of the local community has taken firm hold and suggests that it has driven English local history for decades. In Marshall's view it was when the rural idyll of pre-industrial England began to be affected by industrialization that the really pertinent questions about the nature of communities should have been asked. However, he argues that the Leicester scholars largely ignored the issue. For Marshall this neglect

> ...was particularly reprehensible because sustained critical discussion would almost certainly have revealed serious historical lacunae, like the non-appearance of good nineteenth- or twentieth-century studies, save those produced by sociologists like Margaret Stacey or W.M. Williams.[98]

As Marshall suggests, debate about the nature of community has been largely the preserve of anthropologists and sociologists. It has been conducted mainly through a number of major studies of contemporary British rural communities undertaken since the Second World War. One of the earliest was a study of small-scale subsistence farming in Co. Clare, Ireland, during the 1930s by Arensburg and Kimball.[99] They introduced the model of 'rural equilibrium', at the core of which was a rejection of the notion that people's actions were motivated principally by the pursuit of economic goals.[100] In their view the characteristics and relationships of rural populations were fundamentally different to those found in urban populations. Economic activity in rural areas was seen as being

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[97] Marshall, *The tyranny of the discrete*, 64.
[98] Marshall, *The tyranny of the discrete*, 67. The studies quoted are Margaret Stacey, 'The Myth of Community Studies', *British Journal of Sociology*, 20, 2, (1969), 134-147, and W.M. Williams, *A West Country Village: Ashworthy*, (London, Routledge and Kegan Paul, 1963).
[99] Arensberg, C. and Kimballs, S. *Family and Community in Ireland*, (Cambridge, Massachusetts, Harvard University Press, 1940).
[100] Harper, 'The British rural community', 162.

inextricably interwoven with kin networks, reciprocal social obligations and sentiment. Potential threats to the stability of this society, such as emigration, inheritance and marriage were effectively neutralised by being absorbed and managed within this framework of kinship relations and communal sentiment and practice. Rural society therefore existed, they concluded, in a 'state of equilibrium', markedly absent in economically-driven urban populations.[101]

This concept of equilibrium clearly owed much to Tönnies' dichotomy of *gemeinschaft-gesellschaft* and the latter was 'undoubtedly responsible for shaping the mould from which early rural community monographs emerged.'[102] They invariably started from the proposition that rural populations are different from other groups. Community life was perceived as operating within a framework of stable beliefs, values and corrective influences. Kinship acts as the prime mode of social control, and the family and home are seen as the social centre of the community.

One of the first studies to move away from the concept of the rural community as an isolated self-contained unit, and view its situation in a wider context was the anthropologist J. Littlejohn's study of Westrigg, Scotland, published in 1963.[103] His work differed in two major respects. Firstly, he presented Westrigg as a working community based on occupation rather than kinship, where farming was a capitalist enterprise motivated by profit. Secondly, and perhaps more significant, he recognised that urban social norms had penetrated into rural areas, thereby facilitating comparisons of status and circumstance. As a consequence, individuals were presented with the possibility of spatial and occupational mobility which, in turn, offered the potential for social mobility. Rural depopulation, he argued, was 'a rejection of the status of the working-class countryman'.[104] Littlejohn had not, however, moved beyond the framework imposed by *gemeinschaft-gesellschaft*. Earlier studies stressed aspects of culture separating communities from the mores of urban

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[101] Harper, 'The British rural community', 162.

[102] Harper, 'The British rural community', 162. Examples of such early monographs would include Arensberg and Kimballs, *Family and Community in Ireland*; W. Williams, *The Sociology of an English Village: Gosforth*, (Routledge and Kegan Paul, London, 1956); A. Rees, *Life in a Welsh Countryside*, (University of Wales Press, Cardiff, 1950).

[103] Littlejohn, J. *Westrigg*, (London, Routledge Kegan Paul, 1963).

[104] Littlejohn, *Westrigg*, 150. Although Littlejohn made his comments in a twentieth-century context, it is at least arguable that the same was true of out-migration from the English countryside in the nineteenth century.

life. He, in contrast, concentrated on the similarities between Westrigg and urban populations: 'The *gesellschaft* is perceived as being dominant within the rural community', rather than the traditional *gemeinschaft*.[105]

The first study to establish a new theoretical framework was W.M. Williams' examination of Ashworthy in Devon, also published in 1963. Williams had expected to find a stable, largely static, self-adjusting rural community. In reality, he discovered, Ashworthy's social structure existed in a continual state of internal readjustment. He concluded that:

> Rural life is characterised by conditions of "*dynamic equilibrium*", i.e. that while the social structure as a whole appears relatively unchanged and unchanging in the absence of external stimuli, within it constant and irregular changes are in fact taking place.[106]

In order to explain the continuity of social life in a climate of incessant change, Williams 'reoriented the whole approach of community analysis to place it within an ecological framework'.[107] The family no longer constitutes the principal social and economic unit, and there is an 'absence of a deep attachment to the family land'.[108] Kinship links and links with neighbours are characterised as providing 'complementary or overlapping networks' of cooperative mutual support.[109] However, these networks are not stable, as the individuals of whom they are comprised '...move, disappear, and reappear. In this aspect of the social life, as in others, change is evident'.[110] For Williams it is the relationship between people and the land, as manifested in the land-holding system, which 'is central to any understanding of the social life'.[111] Continuity in Ashworthy is achieved 'within a framework of change in land-holding and in the farming population by each farmer attempting to set up all his sons as farmers in their own right'.[112]

His study of Ashworthy was very different from those of earlier studies that were predicated on the *gemeinschaft*-derived notion of the unchanging traditional countryside.

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[105] Harper, 'The British rural community', 166.
[106] Williams, *Ashworthy*, XVIII.
[107] Harper, 'The British rural community', 166.
[108] Williams, *Ashworthy*, 209.
[109] Williams, *Ashworthy*, 52.
[110] Williams, *Ashworthy*, 213.
[111] Williams, *Ashworthy*, 208.
[112] Williams, *Ashworthy*, 209.

The latter works had viewed rural communities as discrete social entities, largely divorced from their temporal context. By using land as the prime explanatory variable of rural life, Williams placed the rural community firmly within its spatial environment.

Other scholars, notably Ray Pahl, have questioned the very concept of the 'rural community'. Using research on the Hertfordshire metropolitan fringe, he argued that the ways in which people live their lives does not depend on settlement type. Instead, it is a function of class and life cycle rather than the ecological attributes of any particular settlement. Consequently it becomes impossible to formulate a sociological definition of any settlement type, and the concept of a rural-urban continuum cannot be sustained. Therefore rural populations as such do not exist – they are simply populations who live in a rural environment and 'any attempt to link the patterns of social relationships to a specific geographical milieu is a singularly fruitless exercise'.[113]

In the 1970s and 1980s new rural studies, mainly by social anthropologists began to emerge. These were particularly concerned to try and establish the essence of the 'village', and the concept of membership or non-membership of a group is a strong theme. A prominent survey of this type was Strathern's analysis of Elmdon, Cambridgeshire, in the 1960s.[114] She suggests that 'there is a precise equation between being a "real" villager and being a member of the "old" Elmdon families.'[115] Strathern draws a strong link between kinship and occupation: the 'real' villager is a cultural artifice created by particular families as a means of asserting proprietary rights to certain kinds of employment. Historic familial links to the village were used by farmworkers to appeal to employers' sense of community for priority when decisions about employment were being made.[116] These 'real' villagers, born and originating in Elmdon, are characterised as the core group in the village. Alongside them are the 'other established', a group who were born in Elmdon but whose families did not originate in the village. A third group are identified as 'urban commuters' or in-migrants with no previous connection to Elmdon. Strathern's analysis, however, fails to establish any great difference between the first two groups. Where conflict does arise, it tends to be between the in-migrants and everyone who had

[113] Pahl, R. 'The rural-urban continuum', *Sociologia Ruralis*, 6, (1966), 322.
[114] Strathern, A. *Kinship at the Core: an Anthropology of Elmdon in the Nineteen Sixties*, (Cambridge, Cambridge University Press, 1981).
[115] Strathern, *Kinship at the Core*, 5.
[116] Strathern, *Kinship at the* Core, 83.

lived in the village prior to their arrival.[117] It seems debatable, therefore, whether the distinctions she draws have any practical impact upon daily social interactions within the village.

A similar distinction was noted by Scott Phillips who discussed the symbolism of belonging to a community in his study of Muker parish in the Yorkshire Dales.[118] He found that 'There is...a close resemblance between "locals" and "old incomers" on the basis of continuous and contiguous residence in the locality.'[119] Indeed, he suggests that 'continuous and contiguous residence in the locality is as important a character of local identity as descent.'[120] In other words, the longer an incomer lived in Muker, the more likely it is that they will be regarded as a local by other locals and new incomers. Strathern's historic association of kinship and employment might be seen, therefore, as a symbolic marker emphasising the boundaries between the 'real' Elmdoners and recent migrants to the village.

There is, however, some evidence that the association of occupation, kinship and place had existed in the village in the past. Jean Robin's analysis of Elmdon in the mid-nineteenth century shows that, notwithstanding the normal flows of in- and out-migration associated with rural villages at this time, there was an 'almost total pre-emption of agricultural labourers' jobs by those with Elmdon connections.'[121] She goes on to state that '[c]ertain kinds of work were more likely to be done by incomers, while other occupations seemed to be the preserve of those born in the parish.'[122] Moreover, 'The farm workers formed a homogenous group with nearly ninety per cent being born in Elmdon parish.'[123] Indeed, she claims that '[i]n order to migrate into Elmdon, it was generally necessary either to have kin-links in the village, or to be doing a job which Elmdoners did not normally expect to

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[117] Strathern, *Kinship at the Core*, 57.
[118] Phillips, Scott K. 'Natives and Incomers: the symbolism of belonging in Muker parish, north Yorkshire', in Drake, M. (ed.), *Time, Family and Community: Perspectives on Family and Community History*, (Oxford, Blackwell, 1994), 225-239.
[119] Phillips, 'Natives and incomers', 233-234.
[120] Phillips, 'Natives and incomers', 229.
[121] Robin, J. *Elmdon: Continuity and change in a north-west Essex village 1861-1964* (Cambridge, 1980), 26.
[122] Robin, *Elmdon* 111.
[123] Robin, *Elmdon* 111.

fill.'[124] It seems, then, that although Strathern's notion of the 'real' villager as member of a core group may have had little practical impact by the 1960s, it is possible that 100 years earlier it had been a modifier of social relations in Elmdon. What Strathern may have identified, perhaps, was a social structure preserved in the memory and traditions of families originating in Elmdon, but which had lost its practical utility in the life of the village.

A note of caution is called for here, however. For instance, how typical was Elmdon? Was this core group at the heart of the village a constant in its history? Did its composition change over time? In her study of Ashley, Hampshire, Kate Gilbert discovered upon examining the parish registers that the names of the villagers in the early eighteenth century were 'completely different from those found in the sixteenth or seventeenth century records.'[125] This suggests that over the course of several generations, therefore, death and migration had completely altered the familial composition of the village population. Such change did not, of course, occur overnight. In long-run terms it will have been a constant but uneven process. In a study of 10 parishes in south-east Surrey between 1750 and 1850, Evelyn Lord found that the intensity of kinship links varied widely between parishes and over time. She also notes that the socio-economic character of a particular parish was an important influence on the scale and density of kinship links.[126] Core groups undoubtedly existed, but their composition and strength was in a state of constant flux as families died out or moved away (the stone workers of Purbeck, who are examined in some detail in succeeding chapters of this study may well have been an exception to this).

Margaret Stacey also rejects 'community' as a useful sociological concept. She argues that 'there is no good reason to suppose that *everything* is connected with everything else' and 'even less reason to suppose that this should be the case in any particular small locality in a nation-state.'[127] Instead, she feels, sociologists should concentrate on 'local social

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[124] Robin, *Elmdon* 199.
[125] Gilbert, K. *Life in a Hampshire Village: The History of Ashley*, (Winchester, Hampshire County Council, 1992), 123.
[126] Lord, Evelyn 'Communities of Common Interest: the social landscape of south-east Surrey, 1750-1850', in Phythian-Adams, C. (ed.), *Societies, Cultures and Kinship, 1580-1850: Cultural Provinces and English Local History*, (Leicester, Leicester University Press, 1993), 164-167.
[127] Stacey, 'The Myth of Community Studies',138.

systems' – social institutions and their interrelationships in specific localities. She argues that it is possible to discuss in a systematic manner

> (i) the establishment and maintenance of a local social system; (ii) local conditions where no such system can be expected; (iii) some circumstances under which an existing system might be modified or destroyed; (iv) certain interrelationships between systems and their parts; (v) the interaction of local and national systems.[128]

In other words, she is suggesting that theoretically it should be possible to list systematically all the social institutions and their interconnections that might exist in a locality. This would form a model against which empirically observed evidence could be compared. It would be unusual to find a perfectly inter-related social system. Stacey accepts that in most cases it is more likely that 'there will be either no local social system, or some kind of partial local social system.'[129] She also insists, importantly, that the study of local social systems should include their temporal context, something often lacking in earlier community studies.

Writing soon after, Bell and Newby considered that Stacey's approach brought a 'welcome rigour to the field'.[130] They felt that 'something of an impasse had been reached concerning the definition of community.' and suggested that it might be more fruitful to consider 'some distinct streams or approaches to community studies rather than to pursue or attempt to resolve the definitional debate.'[131] Six years later, Alan Macfarlane voiced similar sentiments: 'It would thus seem that it is impossible to agree on what a "community" is.'[132] Indeed, he suggests that 'However helpful both concept and method were at one stage in the history of social science, it would be argued by many that community studies are both impossible and undesirable.' Macfarlane calls for 'the development of more sophisticated concepts for analysing the pattern of human interactions'.[133] He suggests that one way in which this might be achieved is through a synthesis of history with sociology and social anthropology. In his view, while the latter disciplines have developed some useful theories, they have lacked data of sufficient quality

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[128] Stacey, 'The Myth of Community Studies',139.
[129] Stacey, 'The Myth of Community Studies',140. She defines a social institution as 'recognized and established usages governing the relations between individuals or groups'.
[130] Bell, C. and Newby, H. *Community Studies*, (London, George Allen and Unwin, 1971), 49.
[131] Bell and Newby, *Community Studies*, 32.
[132] Macfarlane, 'History, anthropology and the study of communities', 636.
[133] Macfarlane, 'History, anthropology and the study of communities', 636.

and quantity to adequately test them. History, however, can provide 'large quantities of data of an unrivalled kind for literate societies stretching over long periods of time.'[134] While acknowledging the limitations of historical data, Macfarlane argues that such a synthesis of history and, in particular, social anthropology, offers a potentially fruitful framework for exploring human interactions in a given area over long periods of time.

Macfarlane's paper elicited a passionate response from the American sociologist C.J. Calhoun, who flatly rejected the former's suggestion that the concept of 'community' had outlived its usefulness. He did so on the grounds that 'it *does* refer to something we *do* want to understand.'[135] He goes on to claim that Macfarlane 'neglects theory' and argues that 'The fact that a number of varying concepts have been used under the common label ["community"] does not, however, invalidate any of them.' Calhoun feels that Macfarlane dismisses the concepts without demonstrating 'that they are empty of empirical reference'.[136] In a later paper, Calhoun provides a detailed exposition of how he defines community. He begins by asserting that it 'refers to some real and important phenomena' and argues that 'It is thus important that we refine it, rather than abandon it.'[137] He rejects the classical sociological usage that was used to describe essentially conservative, hierarchical, organic and static social entities based on the traditional *gemeinschaft-gesellschaft* dichotomy. Instead he calls for 'a more complex view of community in which we seek elements and relations among elements rather than listing attributes.'[138] Essentially Calhoun conceives of community 'as both a sociological variable and a morally valued way of life'.[139] This conception sees 'community as made up of relationships among social actors, and relations among these relationships.'[140] For Calhoun, community is a kind of moral commitment based on relationships that are predominantly face-to-face and accompanied by 'commonalty of purpose, familiarity and dependability.'[141] He accepts that such qualities are 'suggestive' but argues that this does not negate their

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[134] Macfarlane, 'History, anthropology and the study of communities', 647.
[135] Calhoun, C.J. 'History, anthropology and the study of communities: some problems in Macfarlane's proposal', *Social History*, 3, 3, (1978), 363.
[136] Calhoun, 'History, anthropology and the study of communities', 369-370.
[137] Calhoun, C.J. 'Community: towards a variable conceptualization for comparative research', *Social History*, 5, 1, (1980), 105.
[138] Calhoun, 'Community' 108.
[139] Calhoun, 'Community' 107.
[140] Calhoun, 'Community' 111.
[141] Calhoun, 'Community' 111.

validity. He does, however, concede that 'greater decisiveness' might be gained 'by distinguishing community through the self-regulation of its patterns of organisation, and then analysing how its constituent relations work to permit this freedom from specialised and/or external control.'[142] Calhoun also makes the point that community relations of the sort outlined above are as likely to be found in post-industrial urban settings as in pre-industrial rural settings.

Calhoun is a sociologist and much of the debate about the nature of community has been undertaken by social scientists. However, despite the criticisms of their efforts by Marshall, noted earlier in this chapter, historians have increasingly engaged with the issue, although it must be said that much of their work, like that of social scientists in the modern context, has focused on the small rural village or parish as a 'community'.

Howard Newby's view is that by the mid-nineteenth century most rural villages had lost their traditional small-scale manufacturing and domestic handicraft industries; they had become, to use his term, 'occupational communities', reliant solely on agriculture.[143] However, as was argued in Chapter 2, Newby may be under-estimating the persistence of non-agricultural occupations in rural England. His work seems to be largely based on evidence from East Anglia and as such should perhaps not be extrapolated to the rest of the country. This is important, because as Dennis Mills points out 'Community structures were quite different in villages where rural industry survived. The same can be said of mining and quarrying areas.'[144] Ian Donnachie reinforces the point: 'Different occupations and work regimes generated quite specific cultures and behaviour patterns.'[145] Occupation can significantly affect demographic factors such as age at marriage, seasonality of marriage, fertility, migration and occupational mortality, all of which may help shape community behaviour. This applies to agricultural workers just as much as those who followed non-agricultural occupations. The nature of farming varied enormously from locality to locality and 'the agricultural labour force was not homogenous, nor can it be

[142] Calhoun, 'Community' 111.
[143] Newby, H. *Country Life: A social history of rural England* (London, 1987), 76-77.
[144] Mills, D.R. *Rural Community History from Trade Directories*, (Aldenham, Local Population Studies, 2001), 10.
[145] Ian Donnachie, 'Work and community: changing occupational profiles', in Golby, J. (ed.), *Community and Families*, (Cambridge, Cambridge University Press, 1994), 68.

easily split into groups such as proletariat and lumpenproletariat.'[146] Newby does concede that 'across the country there were marked variations in the circumstances of agricultural workers, differences that were reflected in the everyday life of village communities.'[147] Despite this concession, perhaps a more balanced view is presented by Alun Howkins. Like Newby he sees the lives of those living in rural areas in the nineteenth century as 'structured by their relationship to economic and social power'. However, he also argues that such power was 'mediated through their locality and through very different socio-economic systems.'[148] Consequently, the development of capitalist labour relations in the countryside was actually very uneven. Regional differences in farming and hiring patterns 'produced a complex variety of experiences for those who worked the land.'[149] Indeed, he asserts that 'What it meant to be a labourer in different areas of England was literally to live in different worlds.'[150] Furthermore, he argues that within agrarian capitalism as a whole, 'regional variety remained, at least until the Great War if not later, a key element in how ordinary people lived their lives.'[151]

In social terms, Newby characterises the nineteenth-century rural village as an 'isolated and self-contained community' and suggests that it 'was often the object of a fierce loyalty among its inhabitants.'[152] He also suggests that local customs and traditions enabled villagers to 'draw upon a strong sense of identity and morality' to help sustain them 'in the face of the material adversity which affected all of the rural working population.'[153] This, in Newby's eyes, 'conferred a sense of order on village life, a sense of "place" in both a geographical and a social sense, which could be recognised and accepted as a natural and unchanging fact of life.'[154]

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[146] Rawding, C. 'Society and Place in Nineteenth-Century North Lincolnshire', *Rural History*, 3, 1, (1992), 63.
[147] Newby, *Country Life*, 80.
[148] Howkins, A. 'The English farm labourer in the nineteenth century: farm, family and community', in Short, B. (ed.), *The English Rural Community: Image and Analysis*, (Cambridge, Cambridge University Press, 1992), 85.
[149] Howkins, A. 'The English farm labourer', 102.
[150] Howkins, A. 'The English farm labourer', 85.
[151] Howkins, A. 'The English farm labourer', 102.
[152] Newby, *Country Life*, 79.
[153] Newby, *Country Life*, 79.
[154] Newby, *Country Life*, 79.

Newby perceives 'community' in nineteenth-century rural England as being closely bound up with social class relations and class conflict. He argues that in most nineteenth-century rural villages two communities existed. One was an 'official' village community that included clergy, farmers and landowners, and was symbolised in traditional public ceremonies and rituals. The other was 'a locally-based working-class subculture' that excluded those in authority and 'represented the core of the occupational community.'[155] Newby describes this subculture as 'a neighbourly community of kin and workmates', one which was 'virtually impenetrable' to outsiders.[156] It stemmed from 'the common experience' of work and non-work activities, which reinforced a code of behaviour 'both at work and in the village community.' It was sustained by the isolation of rural villages, close kinship links within villages, and 'by the need for co-operation in times of family crisis.'[157] He goes on to claim that such conditions 'made the nineteenth-century village a very close-knit society' and generated a 'strong sense of group identity'.[158] In other words, this 'community' is 'a local neighbourhood bound together by the common historical experience of family, work, and place.' It is 'the unavoidable communality of the poor.'[159]

Newby's characterisation of the village community raises a number of issues. For example, his assertion that nineteenth-century rural villages were 'isolated and self-contained' is contradicted by other studies. Kate Gilbert's study of Ashley cited earlier in this chapter, makes it quite clear that population change was a constant and major factor in village life from at least the sixteenth century. In a study of Terling in Essex between 1525 and 1700, Wrightson and Levine state that the village 'was in no way a bounded society, a social isolate'. On the contrary, they found that 'the society of the village was deeply involved with the larger society of which it was a part.'[160] In her study of parishes in south-east Surrey between 1750 and 1850, Evelyn Lord argues that 'Communities in the past were not...deeply-rooted organisms', also noting that 'Most families did not stay in the same parish for many generations'.[161] The same point is made by Gwynneth Nair in her study of Highley: 'A nucleus of families remained for more than one generation, but

[155] Newby, *Country Life*, 81.
[156] Newby, *Country Life*, 81.
[157] Newby, *Country Life*, 81.
[158] Newby, *Country Life*, 81-82.
[159] Newby, *Country Life*, 89-90.
[160] Wrightson, K. and Levine, D. *Poverty and piety in an English village: Terling 1525-1700*, (London, Academic Press, 1979), 75.
[161] Lord, 'Communities of Common Interest', 196-197.

hardly any for more than three.'[162] As Brian Short has put it, 'Change and external contact were the norm, not the exception', although he does concede that such a statement 'must be tempered by reference to local situations.'[163] The argument is neatly summarised by Finnegan and Pryce: 'Communities involve change, movement and migration, not just stability.'[164]

The above clearly suggests that many, and probably most, rural villages in the nineteenth century experienced considerable in- and out-migration. As Short says, 'a continuous groundswell of movement of families and individuals was a characteristic of village life in the past'.[165] Given this constant movement of people in and out of villages, it is difficult to sustain Newby's suggestion that rural villages in most localities at least, were socially self-contained and isolated. It also brings into question the role of 'close kinship links' in reinforcing the village 'community'. Movement was so ubiquitous that it seems unlikely that many villages actually contained large groups of inter-related families and individuals. That was certainly the case in Terling in an earlier period, as Wrightson and Levine found that although kinship networks existed, 'they were few and untypical', which they ascribe to 'the high degree of geographical mobility and the geographically exogamous marriage which characterised the villagers.' In the absence of strong kinship links, support was provided by '[n]eighbours and personal friends selected from among them'.[166] Evelyn Lord also argues that 'communities were not comprised of dense networks of kin.' She found that the latter did exist but were not normally confined within a single parish; rather 'a regional sphere of activity was more likely to apply to the majority'.[167] Consequently, she suggests that kin do not necessarily have to live together, or even close to one another, in order to sustain 'a deep and supportive relationship'.[168] Some evidence for this is also presented in Chapter 7 of this study, which discusses the migration patterns of Purbeck

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[162] Nair, G. *Highley: The development of a community*, (Oxford, Basil Blackwell, 1988), 220.
[163] Short, Brian 'Images and realities in the English rural community: an introduction', in Short, Brian (ed.), *The English Rural Community: Image and Analysis*, (Cambridge, Cambridge University Press, 1992), 11.
[164] Finnegan, R. and Pryce, W.T.R. 'Community and community history', in W.T.R. Pryce (ed.), *From Family History to Community History*, (Cambridge University Press, 1994), 209
[165] Short, 'Images and realities', 11.
[166] Wrightson and Levine, *Poverty and piety*, 102.
[167] Lord, 'Communities of Common Interest', 197.
[168] Lord, 'Communities of Common Interest', 164.

stone workers. Lord also argues that 'many analyses of kinship in the past' fail to address 'the degree of relatedness between households, and the quality of kinship relationships.'[169]

Finnegan and Pryce agree, suggesting that we have to 'move beyond individual people and families to study the relationships between them.'[170] In their view, such ties are commonly proposed as the foundation on which community relations rest; but are they based on 'consensus or harmony', or a mixture of both? They also asks whether internal conflict (along with external threat) might not be 'one kind of community tie'.[171] Within communities, Finnegan and Pryce suggest, there will inevitably be internal divisions and 'differing groups who at various times belong together more, or less, in differing senses.'[172] Evelyn Lord also cautions that her research found there were 'more nuances in the class and occupational structure of the communities than historians of rural life, such as Newby, have hitherto suggested.'[173] Conflict certainly existed in rural village communities. Indeed, Wrightson and Levine, utilising evidence from both secular and ecclesiastical courts, describe Terling as 'riddled with petty conflicts'.[174] It is difficult to see any good reason why nineteenth-century rural villages should have been any different. Unfortunately, friction in rural communities is frequently addressed solely in terms of conflict between the labouring population and farmers and landowners. Conflict within the labouring population is largely ignored, perhaps because of a lack of source material.

This, of course, highlights a major problem for any study involving 'community', particularly in a historical context. Quite simply, as Marshall puts it: '[t]here are few biographical or other sources which tell us what people's deeper sentiments of local and communal attachment actually were.'[175] In these circumstances it becomes 'too easy to make suppositions about neighbourly linkages'.[176] Through census, parish register and other records we might know *who* lived in a particular place at a certain point in time. We

[169] Lord, 'Communities of Common Interest', 164.
[170] Finnegan and Pryce, 'Community and community history', 209.
[171] Finnegan and Pryce, 'Community and community history', 211.
[172] Finnegan and Pryce, 'Community and community history', 212.
[173] Lord, 'Communities of Common Interest', 197.
[174] Wrightson and Levine, *Poverty and piety*, 110.
[175] Marshall, *The tyranny of the discrete*, 75.
[176] Marshall, *The tyranny of the discrete,* 64.

do not, on the whole, however, 'really know how often people were in contact, and still less do we know what their real sentiments were.'[177]

In light of this lack of knowledge, it is regrettable that respected scholars such as Howard Newby make sweeping generalisations such as characterising the nineteenth-century rural village as 'a very close-knit society'. It does not seem unreasonable to suggest that the agricultural labouring population in many places possessed a strong group identity. It does not automatically follow from that, however, that they constituted a close-knit society. No doubt many village communities *were* close-knit societies. But equally, it seems perfectly feasible to suggest that many were not. Like 'community' itself, 'close-knit' does not easily lend itself to empirical investigation. Moreover, the sheer scale of population movement in the countryside during the nineteenth century suggests that, at times at least, many of Newby's 'close-knit' communities must have been quite fluid in terms of their component personnel. It seems probable, therefore, that as Finnegan and Pryce emphasise: 'the community identity of a particular locality or group will vary over *time*.' Changes in the 'extent of internal heterogeneity' would inevitably affect social ties with the result that 'that which is a "community" at one time may not be so at another – or anyway, not in the same sense.'[178]

There have also been attempts by historians to define the term 'community', as opposed to using it descriptively. Inevitably, however, they have encountered the same difficulties as have social scientists engaged in the same endeavour. Mills and Schürer, for example, conclude that 'it is almost impossible to define it coherently and agree to a set of criteria by which to measure it.'[179] However, they go on to argue that the family, as 'the most fundamental form of social organization' fulfils 'a major role in the development and structure of communities.'[180] Evelyn Lord reached a similar conclusion: 'the basic unit of each community was the family and its members, who nevertheless might spread across, and therefore interconnect, several communities.'[181]

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[177] Marshall, *The tyranny of the discrete*, 66.
[178] Finnegan and Pryce, 'Community and community history', 213.
[179] Mills, D.R. & Schurer, K. (eds.) *Local Communities in the Victorian Census Enumerators' Books* (Oxford, Leopards Head Press, 1996), 1.
[180] Mills, D.R. & Schurer, K. (eds.) *Local Communities*, 280.
[181] Lord, 'Communities of Common Interest', 199.

Ruth Finnegan has listed five broad characteristics that, she believes, singly or in combination, define community. They are: a locality; some grouping sharing common interests not necessarily localised; a locality or grouping bound by close ties, such as kinship and neighbourliness; a sense of belonging together; a claim or invitation to observe common ties or interests.[182] Unfortunately several of these are subject to the limitations noted above, in that they involve sentiment and human emotion; they are therefore difficult if not impossible to measure with any certainty.

In their refreshing study of community in the nineteenth-century urban context, Dennis and Daniels identify the following six (measurable) attributes which they suggest can be taken as evidence of community: segregation (not pursued in their study); residential persistence; residence-workplace patterns; kinship; marriage patterns; special-interest groups.[183] However, it was found that '[t]aken in isolation every statistical index of community structure is ambiguous and taken together different indices may be contradictory.' They therefore conclude that statistics alone are insensitive to the complexity of human life, and make the very valid point that 'antagonism, jealousy, fear and suspicion' may be as characteristic of communities as 'neighbourly attitudes and relations'.[184] The solution lies, they believe, with a better context of interpretation. This involves bringing together 'many types of evidence on many aspects of social life'. Quantitative evidence should be married with 'a holistic understanding of social attitudes and relationships.'

More recently, Simon Szreter, in his study of fertility in Britain between 1860 and 1940, has developed the concept of the 'communication community':

> Roles, norms and social identities are essential elements of the shared language of any mutually recognising, communicating human group. They are constructed by and embedded in the shared social practices and values of social groups or what might more accurately be termed "communication communities".[185]

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[182] Finnegan and Pryce, 'Community and community history', 210-211.
[183] Dennis, R. and Daniels, S. '"Community" and the Social Geography of Victorian Cities', in M. Drake (ed.), *Time, Family and Community: perspectives on Family and Community History* (Oxford, Blackwell, 1994), 221.
[184] Dennis and Daniels, '"Community" and the Social Geography of Victorian Cities', 221-222.
[185] Szreter, S. *Fertility, class and gender in Britain 1860-1940*, (Cambridge, Cambridge University Press, 1996), 546.

Szreter's work discusses these communication communities largely within an urban context, but it seems equally valid to extend the concept to rural settlements. Communication communities took different forms according to social class. On the one hand there were working-class neighbourhoods or street communities; on the other, middle-class status groups. Although both of these clearly often had a physical dimension, Szreter argues that communication communities did not necessarily depend upon residential propinquity. People living in disparate areas who would probably never meet or know the others existed, could be considered as part of the same communication community if their language was similar, if they had similar gender and work roles, and if they shared the same social and cultural goals.[186]

Szreter suggests that individuals participate in a minimum of two communication communities during their lifetimes: the family home and the neighbourhood surrounding that home. They are socialised into these, 'learn their complex codes', mainly through their childhood and early adult upbringing. However, he cautions against automatically assuming that of these two 'primary communication communities', the family home is 'the more fundamental source of the identity and loyalties which characterise a communication community'. In support of this he cites research undertaken in the 1950s, which found that 'relatively exclusive devotion to the values of the nuclear family, as opposed to those of the immediate community of neighbours, is itself and extremely "middle-class" trait.'[187] Szreter's view is that most people will participate in several communication communities over the course of their lives. Institutions such as schools, church or chapel, pub or club, and the workplace are all examples of places where important communication communities exist. Such communication communities exist in all neighbourhoods and have varying social extents and powers. This depends on 'the unique local, contingent conditions of employment, and the economic, political and social history of the locality and the social groups within it.'[188] Individuals participating in these communication communities are frequently subject to a variety of potentially conflicting loyalties and values. Britain, in Szreter's view, was 'a congeries of extremely localised communities, each possessing a relatively unique cultural and even economic existence.'[189]

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[186] Szreter, *Fertility, class and gender*, 546-547.
[187] Szreter, *Fertility, class and gender*, 547.
[188] Szreter, *Fertility, class and gender*, 548.
[189] Szreter, *Fertility, class and gender*, 64.

In recent decades historians have increasingly appreciated that 'the theories, tools and subject matter of the social sciences could inform the study of history.'[190] Social anthropology, for example, has been enormously influential and dramatically extended the historian's scope, 'resulting in the study of topics that had scarcely been considered before: kinship, the family, marriage, sexual behaviour, literacy, astrology, witchcraft, popular religion, death and time.'[191] This extension of the subject matter of historical enquiry has, however, been accompanied by an increasing tendency towards a 'fragmentation of history into specialist temporal and thematic subdivisions'.[192] In Pat Hudson's view this fragmentation 'has occurred through specialisation and compartmentalisation...with very limited dialogue between subjects or across time periods.' Indeed, she considers that 'fragmentation and specialisation...have contributed to a marginalisation of social history.'[193] Marshall has also expressed similar sentiments, arguing that specialisations like agrarian and urban history, or business and labour history are antithetical to fully understanding historical context and processes.[194] The fragmentation of history has also been strongly criticised by Charles Phythian-Adams. He decries the trend towards thematic analysis and chronologically confined periods, arguing that 'the ultimate ideal of the local historian' should be 'the refabrication, over all reconstructable time, of that which thematic analysis otherwise tears asunder'.[195]

Dissatisfaction with the state of local history continues to exist. For example, a new society and journal have recently been launched with the aim of promoting 'community history' as opposed to the more general term 'local history'.[196] The promoters of 'community history' have made this distinction 'in order to mark a deliberate emphasis on

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[190] Goose, N. 'Local population studies: history, demography and locality', *The Local Historian*, 34, 1, (2004), 38.
[191] Goose, 'Local population studies' 38.
[192] Hudson, P. 'Industrialization in Britain: the challenge of micro-history', *Family & Community History*, 2:1 (1999), 5.
[193] Hudson, 'Industrialization in Britain', 10.
[194] Marshall, *The tyranny of the discrete*, 29.
[195] Phythian-Adams, C. 'Introduction: An agenda for English Local History', in C. Phythian-Adams (ed.), *Societies, Cultures and Kinship, 1580-1850: Cultural Provinces and English Local History*, (Leicester, Leicester University Press, 1993), 2.
[196] The Family and Community Historical Research Society aims to promote and communicate research in family & community history within a scholarly framework. It places particular emphasis on the contribution of locally based and micro studies to the understanding of the wider picture (and vice versa). The Society publishes a journal and newsletter for the Society's members, promoting links between institutional and independent researchers, and encourages activities and interaction at both a national and a regional level. Full details can be found at www.fachrs.com

people rather than places' and with the relationships between people at different levels.[197] Dennis Mills advances five main reasons why 'community history' is considered to 'have an edge' over 'local history'. Firstly, there is the focus on people rather than place; secondly, it stresses the study of population;, thirdly, in rural areas at least, 'community' is used 'in the sense of a well-defined face-to-face, territorial group' that also broadly coincides with the smallest administrative units of parish and township; fourthly, it is also concerned with relationships between communities; and fifthly, it recognizes the importance of relationships within communities.[198] He goes on to claim that 'it is fair to say that community history writing is more consistently analytical and academic in approach than a good deal of local history.'[199] He also argues that 'there needs to be constant interaction between different scales of analysis.'[200]

I would suggest that 'community history' is in fact materially little different to, for example, Pat Hudson's 'micro-history' described below. Both are essentially about method, they are calls for integrated, academically sound historical analysis at a local level. They are also attempting to distance their work from the corpus of 'local history' per se because of the unfortunate associations with antiquarianism, amateurism and parochialism that have dogged local history for many years. Antiquarianism is essentially the collection of facts for their own sake. History, however, should be concerned with analysis and attempting to understand and structure the past; facts have no meaning other than as part of that structuring process. Unfortunately the antiquarian tag has proved difficult to shake off, partly at least because too much published local history has been rather parochial in outlook. It has tended to be inward looking, spatially isolated, fragmentary, and lacking in comparative analysis and context. This is regrettable because it detracts from the truly excellent and important local historical work that has been produced.

The 1980s and 1990s saw a number of scholars attempt to rectify the situation by setting out their thoughts on how history at the local level should be undertaken. Pat Hudson, for example, argues for what she terms 'micro-history'. This is 'primarily an approach or methodology which tackles the problem of describing complex social structures with the

[197] Mills, *Rural Community History*, 9.
[198] Mills, D.R. 'Defining community: a critical review of "community" in Family and Community History', *Family and Community History*, Vol, 7/1, (May 2004), 8-9.
[199] Mills, 'Defining community', 10.
[200] Mills, 'Defining community', 10.

aim of getting closer to the realities of people's lives in the past.'[201] Micro-history focuses on 'socio-cultural relationships and the interconnectedness of different elements in people's lives', thereby avoiding the fragmentation of history described earlier in this chapter.[202] Hudson stresses the integrative nature of her approach, arguing that micro-level studies should be theoretically grounded, drawing upon analysis of national structural developments whilst also reflecting the scale and 'variety of people's lived experiences'.[203] In other words, 'researchers need to 'be aware of the wider theories and debates, and to relate them to small-scale and specific studies'.[204] This is a crucial point. Hudson cites examples from the literature on proto-industrialisation where local studies have exposed 'different patterns and chronologies of change and continuity to macro-history.' Indeed, she goes further and argues that 'they show that causal explanations at the macro level may be misleading'.[205] Hudson therefore promotes micro-history as 'an integrated socio-economic, political and cultural history in which the interconnectedness of all aspects of life can be examined and acknowledged.'[206]

So how has local history developed since Hudson's intervention? As was noted earlier in this chapter, J.D. Marshall, writing in 1997 considered that local history remained in dire straits. However, in a paper published the following year, Kate Tiller presents a much more optimistic view of the state of English local history.[207] She emphasizes the 'dramatic widening' of local history's subject matter in the 1980s and 1990s, much of which was derived from the social sciences. This, in her view, had taken it 'beyond (and sometimes into an emphatic rejection of) earlier and deeply rooted traditions of antiquarianism in English local history.'[208] Like Hudson and Pryce she stresses that local studies should be set in context, that they are 'greatly enhanced by the external, comparative or wider perspective' whilst simultaneously modifying 'the models and generalisations used by other historians'.[209] The need for research to be conducted along such lines was also an

[201] Hudson, 'Industrialization in Britain', 13.
[202] Hudson, 'Industrialization in Britain', 5.
[203] Hudson, 'Industrialization in Britain', 5.
[204] Finnegan and Pryce, 'Community and community history', 214.
[205] Hudson, 'Industrialization in Britain', 9.
[206] Hudson, 'Industrialization in Britain', 12-13.
[207] Tiller, Kate 'English Local History: The State of the Art', (University of Cambridge, Board of Continuing Education, Occasional Paper No. 1, 1998).
[208] Tiller, 'English Local History', 1.
[209] Tiller, 'English Local History', 1.

important theme of an editorial in the inaugural edition of the journal of the Family and Community History Society. The editors called for the 'interaction of detailed and empirically-founded micro-studies with more general scholarly issues'.[210] Referring micro-studies to 'the scholarly literature, linking them to current historical or social scientific debates' would, they hoped, 'encourage cross-fertilization of knowledge, ideas and methodologies'.[211] They go on to suggest that there is an 'awakening recognition of how small-scale studies can extend and question aggregate generalizations through the illumination of local and personal diversities.'[212] This view has been reinforced by Nigel Goose, who recently commented that 'detailed *local* work is already producing results at variance with the "national" orthodoxy'.[213]

It does seem to me that theorizing about the term 'community' has become a largely fruitless and sterile exercise. Virtually the only area of broad agreement is that community involves relations between individuals and groups of individuals. Unfortunately the pattern of these relations and the sentiment underlying them are infinitely complex and largely inexplicable. We simply do not have the evidence for why people act in a certain way (on the whole) and even less so for why people *think* as they do, particularly in the historical context.

Howard Newby argues that by the mid-nineteenth century most of England's rural villages depended on a single activity – agriculture – for their livelihood. He characterises them as 'occupational communities'; communities whose economic life was tied almost exclusively to farming. This study takes Newby's concept as its starting point. However, it questions the claimed ubiquity of the agricultural occupational community in rural England, suggesting that the overall picture was rather more complex than Newby allows. It is also suggested that where rural industries survived or where, for example, mining and quarrying were important, a rural village might contain more than one occupational community.

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[210] Drake, M., Finnegan, R. and Weinbren, D. 'Editorial', *Family and Community History*, Vol. 1, (Nov. 1998) 3.
[211] Drake, Finnegan and Weinbren, 'Editorial', 4-5.
[212] Drake, Finnegan and Weinbren, 'Editorial', 3.
[213] Goose, 'Local population studies', 42.

The Isle of Purbeck in Dorset was identified as a locality where this might well be the case. Originally centred on Corfe Castle, stone has been quarried and worked in Purbeck since the twelfth century. By the nineteenth century, however, Corfe Castle's role was purely ceremonial in nature (see Chapter 4) and the trade was confined to three parishes: Langton Matravers, Swanage and Worth Matravers. These three parishes contained the entire stone-working population (with their families). They also contained a significant proportion of agricultural workers, a good number of tradesmen and women, as well as smaller occupational groups, notably a substantial coast guard presence. The two main occupational groups, agricultural workers and stone workers had therefore co-existed in the locality for several centuries.

From its beginning in the twelfth century the stone trade had operated in a much wider context than just Purbeck or Dorset. Stone was exported to all parts of England and there were particularly strong links with London. In post-medieval times London and towns along the south coast were the prime markets. The Purbeck quarries were small family enterprises. However, a corporate element also existed. The industry was organised into The Company of Purbeck Marblers and Stone Cutters. An individual could only work in the Purbeck stone trade if he was a freeman of the Company (or apprenticed to a freeman). And you could only be apprenticed to a freeman of the Company if you were the son of a freeman. Obviously, these restrictions strongly reinforced the familial basis of the stone industry in Purbeck. The history of Purbeck and its stone industry (outlined in detail in Chapters 4 and 5) is an important component of this thesis. Without knowing something of the history of the area and its stone industry, it would be impossible to understand and accurately place in context its demographic characteristics.

The longevity of the trade, its defined spatial extent, and the exclusively familial nature of recruitment to it, make the stone workers a particularly interesting group. They certainly appear to possess all the attributes that one might ascribe to a distinct occupational community. At the same time, there is no reason to suppose that Purbeck's agricultural workforce were any different to agricultural workers elsewhere in Dorset or England. Unfortunately, as was noted earlier in this chapter, sources that can inform us directly about community sentiment are rare. In this study, therefore, aspects of the demographic behaviour and characteristics of the agricultural population are contrasted with those of the stone-working population in order to gain some sense of whether the two groups did

indeed constitute distinct communities within the same place. In order to achieve this, a community reconstruction of the three parishes concerned for the period 1841-1891 has been undertaken.[214] The community reconstruction method, detailed in Chapter 6, was utilised because it was felt that it offered the most flexibility in terms of interrogating the data. The combined population of the three parishes represented a realistic and manageable total in terms of the data inputting and record linkage phases of the study. At the same time it provided large enough numbers for viable statistical analysis.

Although, on the face of it, the stone workers were a particularly unusual group, they were not unique. Similar groups and industries existed in other parts of England. One thinks, for example, of the Free Miners of the Forest of Dean, lead miners in Derbyshire and Cumberland, and the tinners of Devon and Cornwall, who were cited in Chapter 2. It is likely that other non-agricultural groups and industries existed in these and other parts of rural England also. No doubt many of them were small and had little significance outside their local context. However, I would suggest that we need to know what was unusual in order to know what was usual. Otherwise we are left to rely on aggregative norms that may or may not have existed in real life. Charles Rawding has suggested that 'In the nineteenth century, there may have been a hegemonic culture at a national level, but residual cultures may well have remained dominant, or at least been significant in rural areas.' He goes on to argue that the interactions between such cultures were 'a crucial element in societal change'.[215] The stone-working parishes of Purbeck may well have represented such a 'residual culture'. Good quality local studies are the ideal mechanism for identifying and analysing the subtleties of structure and change that undoubtedly existed in rural England in past centuries. The fragmentation of history into ever-more specialised sub-disciplines is unfortunate, as it makes what should be one of the main tasks of the local historian, that of synthesis, increasingly difficult. A broad, integrated, approach to local studies is therefore essential if the disparate elements relating to the human past are to be brought together. Indeed, local studies are probably the only mechanism for achieving this task.

[214] 'Community reconstruction' in this context is simply a label for the technique – it in no way implies that a 'community' existed.
[215] Rawding, 'Society and Place', 65.

Chapter Four
The Isle of Purbeck in Historical Context

Introduction

Demographic studies are distinctly lacking if the figures they produce are not rooted in their social and economic historical context. The purpose of any historical enquiry should be to illuminate the past, enabling us to understand how people lived their lives, how their life experiences changed over time. I would suggest, however, that much historical demography fails to adequately engage with the wider past. Indeed, much so-called 'historical demography' is barely recognisable as being historical at all. It informs us about what people's demographic behaviour was at a given point in time but leaves us none the wiser about the factors that acted to produce it or continued to act upon it. However, through a detailed investigation of the social and economic history of a study area it becomes possible to place a demographic analysis in its proper historical context. Without doing this it is impossible to fully appreciate or understand how demographic characteristics have developed and changed over time.

Dorset

In the nineteenth century Dorset was one of the most rural counties in England, with no large towns and very little manufacturing industry. The county was remote from large population and industrial centres and possessed few raw materials; there was no coal, iron or industrial minerals and, despite a long coastline, no large ports to stimulate growth. Dorset possessed many large estates and the agricultural sector overwhelmingly dominated the social and economic character of the county. There were three broad divisions in the county's farming. Historically Dorset had been noted for its sheep, reared on the central chalk belt that accounts for around half the county's area. By 1850, however, the traditional sheep and corn husbandry of the chalk belt was gradually declining in favour of dairy farming.

East Dorset was a region of mixed arable and dairy farming, while small-scale dairy farming dominated in the west and north.[216] Despite its dependence on agriculture, Dorset did share in the huge population increase that characterizes the nineteenth century.

Table 4.1 Population growth, Dorset and England and Wales, 1801-1901

	England and Wales		Dorset	
Census Year	Nos.	% Increase	Nos.	% Increase
1801	8,892,536		114,452	
1811	10,164,256	14.30	124,718	8.97
1821	12,000,236	18.06	144,930	16.21
1831	13,896,797	15.80	159,385	9.97
1841	15,914,148	14.52	175,054	9.83
1851	17,927,609	12.65	184,207	5.23
1861	20,066,224	11.93	188,789	2.49
1871	22,712,266	13.19	195,774	3.70
1881	25,974,439	14.36	190,959	-2.46
1891	29,002,525	11.66	194,517	1.86
1901	32,527,843	12.16	202,936	4.33
1801 - 1851		101.60		62.13
1851 - 1901		81.44		10.17
1801 - 1901		265.79		77.31

Source: Mills, Edgar and Hinde, 'Southern historians', Table 1 and Table 2, 62-63.

However, as Figure 1 shows, the county's population growth was significantly below the national rate of increase, particularly after 1850 when underemployed agricultural workers and their families began to leave the countryside in large numbers. Indeed, between 1871

[216] Good reviews of Dorset's farming at the beginning of the nineteenth century can be found in John Claridge, *General View of the Agriculture in the County of Dorset*, (London, Board of Agriculture Report, 1793), and W. Stevenson, *General View of the Agriculture of the County of Dorset*, (1812). For the mid-century period two excellent accounts are: Louis H. Ruegg, 'Farming of Dorsetshire', *Journal of the Royal Agricultural Society of England*, XV, (1854), 389-454; and Joseph Darby, 'The Farming of Dorset', *Journal of the Bath and West of England Agricultural Society*, Third Series, Vol. IV, (1872), 1-46. A useful summary of the county's farming at the end of the nineteenth century and the beginning of the twentieth century is provided by A.J. Buckle, 'Agriculture', in W. Page (ed), *The Victoria County History of the County of Dorset*, Vol. 2, (London, Constable, 1908), 275-286. In addition there are several modern works covering all or part of the nineteenth century. For example, see G.E. Fussell, 'Four Centuries of Farming Systems in Dorset, 1500-1900', *Proceedings of the Dorset Natural History and Archaeological Society*, Vol. 73, (1951), 116-140; W.E. Minchington, 'Agriculture in Dorset during the Napoleonic Wars', *Proceedings of the Dorset Natural History and Archaeological Society*, Vol. 77, (1955), 162-173; Barbara Kerr, *Bound to the Soil*, (London, John Baker, 1968).

and 1881 Dorset's population actually declined, as the pace of out-migration was exacerbated by the agricultural depression of the 1870s.[217] It was relatively unusual for a county's population to decline in absolute terms; normally individual communities and districts within a county would experience a reduction in population while the overall county total continued to rise. On the whole, however, Dorset's population experience was fairly typical for a rural southern county in the nineteenth century.[218]

Agriculture may have dominated the rural economy of Dorset, as it did in much of southern England in the nineteenth century, but the occupational structure of many rural areas was more complex than this might suggest. Every community had its tradesmen and craftsmen; and within agriculture itself there were a number of occupational divisions and specialisations.[219] Agricultural labourers worked in the same industry as farm servants, ploughmen, dairymen, carters, shepherds and others. This diversity of occupations within agriculture is frequently overlooked, not least because those filling-in census books and parish registers often simply entered 'ag lab' or 'lab' when noting occupations.[220] For women's work, the situation is even worse, as much of it seems to have been ignored by the enumerators because it was part-time or seasonal.[221]

Some commentators have suggested that nineteenth-century rural England was effectively devoid of industry and devoted almost exclusively to farming.[222] This, as I have argued above, is an over-generalisation. A lot of rural industry did disappear in the late eighteenth century and early nineteenth century, unable to compete with urban factory production. Areas such as East Anglia probably were almost wholly agricultural in character, though some rural communities continued to support some kind of non-agricultural economic activity alongside farming. In other areas, however, rural industries thrived well into the second half of the nineteenth century and in some instances on into the twentieth century.

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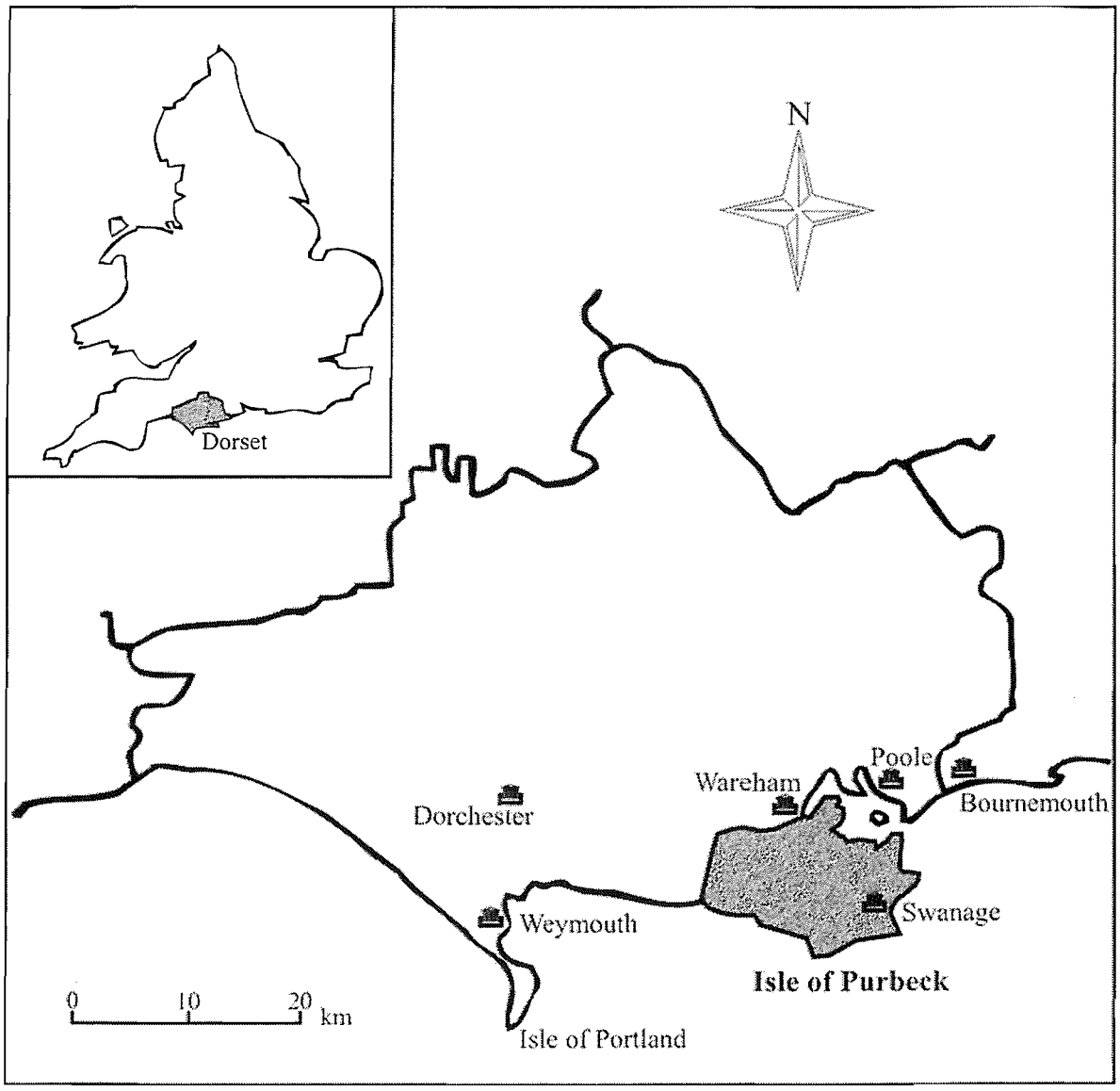
[217] Mills, Edgar and Hinde, 'Southern Historians', 62-63.
[218] Mills, Edgar and Hinde, 'Southern Historians', 62-63.
[219] Edgar, 'Occupational diversity', 53.
[220] Edward Higgs, 'Occupational Censuses and the Agricultural Workforce in Victorian England and Wales', *Economic History Review*, XLVIII, 4, (1995), 700-716. Edward Higgs, *Making Sense of the Census*, (London, HMSO, 1989). Edward Higgs, 'Women, Occupations and Work in the Nineteenth-Century Censuses', *History Workshop*, 23, (1987), 59-80.
[221] Mills, Edgar and Hinde, 'Southern Historians'; Higgs, 'Women, Occupations and Work'; Bridget Hill, 'Women, Work and the Census: a problem for historians of women', *History Workshop Journal*, 35, (1993), 78-94.
[222] Howard Newby, *Country Life*, 79-96.

Generally these were quite small industries, often based on local resources, though some were larger and had importance outside their local context.[223] The south-eastern corner of Dorset, the Isle of Purbeck, was particularly rich in such industries; clay mining, stone quarrying, and a fledgling tourist industry were all important modifiers of the local economy during the nineteenth century and into the twentieth century.

Figure 4.1 Location of the Isle of Purbeck



Purbeck is not an island in the usual sense of the word. It is actually a peninsula of around 60 square miles, forming the southeast corner of Dorset. Purbeck's 'island' status stems

[223] The quarries on the Isle of Portland and the rope and net-making industries at Bridport are examples of industries that marketed their products nationally.

from its boundaries being largely delimited by water. To the north there are the River Frome and the southern shore of Poole Harbour; on the east and south the English Channel forms the boundary as far west as Worbarrow Bay. From there the boundary runs northwards overland for a mile or so. It then follows a small stream called Luckford Lake north to the Frome once again.[224]

Physically the Isle of Purbeck is divided into two roughly equal parts by a high ridge of chalk running from east to west across its length. The northern half of the island is largely low-lying barren heathland. To the south the chalk hills form the northern side of a broad fertile valley that also runs from east to west. The southern side of this valley then runs up to a limestone plateau that extends southwards to the English Channel.

Although not properly an island, and despite its proximity to two of Dorset's main towns, Wareham and Poole, Purbeck has historically been an isolated area. Dorset has never had good road communications and Purbeck's roads were particularly poor.[225] Writing in 1882, Robinson noted that 'Up to about the middle of the last century...there appears to have been an utter want of metalled roads in Purbeck'.[226] The second half of the eighteenth century saw the construction of Purbeck's first turnpike but it did not extend all the way to Swanage and the road system remained much as it had been in medieval times.[227] A century later the situation had improved somewhat, particularly with the construction of the first through road from Corfe Castle to Swanage in 1862, though the island's roads continued to be compared unfavourably with those elsewhere.[228] A mail coach did run between Swanage and Wareham, and from around 1851 it also carried passengers.

There was no railway line to compensate for the inadequacy of Purbeck's roads until late in the nineteenth century. Although the main line from Southampton to Dorchester,

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[224] The traditional boundaries of the Isle of Purbeck include the parishes of Arne, Church Knowle, Corfe Castle, Kimmeridge, Langton Matravers, Steeple, Studland, Swanage, Tyneham and Worth Matravers, together with the extra-parochial place of East Holme (I am grateful to R.J. Saville, Chairman and Curator of the Langton Matravers Local History and Preservation Society, for clarifying this point).

[225] Crickland and Vellacott, 'Industries'. 326.

[226] C.E. Robinson, *A Royal Warren or Picturesque Rambles in the Isle of Purbeck*, (1882), 42.

[227] Rodney Legg, *Old Swanage: quarry port to seaside spa*, (Sherborne, Dorset Publishing Co., 1983), 25; John Hutchins, *History and Antiquities of the County of Dorset*, 3rd Edition (4 Vols, eds. W. Shipp and J.W. Hodson, Westminster, 1861-1870), 462.

[228] Hutchins, *History and Antiquities*, 466.

completed in 1847, ran through Wareham, only ten miles from Swanage, a branch line into Purbeck was not constructed until the 1880s. An Act was passed for a branch line to Swanage in the 1860s but it was never built, apparently because of fierce opposition from the town of Wareham. Railway engineers eventually surveyed the island in 1880 and the following year, despite further opposition from Wareham, an Act was passed enabling the building of a line between Wareham and Swanage. Work began on 5 May 1881 at Wareham and the line was opened exactly four years later on 5 May 1885. The construction of this railway line had profound consequences for Purbeck, not least in opening up the island, and Swanage in particular, to tourism.

Before the railway opened in 1885 Purbeck's main communications artery to the rest of Dorset and the country beyond, was the huge expanse of Poole Harbour. The port of Poole had served as the main supply centre for Purbeck for centuries. Prior to the eighteenth century, quays on the southern shore of Poole Harbour had been the shipping points for Purbeck stone. By 1700 most of Purbeck's stone was being exported from Swanage on the island's channel coast, but there were still at least two ferry services operating across the harbour between Purbeck and Poole during the eighteenth and nineteenth centuries.[229] In the middle of the nineteenth century two market boats sailed twice weekly between Swanage and Poole. In the 1860s tourist steamers began calling on Swanage, carrying day trippers from Bournemouth and the Isle of Wight.[230]

The combination of geographical location and poor road communications left Purbeck a rather remote, isolated place, even in the nineteenth century, and this relative inaccessibility reinforced its 'island' status. The island's history, which is bound up with the fortress and town of Corfe Castle, further reinforced this relative isolation. Corfe derives its name from the Saxon 'Ceorfa' - gate or cutting - the site being the only gap in the hills allowing access to the interior of Purbeck. Following the Norman Conquest the whole of Purbeck became a chase or warren, a royal hunting ground belonging to the Crown and governed by the constable of Corfe Castle. Exactly when construction of the castle commenced is not known, but it seems to have been soon after the Norman invasion. There is no evidence of any fortress at Corfe before 1066, though there may have been a

[229] Legg, *Old Swanage*, 58; B.C. Short, *The Isle of Purbeck*, (Poole, J. Looker Ltd, 1967), 15.
[230] *Hunt & Co.'s Directory of Dorsetshire*, (London, Hunt & Co., 1851; Lawrence Popplewell, *Stone Blocks and Greenheart: Swanage seen from its Piers, 1859-96*, (1988)

Saxon hall-house on the site.[231] During the following two centuries the castle was enlarged to become one of the strongest fortresses in England. It stands just to the north of the town, opposite the church, on a steep rocky hill. Roughly oval in form it is approximately half a mile in circumference.

The land on which the castle and town of Corfe are built does not appear to have been ancient demesne of the Crown, though it is frequently referred to as such.[232] Neither the town nor the castle is named in Domesday Book and there does not seem to have been a settlement there at that time. It is probable therefore that the town developed to service the castle. The land on which they are built seems to have comprised part of the manor of Kingston, acquired by William the Conqueror in exchange for the church of Gillingham in north Dorset. This parcel of land became the castle, town and liberty of Corfe. A description of its boundaries does exist although it is impossible now to trace them exactly on the ground.[233]

The castle, town and liberty of Corfe, along with much of the island, remained royal property until they were sold in 1572, when Queen Elizabeth I granted to Christopher Hatton, later Sir Christopher Hatton:

> the said demesne lands, also the castle, with its liberties, privileges, and royalties, and the lordship and manor of Corfe, and all the lands and hereditaments in Corfe known by the name of the Castle, lordship or manor of Corfe, ... the whole Isle of Purbeck, viz. The government of it, forest, chase and free warren, and all the Queen's hereditaments there... to be held of the queen in chief.[234]

In 1576 she also granted him:

> the liberties of the Admiralty within the Isle of Purbeck, that the said Christopher Hatton shall have, receive and enjoy all such liberties as any constable of the castle ever had by reason of any former letters patent or otherwise.[235]

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[231] David A. Hinton, 'Some Anglo-Saxon charters and estates in South-East Dorset', *Proceedings of the Dorset Natural History and Archaeological Society*, 116, (1994), 11-20; Thomas Bond, *History of Corfe Castle*, (1883).
[232] Hinton, 'Some Anglo-Saxon charters'.
[233] Hinton, 'Some Anglo-Saxon charters', 13-16.
[234] Hutchins, *History and Antiquities*, 470-71. Corfe seems to have become a manor with this sale.
[235] Hutchins, *History and Antiquities*, 471.

These grants were confirmed in 1585.[236] The constable of the castle enjoyed considerable hegemony over the inhabitants of the town and the island as whole, and presumably this explains why Hatton was keen to have these privileges for himself. Hatton died in 1591-2 and the properties passed to his nephew, Sir William Hatton, alias Newport. In turn, he gave the castle, manor and most of his lands in the island to his wife. She and her second husband, Lord Chief Justice Coke, sold them in 1635 to Sir John Bankes.[237]

The constable of Corfe Castle was also Admiral and Lord Lieutenant of the Isle of Purbeck. When the Crown sold the castle and lordship of Corfe in 1572 these became hereditary offices vested in the owner. The Lord Lieutenant was responsible directly to the Crown and was *Custos Rotulorum* - keeper of records. He had the power to raise and muster a militia and of appointing all officers in the island. His bailiff or deputy determined all actions and suits. Normally a Lord Lieutenant was appointed over a whole shire and it was extremely rare for a private individual to hold such an office.[238] The office of Lord Lieutenant of the Isle of Purbeck disappeared in 1757, when the Militia Act was passed, as the Bankes family, owners of Corfe Castle since 1635, did not press their claim. Purbeck then passed under the jurisdiction of the Lord Lieutenant of Dorset, and for the first time since the Norman Conquest the Isle of Purbeck was administered with the rest of Dorset.

During the English Civil War, Corfe Castle became famous for the heroic defence made by Lady Mary Bankes against Parliamentary forces besieging the castle, while her husband was away with the King.[239] The castle was taken on 26 or 27 February 1645 and ransacked by the occupying forces. Following a vote in the House of Commons, on 4 March 1645, its walls and towers were blown up with gunpowder.[240] The castle was never rebuilt and its destruction saw the ending of a resident landlord at Corfe.[241]

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[236] Hutchins, *History and Antiquities*, 471.
[237] Hutchins, *History and Antiquities*, 471.
[238] Hutchins, *History and Antiquities*, 463, 471; Short, *Isle of Purbeck*, 2; John Richardson, *The Local Historian's Encyclopaedia*, (New Barnet, Historical Publications, 2nd Edition, 1986),38.
[239] Hutchins, *History and Antiquities*, 504.
[240] Hutchins, *History and Antiquities*, 509.
[241] Following the restoration the Bankes family built a house at Kingston Lacy near Wimborne and lived there until the late Walter Bankes left the estate (including Corfe Castle) to the National Trust in the 1980s.

The first detailed description of the privileges enjoyed by the town is found in an inquisition dated 1381 into what 'possessions, rents, rights, customs and liberties from ancient times belonged and then still belonged to the castle and lordship of Corfe'.[242] The jury summoned to hear the inquisition stated that the 'liberties, rights and customs' they noted down were 'contained in the Custumal of the castle ... and also in the Custumal of the town' and that these had 'been exercised from time immemorial'.[243] Some of these are listed in Appendix One and they illustrate the extent to which the inhabitants of Corfe, and Purbeck generally, regulated their own affairs. In many ways they were administered separately from the rest of Dorset.

Although always referred to as a town, Corfe was a borough by prescription; that is, it was referred to as a borough in letters patent or other state document. It had no charter of incorporation until the sixteenth century.[244] This was not uncommon for towns so closely linked with an important royal fortress. Corfe certainly had a mayor quite soon after the office was introduced in this country, as in 1291 an Inquisition found that the Mayor of Corfe Castle had the right of 'pesage' (a weighing monopoly) of wool, cheese and other merchandise. For this privilege he paid two pounds of wax per annum, valued at twelve pence.[245] Corfe Castle did not return any members to Parliament until 1572, a privilege probably procured by Christopher Hatton.[246] In 1576 he also obtained a charter of incorporation for the borough. However, the privileges granted by the latter, though notable, were largely vested in the lord of the manor rather than the burgesses.[247] They seem to have rather resented their subservient status and in 1603 despatched a letter to their representatives in Parliament, asking them to obtain from King James I a confirmation of their ancient liberties and privileges.[248] These were not confirmed until 1679, however, in a charter granted by Charles II, following representations from Thomas Osborn, Duke of Leeds.[249]

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[242] Hutchins, *History and Antiquities*, 496.
[243] Hutchins, *History and Antiquities*, 496. Strictly speaking, the phrase 'Time Immemorial' denotes time beyond legal memory, i.e. before 1189.
[244] Hutchins, *History and Antiquities*, 471.
[245] Hutchins, *History and Antiquities*, 496.
[246] Hutchins, *History and Antiquities*, 470.
[247] Hutchins, *History and Antiquities*, 471.
[248] Browne Willis, *Notitia Parliamentaria*, Volume II, (London, 1696); Hutchins, *History and Antiquities*, 471.
[249] The charter is reproduced in Hutchins, *History and Antiquities*, 474-80.

The importance of the stone trade in medieval times is reflected (at least in part) in the rights and privileges granted to the free men of Corfe. These freemen will have constituted the core of the original medieval Company of Marblers. The men who comprised the 1651 (and later) Company clearly considered themselves to be the inheritors of these rights and privileges, despite the fact that by then the stone trade had become based in Swanage and Langton Matravers rather than Corfe Castle. The freemen of Corfe clearly considered their rights and privileges worth having; otherwise they would not have spent over 70 years attempting to get them ratified.

Corfe's small size and its status as a possession of the lord of the manor meant that the town became a rotten borough. Many of its MPs came from either the Bankes family, owners of Corfe, or the Bond family, prominent landowners in Purbeck since the 16th century.[250] The borough of Corfe was disenfranchised as a separate constituency by the Reform Bill of 1832 and united to Wareham. However, both places were permitted to remain unaffected by the Municipal Act of 1835.[251]

History of the Stone Trade

Purbeck's history has not just revolved around the castle at Corfe. In the medieval period the island was also famous for its stone quarries. Stone has been quarried in Purbeck since Roman times but the industry rose to national prominence following the Norman Conquest.[252] During the Middle Ages huge quantities of Purbeck marble (actually a polished limestone) were exported for interior use in ecclesiastical buildings throughout England, most notably for carved stone columns.[253] Indeed, it has been said that:

> nearly every English church of any size that was built from 1170 to 1350 imported for its use these polished dressings which. . .were not only moulded and chiselled with delicate foliage, but were carved too into fine head corbels or into relief panels of five figure subjects.[254]

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[250] There is a list of the town's MPs from 1572 in Hutchins, *History and Antiquities*, 472-3.
[251] Hutchins, *History and Antiquities*, 473.
[252] G. Dru Drury, 'The Use of Purbeck Marble in Medieval Times', *Proceedings of the Dorset Natural History and Archaeological Society*, 70, (1948), 72-103.
[253] Drury, 'The Use of Purbeck Marble', 79.
[254] *Archit. Rev.*, XII, 5; quoted in M.M. Crickland and C.H. Vellacott, 'Industries', in W. Page (ed.), *The Victoria History of the County of Dorset*, Vol. 2, (London, Constable, 1908), 331.

Purbeck marble was also used for altar slabs, fonts, coffin lids, effigies, and as a base for memorial brasses.[255]

The marble quarries lay to the south of the town of Corfe Castle, which served as the industry's headquarters. Many of the smaller items appear to have been carved and sculpted at Corfe prior to shipping from Ower and other quays on Poole Harbour.[256] However, on large projects marblers commonly worked on site.[257] Indeed, the long series of royal works undertaken at the Abbey and Palace of Westminster during the thirteenth and fourteenth centuries had led, by 1269, to the establishment of a colony of Purbeck marblers in London.[258] This association between London and the Purbeck quarries continued down to the twentieth century and has been an integral part of the industry's history. Besides marble, huge quantities of building stone were used to construct Corfe Castle. The quarries also provided stone for churches and large domestic buildings in Purbeck and east Dorset. Curiously enough it seems that the town of Corfe, with the exception of one or two large houses, was itself only built of stone following the destruction of the Castle (using debris from the ruins).

During the fifteenth century the passion for ecclesiastical building subsided, and with it the demand for Purbeck marble. This period also saw the introduction and rise of alabaster as the preferred material for carving effigies.[259] By the end of the fifteenth century the marble industry had largely ceased to exist.[260] Small quantities were produced into the seventeenth century, but stone for general building purposes became the staple.

There are few records of the Purbeck stone quarries between 1500 and the mid-seventeenth century. Many of the early records of the castle, town and stone trade seem to have been lost or destroyed around the time that Parliamentary forces occupied the town and castle. An inventory of items taken from the castle by Parliamentary troops includes 'Many books and papers, at the value of 1,300*l*, all new and good, with many other things not mentioned.' It may have been that some of the early records were either part of these

[255] Drury, 'The Use of Purbeck Marble', 77-95.
[256] Drury, 'The Use of Purbeck Marble', 75.
[257] Drury, 'The Use of Purbeck Marble', 97-98.
[258] Drury, 'The Use of Purbeck Marble', 78.
[259] Drury, 'The Use of Purbeck Marble', 95.
[260] Drury, 'The Use of Purbeck Marble', 95.

papers, or suffered the same fate.[261] The destruction of the castle at Corfe and general dislocation of the Civil War period seems to have resulted in a fundamental reorganisation of the trade between 1650 and 1700, as part of which the geographical focus of the stone industry shifted southwards. New quarries were opened close to the small port of Swanage on Purbeck's channel coast, and by 1700 Swanage had superseded Corfe Castle as the industry's headquarters and distribution centre. Quarries were also opened in the adjacent parishes of Langton Matravers and Worth Matravers, although perhaps not until a little later in the eighteenth century.[262]

The new quarries produced freestone for general building purposes, especially paving. A great deal of Purbeck stone was used in the rebuilding of London after the great fire of 1666 and it is probable that this event provided a significant stimulus to the reorganisation and renaissance of the industry.[263] By the 1720s, when Daniel Defoe visited Purbeck, there had been a considerable improvement in the industry's fortunes:

> This part of the country is eminent for vast quarries of stone, which is cut out flat, and used in London in great quantities for paving court-yards, alleys, avenues to houses, kitchens, footways on the side of the high-streets, and the like; and is very profitable to the place, as also in the number of shipping employed in bringing it to London.[264]

Paving was the staple product, but there were also large contracts to supply stone for sea defences and fortifications along the south coast.[265] Most notably, tens of thousands of tons of Purbeck stone were used in the construction of Ramsgate Harbour between 1750 and 1771.[266] Churches also continued to make use of the products of the Purbeck quarries, as the following entry from the Vestry minute book of St Dunstan's, Stepney, shows: 'Order'd that every Corps being buried in the Church shall be Cover'd with a Purbick stone by the Relations or Executors of the Deceas'd in case there is no stone already upon

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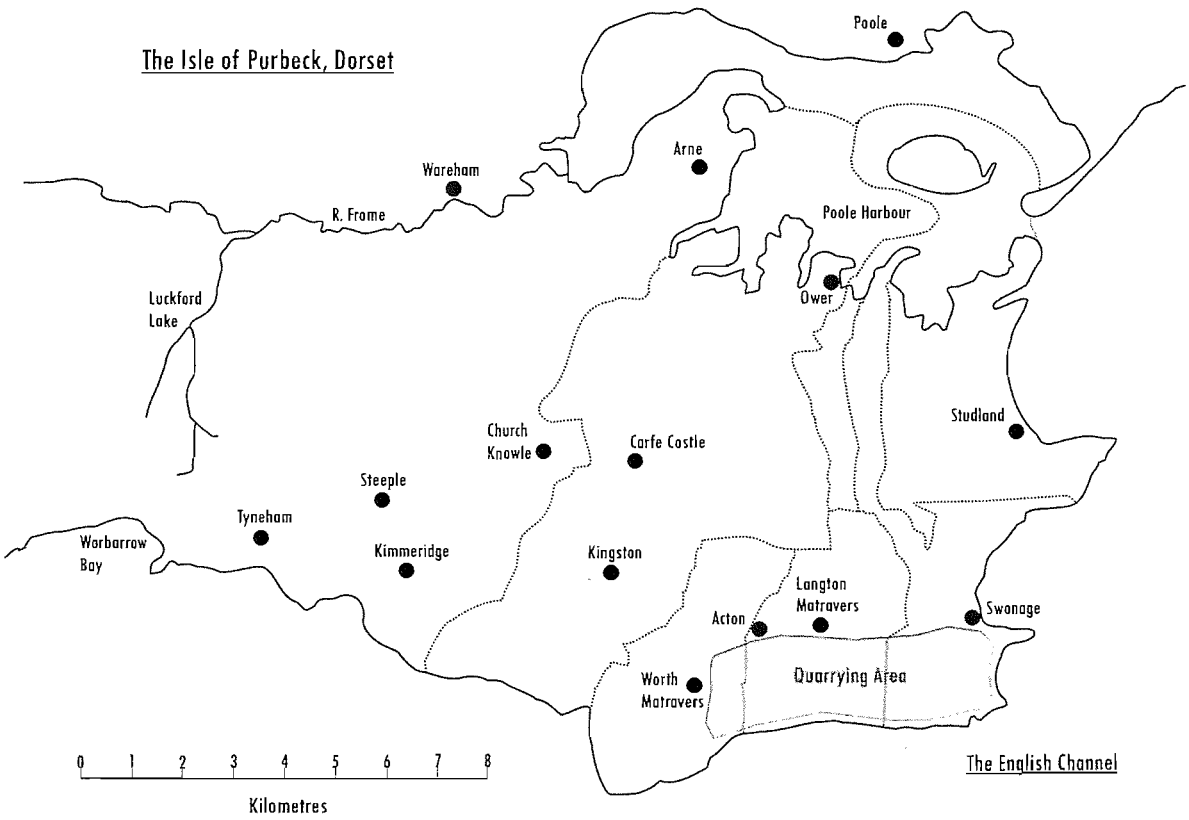
[261] Bond, *History of Corfe Castle*, 123.
[262] Edgar and Hinde, 'The stone workers of Purbeck', 76.
[263] Hutchins, *History and Antiquities*, 464.
[264] Quoted in C. Cochrane, *Poole Bay and Purbeck (2) 1660-1920*, (Dorchester, Friary Press, 1971), 13.
[265] Eric Benfield, *Purbeck Shop: a Stone worker's Story of Stone*, (Cambridge Cambridge University Press, 1940), 10; Hutchins, *History and Antiquities*, 657.
[266] E.O. Cockburn, *The Stone Quarries of Dorset*, (John Murray, 1971), 17; Crickland and Vellacott, 'Industries', 337; Meriel Moore, 'Stone quarrying in the Isle of Purbeck: an oral history', unpublished M.A. thesis, (Department of English Local History, University of Leicester, 1992), 45-46. See also letter from Jn Bishop, 10 June 1771, Dorset Record Office (DRO), D/RWR/E107.

the Ground'.[267] The annual output of the Purbeck quarries at the end of the eighteenth century was estimated at around 30-40,000 tons per annum.[268] Population growth and urbanisation ensured that the demand for paving stone, especially in London, continued into the 19th century. The Victorian passion for church restoration also stimulated a small revival in the demand for Purbeck marble. The quarried stone was transported from Purbeck to London and elsewhere by sea.

Figure 4.2 The Isle of Purbeck showing the quarrying area



The industry's move southwards was accompanied by a change in quarrying methods. Prior to the eighteenth century opencast quarries had been used, but the new workings in Swanage, Langton Matravers and Worth Matravers were stone mines.[269] The best beds of

[267] St Dunstan Stepney – Vestry minute book, 1662-1747, (P93/DUN/328), Meeting of Vestry, 4 April, 1727.
[268] J. Claridge, *General View of the Agriculture*, 41.
[269] Frank Baines, 'The History of John Mowlem and Co.', 5 (unpublished typescript, DRO, D432/1).

stone lay deep underground and were accessed by means of inclined shafts anything up to 120 feet deep. The quarriers then tunnelled horizontally along the seams of stone, cutting it out in blocks that were hauled to the surface on trolleys with the aid of a capstan.[270] A variant of this method was used to open quarries in the cliffs along Purbeck's coastline. The cliff was sliced down vertically and then cut or blasted away to form a platform. Large galleries were then driven into the face of the cliff. The platform also served as a wharf; the quarried stone was lowered into boats waiting below and then carried to Swanage. Figure 4.3 is a photograph taken from a postcard dated 1904, and illustrates the technique in practice.

Figure 4.3 Cliff quarries at Tilly Whim in the parish of Worth Matravers, c. early 1900s

Most of the stone for large construction projects such as Ramsgate Harbour came from cliff quarries such as these, and it seems that they were opened specifically for this purpose.[271]

[270] Letter XXVIII, 'The stone quarries of Swanage', in P.E. Razzell and R.W. Wainwright (eds.), *The Victorian Working Class: Selections from Letters to the Morning Chronicle*, (London, 1973), 43-44.
[271] Cockburn, *The stone quarries of Dorset*, 16.

The huge quantities of stone quarried were produced by a large number of small quarries, almost all of which were family concerns. There were no big quarrying companies in Purbeck. Dr C. Le Neve Foster, Inspector of Mines for the west of England, reported in 1878: 'There are nearly a hundred stone mines in the Swanage district, worked by one, two or three men underground, who are in many cases the owners as well as the occupiers'.[272] Those employed in and around a quarry usually totalled between six and twelve.[273] Almost all the quarries were operated by sole proprietors who preferred, where possible, to employ their sons, hiring any additional labour that might be required. In the 1850s and 1860s it was common for children to be put to work around the quarries at eight or nine years of age. If a man's sons were numerous enough he might work his quarry with their labour alone. Sometimes two or more quarriers (generally closely related) would combine to work a quarry.[274] The familial element in the stone trade was very strong with many quarries being handed down from father to son.[275]

Opening a new quarry was a relatively simple process. The prospective quarrier merely asked permission of the landowner (or their agent) under whose ground he wished to work. If this was granted (and it appears that generally it was), the quarrier sank his shaft, erected a capstan at the top and built a small enclosure to form a working area. The farmer who occupied the land did not have any say in the matter; the agreement was solely between landowner and quarrier.[276] The landowner retained the mineral rights of the land and received an annual royalty, based on the type and quantity of stone extracted.[277] In 1851 these 'dues' as they were known, were said to be one shilling for every hundred cubic feet of solid stone and the same for every hundred feet of paving stone.[278] The property rights of the quarrier were extensive but not absolute: he could bequeath or sell his quarry, provided he did not leave it unworked for more than a year and a day.

[272] Quoted in Crickland and Vellacott, 'Industries', 338.
[273] Letter XXVIII, 'The stone quarries of Swanage', 43
[274] Letter XXVIII, 'The stone quarries of Swanage', 43.
[275] Letter XXVIII, 'The stone quarries of Swanage', 38.
[276] Letter XXVIII, 'The stone quarries of Swanage', 39-40.
[277] Edgar and Hinde, 'The stone workers of Purbeck', 76.
[278] Letter XXVIII, 'The stone quarries of Swanage', 38.

Should the quarry be left dormant for such a period, possession of it reverted to the landowner.[279] These agreements between landowner and quarrier had historically been verbal and continued to be so in the nineteenth century. It was extremely rare for a formal written lease to be drawn up; certainly none have survived for the inland quarries, though one or two exist for the cliff quarries.[280]

Despite having no choice in whether or not a quarry was opened on their property, the tenant farmers under whose land quarries were situated were not completely excluded by the system. They had the right, for a fee, to carry the stone from the quarries to the bankers (storage areas) on Swanage seafront. Presumably this was to compensate them for the loss of whatever land was taken up by the quarry site and its debris. It may also have meant that the quarriers paid considerably higher freight charges than would otherwise have been the case.[281] Should a farmer waive his claim then the quarrier was free to make his own arrangements for carriage of his stone. There do not appear to be large numbers of non-agricultural carters present in the CEBs, suggesting that many farmers did take advantage of the opportunity to gain some compensation for the loss of land and general disruption caused by the quarries.

The Purbeck stone industry included two other groups in addition to those who owned or worked in quarries: stonemasons and stone merchants. Stonemasons were employed on the surface to cut and dress the quarried stone to the required size and shape. Quarriers and stonemasons were not, however, mutually exclusive trades. The former were all skilled to some degree as masons, and there is evidence that quarriers would work as masons, on a temporary basis during periods of low demand for stone. Similarly, there was nothing to prevent a mason from working as a hired quarrier or even from setting up in a quarry of his

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[279] Strictly speaking, therefore, the quarriers were only bequeathing or selling the right to work the quarry, not the quarry itself. In the late eighteenth century the Company of Marblers attempted to institute a change to the system which would have given the use of abandoned quarries to the Company. However, at the summer assizes of 1788 a special jury ruled that the status quo should be maintained and that deserted quarries should continue to revert to the landowner. This suggests that although landowners disputed this attempted extension of the quarriers' rights, they do not appear to have sought to overturn the system as a whole. Hutchins, *History and Antiquities*, 687.

[280] There may have been no need for a lease if the quarriers owned their quarries in perpetuity and did not need the farmer's permission to open a quarry. It may be significant that the only extant leases refer to the cliff quarries. Were the inland ones subject to a very old customary system, whereas the cliff workings which were of much more recent origin were not?

[281] Letter XXVIII, 'The stone quarries of Swanage', 38; Hutchins, *History and Antiquities*, 630.

own. It is likely that many individuals moved between the two activities in the course of their working lives. According to C. le Neve Foster, inspector of mines for the west of England, reporting in 1878: 'if men can find work as masons they abandon their quarries for a time and do not return to them until other work is slack'.[282] Quarriers were slightly better paid than masons, however, and it seems that quarrying was viewed as being the more desirable of the two activities.

The third group making up the Purbeck stone industry was a small number of stone merchants who functioned as 'middle men' between the quarriers and the market place. They purchased every ton of stone quarried in Purbeck and sold it on to customers throughout England and Wales. This meant that they effectively controlled the entire trade. However, the system also helped insulate the quarriers from fluctuations in demand, at least in part, since the merchants frequently continued to purchase stone when there was no immediate demand for it, storing it on the bankers at Swanage until trade picked up again. Such 'philanthropy' on the part of the merchants was made possible because they actively promoted a system of truck in the three quarrying parishes. The quarriers were paid only a small proportion of the price they received for their stone in cash. The balance was 'paid' in the form of extended rolling credit at shops owned by the merchants. Consequently the quarriers were obliged to pay their own hired labour in stone rather than cash, thereby forcing them into the merchants' truck system too. This 'captive market' allowed the merchants to charge higher prices in their shops than if a normal cash economy had existed. The buying power of stone workers' wages was much reduced by the truck system and it was the cause of much complaint in the quarrying communities.[283]

At the heart of the stone industry was the requirement that all the Purbeck quarriers, masons and merchants must belong to an organisation known as the Company of Marblers and Stone Cutters. The Company was probably of medieval origin, although no records confirming this have survived. Its early records were apparently destroyed in a fire at

[282] Quoted in Legg, *Old Swanage*, 22.
[283] Hutchins, *History and Antiquities*, 630; Letter XXVIII, 'The stone quarries of Swanage', 43-44.

Corfe Castle in the 1680s.[284] The earliest extant document is a copy of the Company's ten Articles of Agreement dated 3rd March 1651.[285]

The articles are 'drawen out of the auntient records' and some are probably of considerable antiquity.[286] Indeed, the Company's rules and organisation are very reminiscent of those of medieval craft or trade guilds. Their premise was that employment in the Purbeck stone industry should be reserved to freemen of the Company and their apprentices. Freemen employing non-Company labour, or taking non-freemen as partners were liable to fines and forfeitures. Apprentices could be set to work at any age but had to be at least 21 years of age before they could become a freeman. Apprenticeships lasted seven years, during which time the apprentice was required to lodge in the freeman's home. In practical terms the latter stipulation probably restricted apprenticeship to the sons and relatives of freemen.[287]

Having attained his majority an apprentice was eligible to be enrolled as a freeman at the Company's annual meeting, held every Shrove Tuesday at Corfe Castle. Provided that he had completed his seven-year apprenticeship and was of good character an apprentice could enrol as a freeman by paying 6s 8d, and providing a penny loaf and two pots of beer for the Wardens of the Company.[288] Newly admitted freemen had to wait seven years before taking an apprentice of their own. When a freeman married the sum of one shilling was payable to the Wardens on the following Shrove Tuesday. This secured to his wife the right, in case of his death, to have an apprentice work for her.[289]

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[284] Letter XXVIII, 'The stone quarries of Swanage', 45-47; Hutchins, *History and Antiquities*, 682.
[285] DRO, Articles of agreement and rules of the Company of Marblers, 3 March 1651/2, D/619. Much ambiguity surrounds the date of this document. Several copies are in existence, at least one of which bears the date 3 March 1551. The text of all the copies I have studied seems, however, to be identical. The wording of the 1651 document suggests that it is a copy of an earlier document.
[286] DRO, D/619.
[287] Moore, 'Stone quarrying in the Isle of Purbeck', 68-69. It was also forbidden for a freeman to take an apprentice who was illegitimate or whose parents had led a 'loose lyfe', DRO, D/619.
[288] DRO, D/619.
[289] DRO, D/619. Other articles laid out penalties for working another freeman's quarry without his consent, undercutting an agreed bargain of sale, disregarding the Wardens' instructions, and revealing the Company's secrets.

In 1697, the trade was going through a depressed period and apprenticeship was explicitly limited to the sons of freemen.[290] It appears that this measure was originally intended to apply for a period of 14 years. It is not clear whether it was ever formally made permanent, but in practice it seems to have become so by the nineteenth century. Analysis of the Langton Matravers marriage registers, 1813-1891, provides no evidence of anyone other than the son of a freeman entering the stone trade.[291]

The Purbeck stone workers certainly considered themselves to be a 'special' group and their way of life and traditions were much commented on in the 19th century. In 1851 the *Morning Chronicle* said of Purbeck that:

> amongst the other peculiarities of this singular district, it must be borne in mind that its people have their own laws, and their own mode of giving them effect. It is possible, no doubt theoretically, that an English writ might issue into a Swanage quarry; but English law has, generally speaking, very little to do with the practical administration of Swanage justice.[292]

Similar comments were still being made 30 years later, in March 1880, when the Inspector of Factories and Workshops published a report on the Purbeck stone workers. They were described as 'holding a sort of tradition that they are beyond all laws, and that they would have a sort of right to make regulations for their own government'.[293] This sense of having a 'special' status appears to have been rooted in cultural history and folk memory. The Company, with its emphasis on hereditary access to the stone trade can be seen as part of that cultural history; indeed it reinforced it. Yet the true origins of this perceived special status lie much earlier than the recorded history of the Company. As was described above, the whole of the Isle of Purbeck had been a Royal Warren from as early as the eleventh century. This, allied to the presence of an important royal fortress in Corfe Castle, led to the inhabitants being granted many privileges by the Crown. Amongst these, the Purbeck stone workers claimed to have been granted a charter that conferred upon them the right to enter any man's land and open a quarry there, regardless of whether the landowner gave his permission or not. Unfortunately the charter itself had disappeared and no other

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[290] DRO, D619/1, Articles of agreement of the Company of Marblers, including articles to set up a joint stock company, 8 March 1697/8.
[291] Edgar and Hinde, 'The stone workers of Purbeck',79.
[292] Letter XXVIII, 'The stone quarries of Swanage', 40.
[293] Report of the Chief Inspector of Factories and Workshops for year ending 31 October 1879, *British Parliamentary Papers*, 1880/XIV (C. 2489), 81.

documentary evidence confirming its existence could be produced. Nonetheless, the stone workers were vehement in their claims for this lost charter and the belief that these privileges had been granted was very strong. This was a regular cause of friction between landowners and quarrymen. It is interesting to note that one of the ancient customs and privileges identified by Sir Christopher Hatton was that the 'ffree barons and inheritours of Corffe' had the right to enter any man's land, with or without his permission, in order to cut turves. This would probably have been as disruptive to farmers and landowners as opening a quarry on the land. Therefore, the principle of entering someone's land and working it, with or without their permission, was not unknown in Purbeck.[294]

Two court cases in 1853, one at Wareham Petty Sessions and the other at Wareham County Court illustrate this. The defendants, different in each case, were summoned for wilful trespass and carrying away stone. In both cases a solicitor appointed by the Company of Marblers defended them.[295] At both trials the defendants freely admitted entering the land and removing the stone. It was argued in both, however, that they acted in the belief that they were at complete liberty to do so as freemen of the Company. They cited as their authority the 'lost' charter and the customs and privileges therein. Both trials were halted at this point. The justices at the Petty Sessions and the County Court judge accepted that the defendants acted under a *bona fide* belief. They declared that therefore they had no jurisdiction in the matter, which would have to be referred to a superior court for a definitive ruling. However, in neither case does there appear to be any documentary record of a ruling being sought from any higher court. The suspicion must be that both cases were eventually settled out of court. Therefore the quarriers' claim that they had the right to enter any man's land and open a quarry was never actually tested in a court of law.[296]

The Purbeck stone workers were not unique in possessing (or believing themselves to possess) special rights and privileges. The customs and privileges of the lead miners of Derbyshire are documented from 1288, following a petition to the King. In succeeding centuries they were amended and expanded, eventually being incorporated into Acts of

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[294] Hutchins, *History and Antiquities*, 498; and Appendix One below.
[295] This solicitor happened to bear the name Phippard, one of the most prominent quarrying families in Purbeck.
[296] These two court cases were reported in the *Poole and South Western Herald*, 1 September 1853, 8, and 17 November 1853, 8.

Parliament in 1851 and 1852.[297] Similar lists of 'laws' exist for the mines of north Yorkshire and the Mendips.[298] The ancient rights and customs of the free miners of the Forest of Dean are also well documented, as are those of the tinners of Cornwall and Devon.[299] The privileges secured by these groups of miners were largely at the expense of other members of the local community, notably farmers, who typically had to allow miners to sink a shaft on their land if they so desired.[300] The potential for conflict is clear and it is not surprising that disputes between miners and landowners occasionally arose. In other mining districts, however, the miners could generally cite legal documents to confirm their rights; in Purbeck no such document appears to have survived, though the quarriers clearly believed it had once existed.

Interestingly, and perhaps rather peculiarly, the Purbeck stone workers' strong cultural history and folk memory appears not to have manifested itself in the form of shared or communal social or cultural activity, at least in the nineteenth century. Dedicated social gatherings for stone workers and their families seem to have been absent. The only supra-familial organisation of any kind appears to have been the Company, the purpose of which was rather resolutely to defend and sustain the stone trade, with only the barest minimum of ceremonial activity. Indeed, the folk memory and shared traditions of the stone workers as a whole were chiefly appealed to in order to combat perceived threats to the industry, certainly in the nineteenth century, at least.[301]

A combination of factors stemming from the island's social, economic and political history probably accounts for the survival of the stone trade and the Company of Purbeck Marblers for as long and in the distinctive form that they did. The national importance of the stone trade and Corfe Castle in medieval times is reflected in the rights and privileges granted to the freemen of Corfe. These freemen will have formed the core of the original Company of Marblers. Those who comprised the Company in later centuries clearly considered themselves to be the inheritors of these rights and privileges, despite the relocation of the

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[297] See A. Raistrick and B. Jennings, *A History of Lead Mining in the Pennines*, (London, Longmans, 1965), 102-104.
[298] Raistrick and Jennings, *A History of Lead Mining in the Pennines*, 104-113.
[299] See C.E. Hart, *The Free Miners of the Royal Forest of Dean and Hundred of St Briavels*, (Gloucester, British publishing Co., 1953); and G.R. Lewis, *The Stannaries: a Study of the Medieval Tin Miners of Cornwall and Devon*, (Truro, D. Bradford Barton, 1965).
[300] Raistrick and Jennings, *A History of Lead Mining in the Pennines*, 182.
[301] Edgar and Hinde, 'The stone workers of Purbeck', 86-87.

stone trade to Swanage and Langton Matravers. From shortly after the Norman Conquest until the mid-eighteenth century the island largely administered its own affairs, separately from the rest of Dorset. In conjunction with Purbeck's geographical isolation, it seems reasonable to suggest that this semi-autonomous existence engendered a distinctive sense of place amongst the island's inhabitants. Amongst the stone working families this was reinforced by their membership of the Company, with its exclusive admissions criteria. The broad continuity of landownership in the island meant that most of the land-owning families in Purbeck in the nineteenth century had histories paralleling that of the Company and the stone trade. Indeed, the Serrells at Langton Matravers appear to have been members of the Company in past centuries, as two men of that name are signatories to the Company's 1651 articles.[302]

The Purbeck stone workers undoubtedly considered themselves to have a 'special' status locally, despite the fact that there was no statutory basis for the customs, rights and privileges that they claimed (other than the 'lost' charter). They certainly considered themselves to be different and special in some way, compared to people from outside Purbeck. However, there does not appear to be any evidence that groups such as the lead miners of Derbyshire and the north Pennines, the tinners of Devon and Cornwall and the free miners of the Forest of Dean thought of themselves in this way. And these groups possessed extensive and unusual rights and privileges that were enshrined in statute law. However, their strong sense of place notwithstanding, the stone workers were quite prepared to leave Purbeck if work was in short supply and seek employment elsewhere - either temporarily or permanently.

[302] DRO, D/619.

Chapter Five

The Isle of Purbeck in Demographic Context

The parish of Langton Matravers lies in the extreme south of the Isle of Purbeck and is bordered by the English Channel. There is no harbour or landing place, however, and the village is situated away from the coast, on the top of the hill on the road from Kingston to Swanage. In the mid-nineteenth century it consisted of a single street almost a mile in length. The parish is made up of two manors, Langton Matravers and Langton Wallis, comprising the east and west portions respectively. In area the parish comprised some 2,353 acres.[303] The 1841 tithe apportionment reveals that 16 persons owned land in Langton Matravers. A somewhat larger number owned cottages but no land except, in some instances, a garden. Four landowners owned more than 100 acres: Walter John Bankes (858 acres), Joseph Galston Garland (767), Reverend Samuel Serrell (214), and John Hales Calcraft (111).[304] None of these farmed their own land, and only Serrell resided in the parish. Bankes, who owned Corfe Castle and was by far the biggest landowner in Purbeck and one of the largest in Dorset, lived at Kingston Lacy near Wimborne. The Garlands were a Poole family, while Calcraft lived on an estate in the neighbouring parish of Corfe Castle. An amended tithe apportionment of 1887 shows that this pattern of ownership persisted throughout the century, the main change being that another Purbeck landowner, the Earl of Eldon, had acquired 100 acres in Langton.[305]

Pastoral farming dominated Langton's agricultural economy, with only around 40 per cent of the land being used for arable production.[306] At the end of the eighteenth century the majority of Langton's men were employed in the Purbeck stone trade.[307] Their wives and children either knitted stockings or spun flax for a short-lived factory established at nearby Kingston.[308] Housing was in short supply; even when they offered to pay the rent in advance many quarriers and labourers were unable to find cottages and were forced to rely

[303] Hutchins, *History and Antiquities*, 630.
[304] 1841 Tithe Apportionment, DRO: T/LAM
[305] 1887 Tithe Apportionment, DRO: T/LAM
[306] Hutchins, *History and Antiquities*, 630. Hutchins calculates these figures from the tithe survey.
[307] Hutchins, *History and Antiquities*, 630.
[308] Hutchins, *History and Antiquities*, 630.

on the parish poor houses for accommodation.[309] The lack of available cottages may indicate that the stone trade was in a period of expansion, with new quarries being opened in Langton, precipitating an influx of stone-working families from Swanage with which Langton's housing market was unable to cope. Another possibility is that Langton's landowners were concerned to protect the poor rate. By keeping the housing stock to a minimum they may have hoped to deter families from settling in Langton who might one day become a charge on the parish.[310] Fuel was also scarce, and as was noted in Chapter 4, a variation of the truck system was strongly entrenched in the area. Fifty years later not a great deal had changed. The factory at Kingston was long-gone, and the women no longer knitted stockings, but quarrying remained the main employment for men. The pressure on housing had apparently abated, despite a 50 per cent increase in population between 1801 and 1851. The census of 1851 did, however, show quite a high number of shared houses, suggesting that supply and demand were not entirely reconciled.

Worth Matravers lies around three and a half miles south west of Swanage. It is bounded on one side by the English Channel, and a coast guard station was located there throughout the second half of the nineteenth century. In area the parish consisted of 2,650 acres of land, of which 1,687 were pasture, 908 was arable land, 20 acres were woodland, and buildings and gardens occupied a further 28 acres.[311] In medieval times Worth Matravers had been an important production centre for Purbeck marble, and some was still dug in the nineteenth century, mainly for church restoration purposes, along with stone for building. However, by the mid-nineteenth century farming was very much the mainstay of the parish economy. Perhaps Worth Matravers' main claim to fame since its medieval heyday is that Benjamin Jesty was living on a farm there in 1774 when he developed the first smallpox vaccine, based on cowpox inoculations, which he used to protect his family from the disease. He is buried at Worth Matravers.

Swanage is Purbeck's main town. Originally a chapelry of Worth Matravers, Swanage seems to have begun its rise to prominence in the seventeenth century. By this time the Purbeck marble industry had all but collapsed. There were, however, huge quantities of building stone in the area around Swanage, which appears to have emerged as the main

[309] Hutchins, *History and Antiquities*, 630.
[310] This practice was not uncommon in nineteenth-century rural England.
[311] Hutchins, *History and Antiquities*, 692. These figures were taken from the tithe survey.

centre for this new trade as it was also close to the sea. Most of the stone was exported from Purbeck on ships out of Swanage Bay. Like Langton Matravers and Worth Matravers, much of the land in Swanage was used for pastoral farming. The depredations of the stone industry meant that a lot of land in the area was unsuitable for growing crops. In Purbeck sheep were the staple until the last quarter of the nineteenth century when dairy farming became increasingly important, particularly after the railway arrived in the mid-1880s.[312] At the time of the tithe survey Swanage comprised of some 2,230 acres, of which 1,396 acres were pasture or meadow, 711 acres were arable, and there were 12 acres of woodland.[313] As was noted in Chapter 4, the heyday of the stone industry was probably the second half of the eighteenth century. Following the end of the Napoleonic Wars, the stone industry suffered a major recession, as one of its prime markets had been stone for fortifications at ports around the south coast of England. It is reported that by the late 1820s, the Committee of Swanage Vestry was raising £1,000 annually for poor relief in the parish. There is likely to have been a certain amount of out-migration as a result, but as Table 5.1 below shows, the population continued to grow. The stone industry appears to have recovered somewhat during the 1830s and 1840s, stimulated by the burgeoning demand for paving stone from London and other urban areas.

There seems to have been little work for women in Swanage. It may have been that the relatively high wages earned by stone workers (compared to agricultural labourers) meant that their wives and daughters had less need of work and were therefore less inclined to pursue it. Straw plaiting was introduced to Swanage in the early nineteenth century by the Reverend Andrew Bell. It continued on a small scale throughout the century, but was never a major employer of women.[314] In the mid-nineteenth century several prominent citizens of the town began to see the future of Swanage as lying with the tourist industry. They had recognised that Purbeck stone was increasingly unable to compete with larger quarrying areas such as the Isle of Portland a few miles to the west.[315] An attempt to bring the railway to Swanage in the 1860s failed. However, a summer steamer service between

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[312] P. Hyland, *Purbeck: the ingrained Isle*, (London, Victor Gollancz, 1978), 82. Hyland suggests that the number of sheep in Purbeck dropped by around two-thirds over the course of the nineteenth century.

[313] Hutchins, *History and Antiquities*, 656.

[314] William Masters Hardy, *Old Swanage*, (Dorchester, 1908), 131.

[315] Rodney Legg, *Old Swanage: quarry port to seaside spa*, (Sherborne, Dorset Publishing Co., 1983), 49-50.

Bournemouth and Swanage began running in the 1870s, bringing day trippers from the former. In 1880 a new pier opened in Bournemouth and day trippers started arriving in really large numbers during the summer months. Many of them came to visit the spectacular ruins of the castle at Corfe castle.[316] On August Bank holiday, 1882, 8,876 day trippers were recorded using Swanage pier. Eleven years later, in 1893, more than 125,000 passengers landed at Swanage from steamers, mainly day trippers from Bournemouth.[317] With the arrival of the railway in 1885, the sea-borne stone trade at Swanage began to die off, and it had completely gone by 1896. At the same time, the stone trade itself declined, partly due to competition from other quarrying areas, partly from the introduction of new materials like concrete, and partly because there was more money to be made from tourists. Stone continued to be quarried into the twentieth century, but on a much smaller scale. The advent of the railway, the subsequent decline of the seafront stone trade, and the slow decline of the industry itself meant that the town also changed physically - what had been a dusty industrial stone port became a rather genteel seaside resort.

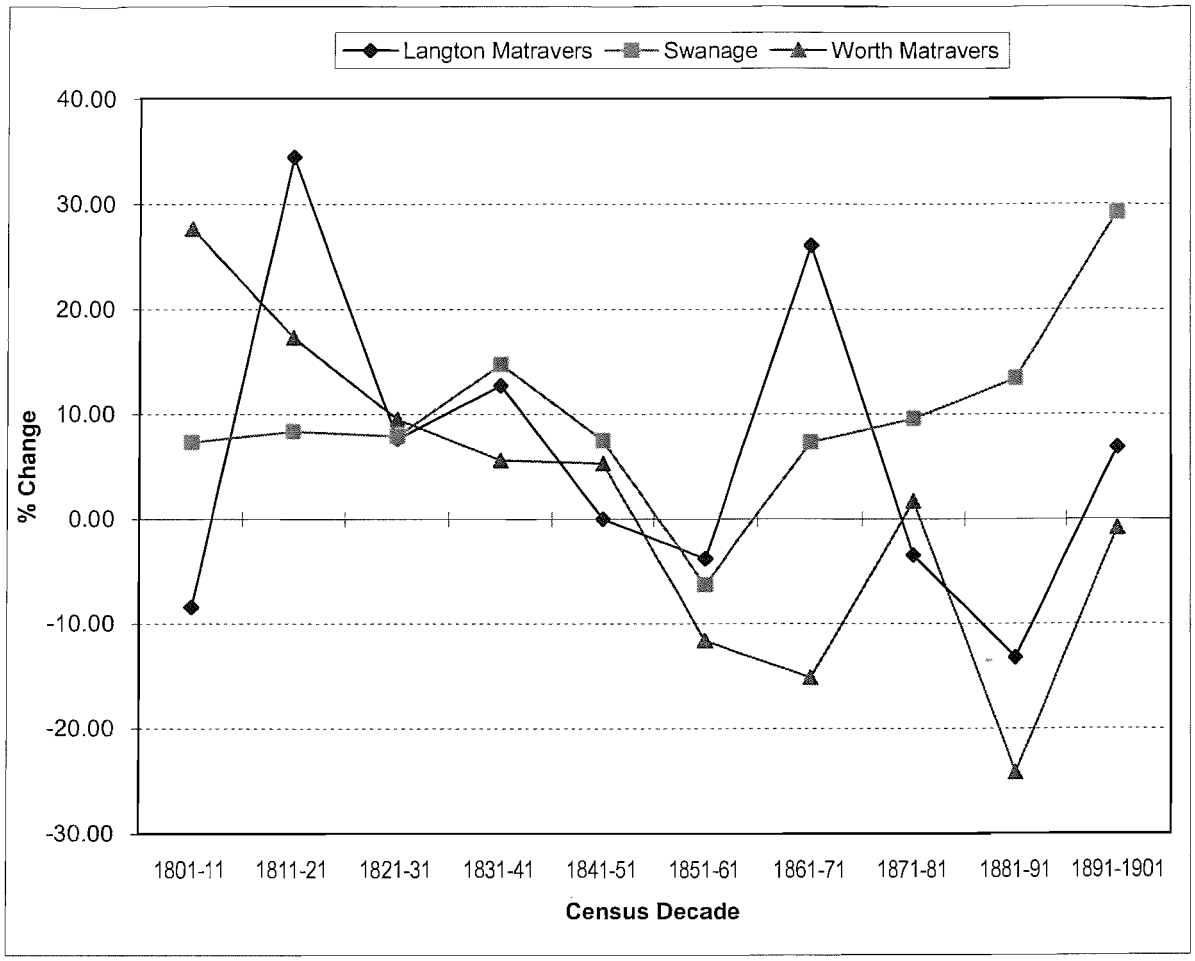
Table 5.1: Population of Langton Matravers, Worth Matravers and Swanage, 1801-1901

Parish	Acres	1801	1811	1821	1831	1841	1851	1861	1871	1881	1891	1901
Langton Matravers	2,316	510	467	628	676	762	762	733	924	892	773	827
Worth Matravers	2,712	217	277	325	356	376	396	350	297	302	229	227
Swanage	3,097	1,382	1,483	1,607	1,734	1,990	2,139	2,004	2,151	2,357	2,674	3,455

Source: G.S. Minchin, 'Table of Population 1801-1901', in W. Page (ed.), *The Victoria History of the County of Dorset*, Vol. 2, London, Constable, 1908, 264-273.

[316] Legg, *Old Swanage*, 42-44.
[317] Lawrence Popplewell, *Stone Blocks and Greenheart: Swanage seen from its Piers, 1859-96*, (1988), Appendix One.

Figure 5.1: Percentage Population Change Langton Matravers, Worth Matravers and Swanage, 1801-1901



As Table 5.1 shows, in general terms Langton shared the population experience of many rural parishes; a rise from 1801 peaking around mid-century, then falling back after 1871. However, the decadal increase/decrease, represented in Figure 5.1, is very uneven, almost certainly reflecting fluctuations in the fortunes of the stone trade. Worth Matravers, on the other hand, has a population profile that is broadly typical of a small agriculture-dominated parish. Its population steadily increased until the middle of the century, before beginning a steady decline after 1851. I suspect that the slight increase between 1871 and 1881 probably stemmed from the coast guard presence in Worth Matravers. Swanage displays a very different profile to either of the other two parishes. Although, like Langton Matravers, it was dominated by the stone trade for virtually the whole century, it does not display the population instability evident at Langton. Nor does it decline after the mid-century as agriculturally dominated Worth does. The population increased steadily in the first half of the century. There is then a small fall in numbers between 1851 and 1861, the

reason for which is not clear. Thereafter, the upward trend resumes, particularly after 1880, with an increase in population of almost 15 per cent between 1881 and 1891, and 30 per cent between 1891 and 1901. This growth is clearly related to the opening up of the area through the arrival of the railway and the rise of the tourist industry.

The different population trends displayed by the three parishes are also evident in the figures for mean household size, detailed in Table 5.2. Worth Matravers shows a steady decline (with the exception of 1881) in mean household size over the second half of the nineteenth century. The rise in household size in 1881 in Worth Matravers is almost certainly related to the coast guard presence there. Some coast guards and their families stayed in the area for long periods; others came and went, presumably at the behest of the service. It seems likely that such a change in personnel among the coast guard (with their families) might well account for the otherwise unexpected rise in household size in 1881.

Table 5.2 Mean Household Size, 1851-1891

	Persons (N)	% Change	Households (N)	% Change	MHS
Langton Matravers					
1851	758		174		4.36
1861	726	-4.22	172	-1.15	4.22
1871	917	26.31	197	14.53	4.65
1881	881	-3.93	205	4.06	4.30
1891	768	-12.38	193	-5.85	3.98
Swanage					
1851	2052		434		4.73
1861	1975	-3.75	442	1.84	4.47
1871	2124	7.54	485	9.73	4.38
1881	2339	10.12	500	3.09	4.68
1891	2575	10.09	569	13.80	4.53
Worth Matravers					
1851	389		80		4.86
1861	344	-11.57	73	-8.75	4.71
1871	295	-14.24	71	-2.74	4.15
1881	292	-1.02	67	-5.63	4.36
1891	223	-23.63	56	-16.42	3.98

Langton Matravers tended to have smaller mean household sizes than the other two parishes. The trend is also more erratic, though it is generally downwards. The quite substantial rise in 1871 echoes the steep rise in the overall population around this time. The churches at Langton Matravers and nearby Kingston were rebuilt in the 1870s and 1880s, and it may be that stone masons from Swanage had moved to Langton Matravers while this work was in progress. Mean household size in Swanage was at roughly the national average in 1851. It then fell in 1861 and 1871 before rising again during the succeeding two decades. Again, this is clearly related to the economic impetus the town gained from its entry into the tourist industry.

Table 5.3 looks in a little more detail at household size, showing the proportions living in households of particular sizes.

Table 5.3 Three Parishes: Proportion of Total Population in grouped Household Sizes, 1851-1891

	Single	Small (1-2)	Moderate (3-6)	Large(7+)
1851				
Langton Matravers	4.60	22.41	60.34	17.24
Swanage	5.76	20.28	55.76	23.96
Worth Matravers	5.00	25.00	46.25	28.75
1861				
Langton Matravers	9.30	23.84	60.47	15.70
Swanage	5.66	22.85	57.47	19.68
Worth Matravers	10.96	21.92	56.16	21.92
1871				
Langton Matravers	3.55	20.81	59.39	19.80
Swanage	5.36	24.12	58.97	16.91
Worth Matravers	2.82	28.17	59.15	12.68
1881				
Langton Matravers	6.83	24.88	58.05	17.07
Swanage	5.60	19.80	58.40	21.80
Worth Matravers	8.96	32.84	40.30	26.87
1891				
Langton Matravers	9.33	30.57	56.99	12.44
Swanage	5.98	21.79	59.58	18.63
Worth Matravers	3.57	23.21	60.71	16.07

Single person households as a proportion of the total population fluctuate quite markedly in the smaller parishes of Langton Matravers and Worth Matravers, unlike the figures for Swanage, which are virtually constant over all five censuses. There may possibly be a slight trend towards more single-person households at the later census dates. This might be expected, as people were living longer by the last two decades of the nineteenth century and one would expect more widowed persons in the population as a result. The figures for the small household (those containing one or two persons) are fairly constant for Swanage and Langton Matravers, though there is the suggestion of a rise in 1891. At Worth Matravers, again, there is a wide deviation from census to census. This probably reflects the much smaller population in this parish, as a small number of individuals can have a significant effect on the analysis. In all three parishes the great majority of people live in the moderate (3 – 6 person) category. Swanage tends to have more of its population living in large households. This probably reflects its status as a small town, with more domestic and occupational servants than in the two smaller parishes.

Table 5.4 Three Parishes: Occupational Structure, 1851-1891

	Sea-based	% Total Pop	Farmers	% Total Pop	Ag Labs	% Total Pop	Professional etc	% Total Pop	Trade/Craft	% Total Pop	Stone Workers	% Total Pop	Total Pop
1851													
Langton	0	0.00	11	1.45	79	10.42	9	1.19	44	5.80	133	17.55	758
Swanage	41	2.00	8	0.39	79	3.85	34	1.66	202	9.84	297	14.47	2052
Worth	17	4.37	9	2.31	65	16.71	4	1.03	7	1.80	33	8.48	389
1861													
Langton	0	0.00	9	1.24	71	9.78	5	0.69	47	6.47	93	12.81	726
Swanage	42	2.13	8	0.41	85	4.30	32	1.62	187	9.47	283	14.33	1975
Worth	15	4.36	7	2.03	61	17.73	3	0.87	13	3.78	23	6.69	344
1871													
Langton	0	0.00	7	0.76	92	10.03	8	0.87	56	6.11	105	11.45	917
Swanage	41	1.93	11	0.52	96	4.52	27	1.27	203	9.55	255	12.00	2125
Worth	12	4.07	9	3.05	48	16.27	4	1.36	8	2.71	21	7.12	295
1881													
Langton	0	0.00	7	0.79	80	9.08	10	1.14	56	6.36	145	16.46	881
Swanage	42	1.80	11	0.47	67	2.86	41	1.75	222	9.49	264	11.29	2339
Worth	13	4.45	6	2.05	42	14.38	2	0.68	9	3.08	27	9.25	292
1891													
Langton	1	0.13	10	1.31	69	9.04	14	1.83	55	7.21	68	8.91	763
Swanage	51	1.98	10	0.39	71	2.76	78	3.03	315	12.23	135	5.24	2575
Worth	18	8.07	7	3.14	40	17.94	5	2.24	11	4.93	11	4.93	223

The occupational structure of the three parishes is shown in Table 5.4, using the six main occupational groups. The importance of the coast guard in Worth Matravers is obvious; indeed, by 1891 they had overtaken stone workers as the second most numerous occupation after agricultural labourers. Swanage has by far the highest number engaged in trades and crafts, as we would expect given its size relative to the other parishes. In all three parishes the proportions working in agriculture seem to have remained almost constant over the second half of the nineteenth century. What is particularly noticeable is the decline of the stone trade – from 1871 in Swanage but in all three parishes especially so after 1881, even in Langton Matravers.

Table 5.5 below details mean household sizes for the six main occupational groups. Again, the figures for Worth Matravers are somewhat variable. Comparing Langton Matravers and Swanage, it is noticeable that the latter tends on the whole to have slightly higher mean household sizes across all occupations at all censuses. In general the average household size for each occupational group remains fairly constant across all five censuses, though the trades/crafts and stone worker categories at Langton Matravers are possibly an exception to this. Professionals and farmers tend to have higher mean household sizes, which would be expected as they are more likely to employ servants. The sea-based households at Swanage (where there was also a coast guard presence) have the highest mean household size of the lower status occupations. In general, stone workers and agricultural labourers display broadly similar figures, particularly in Swanage. None of the occupational categories have exceptionally large mean household sizes.

Table 5.5 Three Parishes: Mean Household Size, 1851, by Occupation of Household Head

	1851	1861	1871	1881	1891
Langton Matravers					
Sea-based	0.00	0.00	0.00	0.00	4.00
Farmers	4.00	6.11	6.43	5.13	4.60
Ag Labs	5.03	4.77	4.68	4.31	5.10
Professional Etc	4.50	4.80	8.75	8.00	6.60
Trades/Crafts	4.41	4.41	4.82	4.45	4.28
Stone Workers	4.41	4.16	4.60	4.48	4.10
Swanage					
Sea-based	5.13	4.67	4.50	5.62	5.18
Farmers	5.88	6.63	6.55	5.64	5.30
Ag Labs	5.07	4.59	4.98	4.76	4.88
Professional Etc	5.83	6.06	6.21	6.32	5.81
Trades/Crafts	5.26	4.70	4.34	4.82	4.83
Stone Workers	4.92	4.89	4.73	4.89	4.82
Worth Matravers					
Sea-based	4.31	4.79	4.00	3.73	3.85
Farmers	5.25	4.80	6.00	5.50	5.00
Ag Labs	5.27	4.74	4.12	4.81	3.82
Professional Etc	1.75	5.50	4.33	4.00	5.33
Trades/Crafts	8.00	5.40	3.33	5.00	4.00
Stone Workers	6.06	5.40	4.10	3.93	5.00

Tables 5.6 to 5.10 below contain the age distribution for all three parishes at each census, including the sex ratio. On the whole the figures are much as expected. There may have been a slight fall in the proportions aged less than ten years in Langton Matravers and Swanage after 1871. This could perhaps hint at the beginnings of family limitation. With the notable exception of 1861, the sex ratio (females per 100 males) in the 0-4 age group at Langton Matravers is consistently high. In the earlier censuses Swanage follows a similar pattern, though not to quite the same extent. After the 1871 census, however, the ratio for the 0-4 age group in Swanage becomes more restrained. This may possibly be of interest, as sex-specific infant mortality is discussed at some length in Chapter 8. 1861 is something of an oddity, as in both Langton Matravers and Swanage there is notable surplus of boys over girls in the 0-4 age group.

Table 5.6 Three Parishes: Age Distribution (1851 CEBs)

	f	m	Total	% Female	% Male	% Total	Ratio
Langton M							
0-4	61	49	110	55.45	44.55	14.51	124.49
5-9	46	38	84	54.76	45.24	11.08	121.05
10-14	44	45	89	49.44	50.56	11.74	97.78
15-19	36	43	79	45.57	54.43	10.42	83.72
20-24	28	36	64	43.75	56.25	8.44	77.78
25-29	31	23	54	57.41	42.59	7.12	134.78
30-34	17	14	31	54.84	45.16	4.09	121.43
35-39	17	16	33	51.52	48.48	4.35	106.25
40-44	20	26	46	43.48	56.52	6.07	76.92
45-49	18	15	33	54.55	45.45	4.35	120.00
50-54	17	15	32	53.13	46.88	4.22	113.33
55-59	16	17	33	48.48	51.52	4.35	94.12
60-64	10	6	16	62.50	37.50	2.11	166.67
65+	26	28	54	48.15	51.85	7.12	92.86
Total	387	371	758	51.06	48.94	100.00	104.31
Swanage							
0-4	162	142	304	53.29	46.71	14.81	114.08
5-9	147	132	279	52.69	47.31	13.60	111.36
10-14	119	116	235	50.64	49.36	11.45	102.59
15-19	127	90	217	58.53	41.47	10.58	141.11
20-24	84	66	150	56.00	44.00	7.31	127.27
25-29	69	46	115	60.00	40.00	5.60	150.00
30-34	59	55	114	51.75	48.25	5.56	107.27
35-39	61	51	112	54.46	45.54	5.46	119.61
40-44	68	60	128	53.13	46.88	6.24	113.33
45-49	54	47	101	53.47	46.53	4.92	114.89
50-54	42	35	77	54.55	45.45	3.75	120.00
55-59	36	33	69	52.17	47.83	3.36	109.09
60-64	26	28	54	48.15	51.85	2.63	92.86
65+	48	49	97	49.48	50.52	4.73	97.96
Total	1102	950	2052	53.70	46.30	100.00	116.00
Worth M							
0-4	33	25	58	56.90	43.10	14.91	132.00
5-9	23	30	53	43.40	56.60	13.62	76.67
10-14	18	32	50	36.00	64.00	12.85	56.25
15-19	27	21	48	56.25	43.75	12.34	128.57
20-24	11	10	21	52.38	47.62	5.40	110.00
25-29	13	13	26	50.00	50.00	6.68	100.00
30-34	9	11	20	45.00	55.00	5.14	81.82
35-39	9	9	18	50.00	50.00	4.63	100.00
40-44	12	10	22	54.55	45.45	5.66	120.00
45-49	12	14	26	46.15	53.85	6.68	85.71
50-54	4	7	11	36.36	63.64	2.83	57.14
55-59	4	7	11	36.36	63.64	2.83	57.14
60-64	4	1	5	80.00	20.00	1.29	400.00
65+	12	8	20	60.00	40.00	5.14	150.00
Total	191	198	389	49.10	50.90	100.00	96.46

Table 5.7 Three Parishes: Age Distribution (1861 CEBs)

	f	m	Total	% Female	% Male	% Total	Ratio
Langton M							
0-4	47	58	105	44.76	55.24	14.46	81.03
5-9	52	49	101	51.49	48.51	13.91	106.12
10-14	45	42	87	51.72	48.28	11.98	107.14
15-19	29	23	52	55.77	44.23	7.16	126.09
20-24	32	22	54	59.26	40.74	7.44	145.45
25-29	24	24	48	50.00	50.00	6.61	100.00
30-34	29	21	50	58.00	42.00	6.89	138.10
35-39	21	18	39	53.85	46.15	5.37	116.67
40-44	16	16	32	50.00	50.00	4.41	100.00
45-49	18	10	28	64.29	35.71	3.86	180.00
50-54	13	17	30	43.33	56.67	4.13	76.47
55-59	13	16	29	44.83	55.17	3.99	81.25
60-64	16	9	25	64.00	36.00	3.44	177.78
65+	23	23	46	50.00	50.00	6.34	100.00
Total	378	348	726	52.07	47.93	100.00	108.62
Swanage							
0-4	118	152	270	43.70	56.30	13.68	77.63
5-9	127	112	239	53.14	46.86	12.11	113.39
10-14	130	125	255	50.98	49.02	12.92	104.00
15-19	96	89	185	51.89	48.11	9.38	107.87
20-24	67	63	130	51.54	48.46	6.59	106.35
25-29	81	45	126	64.29	35.71	6.39	180.00
30-34	51	49	100	51.00	49.00	5.07	104.08
35-39	62	39	101	61.39	38.61	5.12	158.97
40-44	51	49	100	51.00	49.00	5.07	104.08
45-49	57	49	106	53.77	46.23	5.37	116.33
50-54	49	40	89	55.06	44.94	4.51	122.50
55-59	41	45	86	47.67	52.33	4.36	91.11
60-64	36	30	66	54.55	45.45	3.35	120.00
65+	61	59	120	50.83	49.17	6.08	103.39
Total	1027	946	1973	52.05	47.95	100.00	108.56
Worth M							
0-4	25	18	43	58.14	41.86	12.50	138.89
5-9	18	20	38	47.37	52.63	11.05	90.00
10-14	28	26	54	51.85	48.15	15.70	107.69
15-19	20	22	42	47.62	52.38	12.21	90.91
20-24	8	10	18	44.44	55.56	5.23	80.00
25-29	13	9	22	59.09	40.91	6.40	144.44
30-34	5	8	13	38.46	61.54	3.78	62.50
35-39	8	9	17	47.06	52.94	4.94	88.89
40-44	9	10	19	47.37	52.63	5.52	90.00
45-49	10	13	23	43.48	56.52	6.69	76.92
50-54	5	7	12	41.67	58.33	3.49	71.43
55-59	14	10	24	58.33	41.67	6.98	140.00
60-64	3	4	7	42.86	57.14	2.03	75.00
65+	9	3	12	75.00	25.00	3.49	300.00
Total	175	169	344	50.87	49.13	100.00	103.55

Table 5.8 Three Parishes: Age Distribution (1871 CEBs)

	f	m	Total	% Female	% Male	% Total	Ratio
Langton M							
0-4	75	72	147	51.02	48.98	16.03	104.17
5-9	80	59	139	57.55	42.45	15.16	135.59
10-14	50	65	115	43.48	56.52	12.54	76.92
15-19	43	44	87	49.43	50.57	9.49	97.73
20-24	34	32	66	51.52	48.48	7.20	106.25
25-29	25	18	43	58.14	41.86	4.69	138.89
30-34	29	23	52	55.77	44.23	5.67	126.09
35-39	25	22	47	53.19	46.81	5.13	113.64
40-44	26	20	46	56.52	43.48	5.02	130.00
45-49	17	16	33	51.52	48.48	3.60	106.25
50-54	19	13	32	59.38	40.63	3.49	146.15
55-59	10	10	20	50.00	50.00	2.18	100.00
60-64	10	14	24	41.67	58.33	2.62	71.43
65+	36	30	66	54.55	45.45	7.20	120.00
Total	479	438	917	52.24	47.76	100.00	109.36
Swanage							
0-4	158	156	314	50.32	49.68	14.78	101.28
5-9	150	133	283	53.00	47.00	13.32	112.78
10-14	105	129	234	44.87	55.13	11.02	81.40
15-19	83	83	166	50.00	50.00	7.82	100.00
20-24	86	61	147	58.50	41.50	6.92	140.98
25-29	72	65	137	52.55	47.45	6.45	110.77
30-34	67	64	131	51.15	48.85	6.17	104.69
35-39	62	46	108	57.41	42.59	5.08	134.78
40-44	52	51	103	50.49	49.51	4.85	101.96
45-49	49	31	80	61.25	38.75	3.77	158.06
50-54	49	46	95	51.58	48.42	4.47	106.52
55-59	53	36	89	59.55	40.45	4.19	147.22
60-64	43	46	89	48.31	51.69	4.19	93.48
65+	82	66	148	55.41	44.59	6.97	124.24
Total	1111	1013	2124	52.31	47.69	100.00	109.67
Worth M							
0-4	23	16	39	58.97	41.03	13.22	143.75
5-9	12	19	31	38.71	61.29	10.51	63.16
10-14	18	16	34	52.94	47.06	11.53	112.50
15-19	14	8	22	63.64	36.36	7.46	175.00
20-24	10	7	17	58.82	41.18	5.76	142.86
25-29	15	12	27	55.56	44.44	9.15	125.00
30-34	8	4	12	66.67	33.33	4.07	200.00
35-39	11	19	30	36.67	63.33	10.17	57.89
40-44	4	2	6	66.67	33.33	2.03	200.00
45-49	7	9	16	43.75	56.25	5.42	77.78
50-54	4	8	12	33.33	66.67	4.07	50.00
55-59	6	7	13	46.15	53.85	4.41	85.71
60-64	7	8	15	46.67	53.33	5.08	87.50
65+	14	7	21	66.67	33.33	7.12	200.00
Total	153	142	295	51.86	48.14	100.00	107.75

Table 5.9 Three Parishes: Age Distribution (1881 CEBs)

	f	m	Total	% Female	% Male	% Total	Ratio
Langton M							
0-4	62	51	113	54.87	45.13	12.83	121.57
5-9	62	45	107	57.94	42.06	12.15	137.78
10-14	44	61	105	41.90	58.10	11.92	72.13
15-19	33	47	80	41.25	58.75	9.08	70.21
20-24	29	44	73	39.73	60.27	8.29	65.91
25-29	26	28	54	48.15	51.85	6.13	92.86
30-34	28	28	56	50.00	50.00	6.36	100.00
35-39	27	19	46	58.70	41.30	5.22	142.11
40-44	23	26	49	46.94	53.06	5.56	88.46
45-49	26	23	49	53.06	46.94	5.56	113.04
50-54	20	19	39	51.28	48.72	4.43	105.26
55-59	18	13	31	58.06	41.94	3.52	138.46
60-64	12	8	20	60.00	40.00	2.27	150.00
65+	27	32	59	45.76	54.24	6.70	84.38
Total	437	444	881	49.60	50.40	100.00	98.42
Swanage							
0-4	161	154	315	51.11	48.89	13.47	104.55
5-9	134	131	265	50.57	49.43	11.33	102.29
10-14	132	123	255	51.76	48.24	10.90	107.32
15-19	113	115	228	49.56	50.44	9.75	98.26
20-24	79	111	190	41.58	58.42	8.12	71.17
25-29	81	82	163	49.69	50.31	6.97	98.78
30-34	85	65	150	56.67	43.33	6.41	130.77
35-39	60	68	128	46.88	53.13	5.47	88.24
40-44	64	64	128	50.00	50.00	5.47	100.00
45-49	54	39	93	58.06	41.94	3.98	138.46
50-54	47	48	95	49.47	50.53	4.06	97.92
55-59	50	27	77	64.94	35.06	3.29	185.19
60-64	46	34	80	57.50	42.50	3.42	135.29
65+	93	79	172	54.07	45.93	7.35	117.72
Total	1199	1140	2339	51.26	48.74	100.00	105.18
Worth M							
0-4	23	17	40	57.50	42.50	13.70	135.29
5-9	17	20	37	45.95	54.05	12.67	85.00
10-14	21	17	38	55.26	44.74	13.01	123.53
15-19	7	20	27	25.93	74.07	9.25	35.00
20-24	8	5	13	61.54	38.46	4.45	160.00
25-29	11	5	16	68.75	31.25	5.48	220.00
30-34	8	10	18	44.44	55.56	6.16	80.00
35-39	11	11	22	50.00	50.00	7.53	100.00
40-44	9	7	16	56.25	43.75	5.48	128.57
45-49	5	9	14	35.71	64.29	4.79	55.56
50-54		4	4	0.00	100.00	1.37	0.00
55-59	5	7	12	41.67	58.33	4.11	71.43
60-64	3	7	10	30.00	70.00	3.42	42.86
65+	11	14	25	44.00	56.00	8.56	78.57
Total	139	153	292	47.60	52.40	100.00	90.85

Table 5.10 Three Parishes: Age Distribution (1891 CEBs)

	f	m	Total	% Female	% Male	% Total	Ratio
Langton M							
0-4	58	39	97	59.79	40.21	12.63	148.72
5-9	50	55	105	47.62	52.38	13.67	90.91
10-14	40	41	81	49.38	50.62	10.55	97.56
15-19	19	29	48	39.58	60.42	6.25	65.52
20-24	26	24	50	52.00	48.00	6.51	108.33
25-29	33	15	48	68.75	31.25	6.25	220.00
30-34	30	29	59	50.85	49.15	7.68	103.45
35-39	17	16	33	51.52	48.48	4.30	106.25
40-44	26	22	48	54.17	45.83	6.25	118.18
45-49	21	17	38	55.26	44.74	4.95	123.53
50-54	17	21	38	44.74	55.26	4.95	80.95
55-59	21	15	36	58.33	41.67	4.69	140.00
60-64	17	16	33	51.52	48.48	4.30	106.25
65+	31	23	54	57.41	42.59	7.03	134.78
Total	406	362	768	52.86	47.14	100.00	112.15
Swanage							
0-4	154	167	321	47.98	52.02	12.47	92.22
5-9	149	140	289	51.56	48.44	11.22	106.43
10-14	166	142	308	53.90	46.10	11.96	116.90
15-19	137	100	237	57.81	42.19	9.20	137.00
20-24	126	76	202	62.38	37.62	7.84	165.79
25-29	126	80	206	61.17	38.83	8.00	157.50
30-34	87	82	169	51.48	48.52	6.56	106.10
35-39	75	63	138	54.35	45.65	5.36	119.05
40-44	80	61	141	56.74	43.26	5.48	131.15
45-49	62	57	119	52.10	47.90	4.62	108.77
50-54	62	42	104	59.62	40.38	4.04	147.62
55-59	60	38	98	61.22	38.78	3.81	157.89
60-64	34	30	64	53.13	46.88	2.49	113.33
65+	103	76	179	57.54	42.46	6.95	135.53
Total	1421	1154	2575	55.18	44.82	100.00	123.14
Worth M							
0-4	9	13	22	40.91	59.09	9.87	69.23
5-9	16	12	28	57.14	42.86	12.56	133.33
10-14	10	8	18	55.56	44.44	8.07	125.00
15-19	8	14	22	36.36	63.64	9.87	57.14
20-24	8	8	16	50.00	50.00	7.17	100.00
25-29	6	10	16	37.50	62.50	7.17	60.00
30-34	7	6	13	53.85	46.15	5.83	116.67
35-39	8	4	12	66.67	33.33	5.38	200.00
40-44	5	8	13	38.46	61.54	5.83	62.50
45-49	8	10	18	44.44	55.56	8.07	80.00
50-54	5	2	7	71.43	28.57	3.14	250.00
55-59	3	11	14	21.43	78.57	6.28	27.27
60-64	1	3	4	25.00	75.00	1.79	33.33
65+	9	11	20	45.00	55.00	8.97	81.82
Total	103	120	223	46.19	53.81	100.00	85.83

The analysis now turns to the numbers of children aged less than 15 years per household in six main occupational groups. These figures are seen in table 5.11 below. Overall the picture is a mixed one. Stoneworkers at Langton Matravers are remarkably consistent in the average number of children under 15 years in their households. There was an increase in 1871, which coincides with Langton's nineteenth-century population peak. At Swanage, however, there is a progressive decline in the average number of children aged less than 15 years in stone worker households from 1851. Farmers were the only other category of household where this occurred. The sea-based occupations generally had a slightly higher number of children in this age group, as did farmers and agricultural labourers. The trades and crafts category seem to have had similar numbers to the stone workers.

Table 5.11 Children Aged Under 15 Years By Occupation Of Household Head, 1851-1891

	Sea-based	Mean per H/H	Farm-ers	Mean per H/H	Ag Labs	Mean per H/H	Prof-ssion-al etc	Mean per H/H	Trade /Craft	Mean per H/H	Stone Work-ers	Mean per H/H
1851												
Langton M	0	0.00	6	0.55	66	2.00	3	0.38	36	1.64	121	1.51
Swanage	58	2.42	19	2.38	57	2.04	22	1.22	193	2.19	329	1.97
Worth M	25	1.92	2	0.25	49	2.23	2	0.50	15	5.00	48	3.00
1861												
Langton M	0	0.00	26	2.89	57	1.84	1	0.20	42	1.56	96	1.50
Swanage	41	1.37	21	2.63	88	2.15	30	1.76	147	1.60	284	1.93
Worth M	36	2.57	8	1.60	42	1.83	2	1.00	12	2.40	16	1.60
1871												
Langton M	0	0.00	13	1.86	79	1.98	10	2.50	75	2.27	130	1.78
Swanage	61	1.91	31	2.82	104	2.26	40	2.11	158	1.46	255	1.76
Worth M	20	1.82	15	1.88	39	1.56	5	1.67	7	1.17	9	0.90
1881												
Langton M	0	0.00	13	1.63	69	1.92	9	2.25	46	1.59	125	1.51
Swanage	77	2.66	16	1.45	49	1.96	14	0.74	186	1.66	230	1.70
Worth M	18	1.64	16	2.67	41	1.95	2	1.00	3	1.00	14	0.93
1891												
Langton M	2	2.00	19	1.90	66	2.28	3	0.60	49	1.36	93	1.52
Swanage	63	2.25	9	0.90	46	1.77	29	0.91	243	1.52	127	1.63
Worth M	16	1.23	9	1.29	15	0.88	7	2.33	5	1.00	5	1.00

Table 5.12 displays the average number of children aged over 15 years in the six main occupational categories. Again, the results are varied. On the whole, the sea-based occupations do not have large numbers of older children in their households. Nor do

agricultural labourers. Farmers, on the other hand, as one would expect, frequently have older children present as part of their household. In most cases the figures vary quite a lot, as the presence of children and their age will obviously depend on the stage in life cycle of the parents. Perhaps the most consistent households in terms of containing children over 15 years of age are those headed by stone workers. Given the family nature of the stone quarries (discussed in detail in Chapter 4), this is what one would anticipate finding.

Table 5.12 Children Aged Over 15 Years By Occupation Of Household Head, 1851-1891

	Sea-based	Mean per H/H	Farm-ers	Mean per H/H	Ag Labs	Mean per H/H	Profe-ssion-al Etc	Mean per H/H	Trade /Craft	Mean per H/H	Stone Work-ers	Mean per H/H
1851												
Langton M	0	0.00	10	0.91	22	0.67	3	0.38	10	0.45	50	0.63
Swanage	16	0.67	9	1.13	29	1.04	18	1.00	60	0.68	115	0.69
Worth M	3	0.23	13	1.63	21	0.95	0	0.00	3	1.00	14	0.88
1861												
Langton M	0	0.00	13	1.44	32	1.03	0	0.00	27	1.00	56	0.88
Swanage	36	1.20	7	0.88	34	0.83	12	0.71	106	1.15	181	1.23
Worth M	13	0.93	1	0.20	33	1.43	0	0.00	10	2.00	21	2.10
1871												
Langton M	0	0.00	17	2.43	23	0.58	3	0.75	9	0.27	49	0.67
Swanage	13	0.41	6	0.55	27	0.59	13	0.68	73	0.68	105	0.72
Worth M	1	0.09	6	0.75	13	0.52	0.00	0.00	4	0.67	10	1.00
1881												
Langton M	0	0.00	5	0.63	17	0.47	2	0.50	15	0.52	74	0.89
Swanage	18	0.62	17	1.55	15	0.60	16	0.84	61	0.54	119	0.88
Worth M	1	0.09	3	0.50	16	0.76	0	0.00	3	1.00	13	0.87
1891												
Langton M	0	0.00	4	0.40	13	0.45	6	1.20	27	0.75	36	0.59
Swanage	23	0.82	11	1.10	19	0.73	16	0.50	90	0.56	63	0.81
Worth M	5	0.38	6	0.86	10	0.59	0	0.00	2	0.40	6	1.20

It seems clear from the above that particular local social and economic circumstances influence the size and structure of households. The out-migration and population decline at Worth Matravers and Swanage's change from stone port to seaside resort in the 1880s and 1890s have clearly affected the data presented above. Langton Matravers appears to have been the most sensitive of the three parishes to the fortunes of the stone trade, presumably because it was the one most reliant upon it.

Chapter Six

Sources and Methods

Description of Sources

The nominative data available for England in the nineteenth century can be divided into three broad categories: the manuscript census returns, or census enumerators' books (CEBs), the ecclesiastical registers of baptisms, marriages and burials, and other sources, e.g. trade directories, poll books, rate books etc., all of which vary both in their content and in their coverage.

The Manuscript Census Enumerators' Books (CEBs)

The CEBs are the books into which Victorian census enumerators transferred the information they had collected on schedules issued to the head of each household in their enumeration district. They were first used for the census of 1841 and are currently available for censuses up to 1901.[318] Of the three groups of sources mentioned above, the population coverage of the CEBs is much the most comprehensive. Unfortunately, however, they do not all follow the same format. In particular, the 1841 CEBs are less informative than those from 1851 onwards. The data included in 1841 consists of address, forename and surname, age, occupation, and whether a person had been born in the county of enumeration in England or Wales, or in Ireland, Scotland or foreign parts. Relationships within the household and marital status are not recorded, and the ages entered for those aged 15 and over are approximations only.[319] The occupational data are less comprehensive than those given in succeeding censuses and the birthplace data are so minimal as to be of little practical use.

[318] The CEBs are subject to a hundred-year confidentiality rule. This prohibits access to census information about named individuals for 100 years after the information was collected. The CEBs from the 1911 census will therefore be made available in January 2012.

[319] In the Purbeck parishes precise ages have been given for those aged under 10 years and for some (but not all) of those aged between 10 and 15 years. Most of those aged 15 and over had their age recorded in 5-year age bands, rounded down to the nearest five years, as the census instructions required.

The range and quality of information improves markedly from 1851, although there are slight differences in format between these later censuses. The 1891 census, in particular, saw two significant changes in the format of the CEBs. Firstly, householders were asked to state the number of rooms occupied, where that number was less than five. Secondly, three extra columns relating to employment status were introduced. These were headed 'employer', 'employed' and 'neither employer or employed'. Unfortunately, significant numbers of men entered responses in two different columns. This was probably a perfectly rational response to the shifting nature of much nineteenth-century employment, especially in the trades/crafts sector. For example, a man could be contracted to do a job (as an employee) and then himself take on additional labour to undertake the work (thereby also functioning as an employer). A slightly different situation could occur in Purbeck. A man might own a quarry and employ labour to help him work it. However, if the demand for stone was slack it was not unusual for a quarry to be closed temporarily, with the quarry-owner and his men going to work for someone else as employee stone masons. There is also the question of how people interpreted the terms 'employer' and employee' when it came to family members. This is particularly germane in Purbeck, where the quarries were virtually all family concerns. Unfortunately it seems unlikely, given the variable nature of much employment in the nineteenth century, that distinctions were made on a consistent basis. Therefore, while they may provide an *indication* of employment status, the data in these columns is an unreliable means of accurately measuring it.[320]

Theoretically, the CEBs of 1851 to 1891 contain the following information about every person resident in England and Wales on census night: address, forename and surname, relationship to the head of household, sex, marital condition, age, occupation, and where born.[321] In practice, some people will inevitably have been omitted, and certain classes of

[320] E. Higgs, 'The 1891 census: change and continuity', *Local Historian*, XXII (1992), 185-7.
[321] General descriptions of the CEBs can be found in E.A. Wrigley (ed.), *Nineteenth Century Society* (Cambridge University Press, 1972); D.R. Mills & C.G. Pearce, *People and Places in the Victorian Censuses: a review and bibliography of publications based substantially on the manuscript Census Enumerators' Books 1841-1911* (Cheltenham, Institute of British Geographers, 1989); D.R. Mills, M.J.D. Edgar & P.R.A. Hinde, 'Southern historians and their exploitation of Victorian censuses', *Southern History*, 18 (1996), 61-86; D.R. Mills & K. Schurer (eds.), *Local Communities in the Victorian Census Enumerators' Books* (Oxford, Leopards Head Press, 1996); E. Higgs, *Making Sense of the Census* (London, HMSO, 1989); E. Higgs, *A Clearer Sense of the Census: the Victorian Censuses and Historical Research* (London, HMSO, 1996); R. Lawton, (ed.), *The Census and Social Structure: an interpretative guide to nineteenth-century censuses for England and Wales* (London, Frank Cass, 1978).

information were imprecisely recorded.[322] Although their format is highly structured, the data entered into the books varies greatly in quality and consistency. Many enumerators were inadequately educated, and poor handwriting and misspellings are common.

Variable legibility aside, the columns which most frequently cause problems are address, relationship to head of household, occupation, and birthplace. Houses were rarely named or numbered in rural areas. Most of the cottages in Langton Matravers, for example, simply have 'Langton' entered in the address column, and outside the village itself, the column was frequently left blank. Anomalies are occasionally apparent in the column describing a person's relationship to the household head. In the Isle of Purbeck it was common for stone masons to work away from their home parish at times. This clearly left some enumerators confused as to who should be entered as head of household. Therefore one sometimes finds households without a recorded head, because the enumerator has entered 'Wife' (or other relation) instead of 'Head' in instances where the husband was working away on census night.[323] There are a number of issues associated with the occupation column. Many occupational terms of the Victorian period have since fallen into disuse or changed their meaning. The biggest problem arises out of the failure of many householders and enumerators to specify whether a tradesman or craftsman was a 'master' or a 'journeyman'. Quite frequently, however, this problem can be ameliorated by cross-referencing to trade directories in order to identify the masters.[324]

The birthplace column can also be problematic. In the first instance, there is the problem of reading strange (and often misspelt) place names and identifying their location. Another difficulty stems from the vagueness of the instructions as to what unit of settlement should be entered in the birthplace column. Householders were supposed to enter their county of birth, followed by their town or parish of birth.[325] However, many respondents have entered the name of a small hamlet or even a farm within a parish. Such places are not always easy to identify without recourse to large-scale maps and/or local knowledge. This practice was particularly prevalent in the Isle of Purbeck.[326]

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[322] Mills et al., 'Southern Historians'; Higgs, *Making Sense of the Census*.
[323] Discrepancies of this kind were found in all areas: see Higgs, *Making Sense of the Census*, 65.
[324] Mills et al, 'Southern Historians', 69-72.
[325] Higgs, *Making Sense of the Census*, 71-3.
[326] Mills et al, 'Southern Historians', 72.

Many householders were at best semi-literate and would have required guidance from the enumerators about how to fill in their schedules. Indeed, the enumerators probably filled in a proportion of the forms themselves, before they copied the information into their enumerators' books. It can be argued, therefore, that strictly speaking the CEBs are not true primary sources. Moreover, it is likely that some respondents engaged in a degree of self-promotion in terms of occupation and age. Nevertheless, the CEBs are by far the most important source of nominative data available for the period between 1841 and 1891. Used with care, they can provide a huge amount of generally reliable demographic, economic and social information on the population of England and Wales in the second half of the nineteenth century.[327]

Ecclesiastical Registers

The ecclesiastical registers consist of the Anglican parish registers and the registers of the various nonconformist churches. Anglican registers survive for almost every parish in England and Wales, but nonconformist registers are generally much more difficult to locate and are frequently missing.[328] For the majority of parishes, therefore, the Anglican registers are the only source for information about baptisms, marriages and burials. These, however, only give details about those persons who were baptised, married or buried by the established Church of England, and the coverage of its registers can be patchy. It is generally better in the southeast of England and in rural areas than in the north and west and urban areas. The accuracy of any nominal record linkage exercise utilising parish registers alone is likely, therefore, to depend upon the extent of nonconformity as well as that of secularity. [329]

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[327] Mills et al, 'Southern Historians'; Mills & Schurer, *Local Communities*; Higgs, *Making Sense of the Census*; Michael Anderson, *Family Structure in Nineteenth-Century Lancashire* (Cambridge University Press, 1971); W.A. Armstrong, 'List of Occupations and Groupings', in E.A. Wrigley (ed.), *Nineteenth Century Society* (Cambridge University Press, 1972).

[328] P.R.A. Hinde, 'The population of a Wiltshire village in the nineteenth century: a reconstitution of Berwick St James, 1841-81', *Annals of Human Biology*, 14, 6 (1987), 476.

[329] E.A. Wrigley & R.S. Schofield, *The Population History of England 1541-1871: a Reconstruction*, (London, Edward Arnold, 1981), 15-16. Also see M. Anderson, 'The incidence of civil marriage in Victorian England and Wales, *Past and Present*, 61 (1975), 50-87.

Baptism Registers

The baptism registers from 1813 are printed and contain the following information: the date of baptism (and occasionally also the date of birth), the name and surname of the child, the names of both parents, the father's occupation, and the family's place of residence (abode).[330] Illegitimate children are noted in the register, enabling the calculation of illegitimacy rates. Unusual baptisms, such as adult baptisms, are generally also noted. One problem that can cause some confusion, especially when attempting to link records from other sources with the baptism register, is that parents sometimes gave a child the same forename as a deceased earlier child.[331] Such conflicts as arise can, however, usually be resolved by cross-referencing to the burial registers.

The main shortcoming of baptism registers is that they do not as a matter of course contain the date of birth alongside the date of baptism. Some registers contain both, but these are the exception rather than the rule, and as the inclusion of birthdates was at the whim of the incumbent, it is rare to find them entered for more than a few years at a time. In terms of demographic analysis this lack of birthdate information is most unsatisfactory. Over the years efforts have been made to quantify the interval between birth and baptism in order that at least an approximation of birth date may be worked out. The major work in this area is that of Berry and Schofield, published in 1971. However, their study only covered the period from 1650 to 1812. Much of the work done since has also largely focused on the period before 1820, and studies investigating later periods are rare.[332] One exception is the work of Dewhurst and Hinde, who produced estimates consistent with the latest of Berry and Schofield's periods.[333] The general consensus appears to be that baptism typically occurred within a few weeks of birth. The baptism registers are particularly useful when nominal record linkage is used to link them to the other ecclesiastical

[330] Langton Matravers baptism registers, 1813-1891, Dorset Record Office (hereafter DRO): PE/LAM: RE/2/1-3; Swanage baptism registers, 1813-1891, DRO: PE/SW: RE 2/2-4; Worth Matravers baptism registers, 1813-1878, DRO: PE/WMT: RE/2/1.
[331] P. Razzell, 'Evaluating the same-name technique as a way of measuring burial register reliability in England', *Local Population Studies*, 64 (2000), 10.
[332] B.M. Berry & R.S. Schofield, 'Age at baptism in pre-industrial England', *Population Studies*, 25 (1971), 453-63.
[333] S. Dewhurst & P.R.A. Hinde, 'Age at baptism in rural Hampshire in the second half of the nineteenth century', *Local Population Studies*, 57 (1996), 72-5.

registers.[334] For example, pre-nuptial pregnancy and infant mortality rates, both important demographic indicators, can be calculated by linking the baptism and burial registers respectively.

Marriage Registers

The marriage registers from 1837 include the following information: name and surname of the bride and groom, their previous marital status, their occupations and place of residence (abode), their fathers' name and occupation, along with the date of the marriage and their age. The last of these is the most problematic item of data in the register. The age at which a woman married is fundamental to demographic enquiry, but it is generally impossible to extract precise data from the registers, as actual ages are not normally given. Instead, either 'full' (aged 21 and over) or 'minor' (aged under 21) was entered. For example, out of 730 individuals listed in the Langton Matravers marriage register between 1813 and 1891, 599 are described as being of 'full' age, 18 are described as 'minors', an actual age is given in108 instances, and for 8 individuals no entry was made for age. Of the 1,630 persons in the Swanage marriage register over the same period, 851 are said to be of 'full' age, 17 are described as being a 'minor', actual ages are given for 233 people and no entry was made for 529 individuals.[335] Although exact ages are rarely noted in the registers, it is possible, in conjunction with sources such as census enumerators' books, to make estimates of women's age at marriage.[336] Unfortunately, the marriage registers for Worth Matravers are only available up to 1837 and, consequently, were of only limited use in this study.[337]

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[334] E.A. Wrigley, R. Davies, J. Oeppen & R.S. Schofield, *English population history from family reconstitution: 1580-1830*, (Cambridge University Press, 1997).

[335] Langton Matravers marriage register, 1813-91, DRO: PE/LAM: RE 3/4-5; Swanage marriage register, 1813-1891, DRO: PE/SW: RE 3/3-5.

[336] See, for example, R.I. Woods & P.R.A. Hinde, 'Nuptiality and age at marriage in nineteenth-century England', *Journal of Family History*, 10 (1985), 126, 119-144; P.R.A. Hinde, 'The marriage market in the nineteenth-century English countryside', *The Journal of European Economic History*, 18, 2 (1989), 383-92; B. Eckstein & A. Hinde, 'Measuring fertility within marriage between 1841 and 1891 using parish registers and the census enumerators' books', *Local Population Studies*, 64 (2000), 38-53.

[337] Worth Matravers marriage register, 1813-1837, DRO: PE/WMT: RE 3/2.

Areas of interest that can be investigated using marriage registers are marriage horizons, seasonality of marriage, the distribution of marriages through the week, and social networks. Marriage horizons provide an indication of the geographical extent of the social world of those marrying in a particular place, although some caution is necessary in interpreting the results.338 The seasonality of marriage has to be set in the context of local economic conditions and courtship customs (where the latter can be identified). The distribution of marriages should provide an indication of available leisure time and, by contrast, of customary patterns of work, as it seems reasonable to assume that people were more likely to get married when they were not required to work. Having said that, the Canon law on the occurrence of weddings was restrictive; until 1887 marriage had to take place during divine service, and between 8 o'clock in the morning and noon. It was possible to make alternative arrangements, but the cost would have been prohibitive for many couples even if they had wished to do so.

Burial Registers

The burial registers from 1813 are printed and contain the following data: name and surname of the deceased, their age, date of burial, and their abode at the time of death.[339] The deceased's occupation and the cause of death are only occasionally recorded. Not everyone in the register had died in the parish; some people were returned to a parish because they had specified burial there, while others were returned from institutions. Several burials in Langton Matravers, for example, were of inmates of the County Lunatic Asylum at Forston, near Dorchester and the Union Workhouse at Wareham.[340] The burials of those who died unbaptised are not recorded in the register, but otherwise they are considered to be fairly comprehensive in their population coverage. It is also common to find young children described in the register simply as 'infant', rather than their precise age at burial being recorded. All those so described in the Purbeck data have been treated as being aged under one year old. This practice has been followed on the basis that the lowest actual age given is one year.

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[338] An excellent study based on Dorset is P. J. Perry, 'Working-class isolation and mobility in rural Dorset, 1837-1936: a study of marriage distances', *Transactions of the Institute of British Geographers*, 46 (1969), 121-41.

[339] Langton Matravers burial registers, 1813-1891, DRO: PE/LAM: RE 4/1-2; Swanage burial registers, 1813-1891, DRO: PE/SW: RE 4/2-3; Worth Matravers burial registers, 1813-1878, DRO: PE/WMT: RE 4/1.

[340] 114 out of 1079 burials have an abode other than Langton Matravers. Of these, six had been returned from the Union Workhouse and five from the County Asylum. DRO: PE/LAM: RE 4/1-2.

Aggregative analysis of the burial registers allows the seasonality of mortality to be investigated, along with years of abnormally high mortality. These might point to the seasonal or irregular onset of diseases, or extreme weather conditions. A particularly important component of past mortality was infant mortality, and this can be determined by bringing together the baptism and burial registers through nominal record linkage. Linking the two registers also means that the information on the father's occupation in the baptism register can be used to investigate the possibility that there was differential infant mortality between occupational groups. Unfortunately, the burial registers omitted a proportion of infants because they died unbaptised. However, this problem can be circumvented by statistical means, as there are techniques enabling the under-registration of infant deaths to be estimated and hence total infant mortality.[341]

Other Sources

The other sources mentioned at the beginning of this chapter are of limited value in the early stages of any nominal record linkage exercise. They are much less comprehensive in their coverage, and their main use is in filling out the picture painted by the censuses and the parish registers. The additional sources available for this study are listed below:

Duties on Personal Estates and Offices - Swanage 1832

This document is a printed form containing a total of 18 names and the duty each person has been assessed for. It contains columns for a description of a personal estate and its value, and a description of the office held and its salary. However, in this instance these details have been omitted. The document is therefore of very limited value, except as information complementary to more detailed sources.[342]

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[341] Ways of assessing parish register accuracy through statistical analysis and demographic modelling of data are discussed in Wrigley et al., *English population history*, 101-6. There is disagreement, however, about the accuracy of parish registers, and the Cambridge Group's methods and techniques have been strongly criticised. For example, see the following review article: S. Ruggles, 'The limitations of English family reconstitution: English population history from family reconstitution 1580-1837', *Continuity and Change*, 14, 1 (1999), 105-30. Peter Razzell has consistently argued over many years for an alternative methodology - see P. Razzell (ed.), *Essays in English population history*, (London, Caliban, 1994); P. Razzell, 'Evaluating the same name technique as a way of measuring burial register reliability in England', *Local Population Studies*, 64 (2000), 8-22; P. Razzell, 'An evaluation of the reliability of Anglican adult burial registration', *Local Population Studies*, 77 (2006), 42-57.

[342] Swanage, Duties on Personal Estates and Offices, DRO: MIC/R/912, QDE (L): 43/47/9.

Land Tax Assessments

Land Tax Assessments for the three parishes of Langton Matravers, Swanage and Worth Matravers were available for 1832 (in the case of Langton Matravers, the assessments are for the two manors of Herston and Langton Wallis). The printed form has columns for the names of the proprietor and occupier of the land being assessed, description of the property, and the sums assessed and exonerated/not exonerated.[343] Although of limited value to this study in terms of nominal record linkage, the land tax assessments are a valuable source for other purposes, such as investigating the structure of landownership.[344]

Tithe Apportionment – Langton Matravers, 1841 and 1887

The 1841 tithe apportionments for Langton Matravers list the owner and occupier(s) of land in the parish, along with the extent of that land, measured in acres, roods, and perches. It was amended in 1887. Again, this source is more valuable in terms of the structure of landownership than it is for nominal record linkage, although it can be used to confirm details from parish registers and the CEBS.[345]

Trade Directories

Trade directories published during the nineteenth century are a well-known and much-utilised source. They all follow broadly the same format – a historical and topographical description of each parish, followed by a list of the principal inhabitants, farmers and master tradesmen and craftsmen (including some women).[346] Their main use in this study has been as a means of deciding whether a trades/craftsperson listed in the CEBs was a

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[343] Herston Land Tax Assessment, DRO: MIC/R/12, QDE (L): 43/47/2; Langton Wallis Land Tax Assessment, DRO: MIC/R/12, QDE (L): 43/47/4; Worth Matravers Land Tax Assessment, DRO: MIC/R/12, QDE (L): 43/47/12; Swanage Land Tax Assessment, DRO: MIC/R/12, QDE (L): 43/47/9.

[344] For a good example of such a study see C. Rawding, 'Village type and employment structure: an analysis in the nineteenth-century Lincolnshire Wolds', *Local Population Studies*, 53 (1994), 53-68. A general discussion of the land tax can be found in M. Turner & D. Mills, *Land and Property: the English Land Tax, 1692-1832*, (Gloucester, Alan Sutton, 1986).

[345] Langton Matravers Tithe Apportionment, 1841 and 1887, DRO: T/LAM.

[346] For a detailed guide to nineteenth-century directories see G. Shaw & A. Tipper, *British Directories: a bibliography and guide to directories published in England and Wales (1850-1950) and Scotland (1773-1950)*, (Leicester University Press, 1988), and D.R. Mills, *Rural Community History From Trade Directories*, (Aldenham, Local Population Studies, 2001).

master or a journeyman.[347] A number of directories dating from 1840 to 1895 were used.[348]

Register of Voters - Langton Matravers 1840

This comprises a short list of names, with a note of the landholding which qualified each individual to vote. There are only 22 names on the list, and it has been used merely to help confirm details from other sources.[349]

Dorset Poll Books

The poll books list those householders who were eligible to vote in elections, and the property qualification that enabled them to do so. They are exclusively male, as women were not eligible to vote until 1918 (and even then, only if they were aged over 30). Again, these sources have been used solely to back up other sources.[350]

Swanage Rate Book

The 1852 rate book for the parish of Swanage contains a list of the occupiers of all the rateable property in Swanage, with the name of the property and a description of it, and the name of the owner. Also included are the gross estimated rental, the rateable value, arrears

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[347] For a study that makes rather more use of directories see C.A. Crompton, 'Changes in rural service occupations during the nineteenth century: an evaluation of two sources for Hertfordshire, England', *Rural History*, 6 (2) (1995), 193-203.

[348] *Dorset Directory*, (W. Robson, 1840); *Post Office Directory of Dorsetshire*, (London, W. Kelly & Co., 1848); *Hunt & Co.'s Directory of Dorsetshire*, (London, Hunt & Co., 1851); *Slater's Royal National and Commercial Directory and Topography of the Counties of Cornwall, Devonshire, Dorsetshire, Somersetshire*, (Manchester & London, Isaac Slater, 1852-53); *The Post Office Directory of Hampshire, Wiltshire and Dorsetshire*, (London, Kelly & Co., 1859); *J.G. Harrod & Co.'s Postal and Commercial Directory of Dorsetshire*, London, J.G. Harrod & Co., 1865); *The Post Office Directory for Dorsetshire* (London, Kelly & Co., 1867); *Mercer & Crocker's General Topographical and Historical Directory for Hampshire, Dorsetshire &c.*, (Leicester, Mercer & Crocker, 1871); *The Post Office Directory for Dorsetshire*, (London, Kelly & Co., 1867) *The Post Office directory for Dorsetshire* (London, Kelly & Co., 1875); *Butcher, Cole & Co.'s South Dorsetshire Towns Directory*, (London, Butcher, Cole & Co., 1874-75); *The Post Office Directory for Dorsetshire* (London, Kelly & Co., 1875); *Kelly's Directory of Dorsetshire*, (London, Kelly & Co., 1880); *Kelly's Directory of Dorsetshire*, (London, Kelly & Co., 1885); *Kelly's Directory of Dorsetshire*, (London, Kelly & Co., 1889); *Kelly's Directory of Dorsetshire*, (London, Kelly & Co., 1895).

[349] DRO: QDE (R) 1/8/9/13.

[350] *Poll Book for the County of Dorset*, 1806, (Dorchester, G. Frampton, 1807); *Poll Book for the County of Dorset*, 1807, (Dorchester, G. Frampton, 1807); *Poll Book for the County of Dorset*, 1831, (Dorchester, Weston Symonds & Sydenham, 1832); *Poll Book for the County of Dorset*, 1857, (Dorchester, Dorset County Chronicle, 1857).

owed, amount collected, and other financial details. This source proved extremely useful in helping to identify problematic entries in the CEBs.[351]

Records of the Company of Purbeck Marblers and Stonecutters

These comprise details of the Shrove Tuesday meetings of the company of Purbeck Marblers and Stonecutters from 1837 to 1933. They include lists of those admitted as Freemen, and those paying the 'marriage shilling' at each meeting. The Wardens and Steward of the Company for the year following each meeting are also named. Skeletal accounts are provided, including lists of men who have been fined for transgressing Company rules, the amounts they were fined, whether they have paid the fine, and whether they paid in stone or cash.[352] As little supporting information is given, it is difficult to link the named individuals to other records, although the newly admitted Freemen can probably be assumed to have been 21 years of age at the time the meeting took place.

Nominal Record Linkage

Given the micro-level nature of the study and the broad range of questions to be addressed, it was clear that these aims would best be achieved through nominal record linkage. Before the advent of the powerful personal computer and reasonably user-friendly software for data analysis, studies linking nominal information from vital registers, the censuses and other sources on the scale outlined above were relatively few in number, due mainly to the laboriousness of the process, and possibly doubts about the quality of the vital registration data. Linkage on such a scale, however, allows us to take demographic analysis of a community much further than is possible using aggregate data. Infant mortality, migration, family limitation and fertility behaviour generally, are all topics that can potentially be studied in some detail using techniques based on nominal record linkage, where the whole is greater than the sum of the parts. There is so much more to be gained from linking a CEB to a parish register than if each were analysed individually without reference to the other.[353] Several techniques based on nominal record linkage have been developed by

[351] Swanage Rate Book, 13th January 1852. This was an uncatalogued item very kindly brought to my attention by the staff at the Dorset County Record Office.
[352] DRO: D1/OM17.
[353] For a review of some of the possibilities for historical enquiry that computers make possible, see P. Hudson, 'A new history from below: computers and the maturing of local and regional history', *Local Historian*, 25, 1995, 209-222.

historical demographers for the study of populations in the past; these include family reconstitution, total reconstitution and community reconstruction. To some extent the particular technique used is determined by the questions that the researcher wishes to address and by the sources available for the period under observation.

Family Reconstitution

Historical demographers have conventionally used the technique of family reconstitution for the demographic analysis of communities in the past, particularly for the pre-1800 period.[354] Family reconstitution aims to produce detailed 'pure' demographic statistics by assembling from the Anglican baptism, marriage, and burial registers the demographic information for a rigidly defined subset of the families within a community. Strict rules are applied to establish the family links amongst those traced. The technique takes as its starting point the marriage (or remarriage) of a couple. All the available parish register data pertaining to that family is then collected: the dates of baptism and burial of the couple, information on their parents, the dates of their children's baptisms and subsequent marriages and/or burials, together with the residential and occupational information the couple recorded at their marriage and the baptism of their children. These reconstituted families are then used to generate a range of demographic variables including nuptiality, fertility and mortality rates.[355]

There are, however, a number of features of family reconstitution that make it an unsuitable methodology for the present study. Its reliance on a single source is a particular problem, as many registers have defects. There may be gaps in the sequence of registers and even where there are not, there might have been under-registration of events, particularly in the nineteenth century. Serious doubts have been expressed concerning the coverage of parish registers after c.1820, and very few family reconstitution studies extend into the nineteenth century. Eckstein and Hinde, for example, found only two such studies

[354] The classic texts for England are Wrigley & Schofield, *The Population History of England*, and Wrigley et al., *English population history*; but also see J.E. Knodel, *Demographic Behaviour in the Past: a study of 14 German village populations in the eighteenth and nineteenth centuries*, (Cambridge University Press, 1988).

[355] The best text on the methodology and rules of family reconstitution is probably E.A. Wrigley & R.S. Schofield, 'Nominal record linkage by computer and the logic of family reconstitution', in E.A. Wrigley (ed.), *Identifying People in the Past*, (London, Edward Arnold, 1973).

for the period after 1850.[356] The preferred option of many researchers would be to use the civil registration data collected from 1837.[357] Unfortunately, government has so far declined to make these records available. Scholars have therefore been reluctant to undertake family reconstitution studies using nineteenth-century parish registers, in case the civil registers are eventually released and their efforts 'wasted'. Consequently, studies of nineteenth-century populations have tended to use the published aggregate census returns or the CEBs themselves.

Only the very best quality registers are suitable for family reconstitution purposes. Consequently, before a study can be attempted, the accuracy and comprehensiveness of the registers has to be tested and inadequate ones rejected. For practical reasons concerning the linkage of individuals, it is also desirable that the parish does not have a high degree of homonymy, where large numbers of people have the same names.[358] Historical demographers wishing to study at the local or regional level as opposed to the national level are entirely at the mercy of those who filled in the registers. This represents a major difficulty if one wants to study a particular area or community, as in this instance.

Even when suitable registers are available, problems remain. In particular, nonconformists and migrants are excluded from the analysis, and only relatively small proportions of non-migrants are actually included in reconstitution studies. In many cases, considerably less than half the families resident in a parish can be fully reconstituted.[359] This means that the demographic characteristics of nonconformists and those who choose to move elsewhere are effectively ignored. As Steven Ruggles says, 'Family reconstitution methods usually exclude most of the parish population from analysis.'[360] He goes on to suggest that

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[356] B. Eckstein & P.R.A. Hinde, 'Measuring fertility within marriage between 1841 and 1891 using parish registers and the census enumerators' books', *Local Population Studies*, 64 (2000), 39.
[357] Civil registration of births, marriages and deaths began on 1 July 1837. In theory, all events were supposed to be registered, but there is evidence of substantial under-registration, particularly in the first decade or two following its introduction. See, Razzell, *Essays in English population history*, 137-138. An interesting account of the origins of civil registration is given in E. Higgs, 'A cuckoo in the nest? The origins of civil registration and state medical statistics in England and Wales', *Continuity and Change*, 11 (1) (1996), 115-34.
[358] Eckstein & Hinde, 'Measuring fertility within marriage', 40; D. Souden, 'Movers and stayers in family reconstitution populations', *Local Population Studies*, 33 (1984), 25.
[359] A.B. Kasakoff & J.W. Adams, 'The Effect of Migration on Ages at Vital Events: a critique of family reconstitution in historical demography', *European Journal of Population*, 11, 1995, 199-242;
[360] Ruggles, 'The limitations of English family reconstitution', 114.

'roughly 70 to 80 per cent of the population is excluded in the analysis of marriage, and over 95 per cent is excluded for most fertility measures.'[361] The life cycles produced by family reconstitution are therefore a sub-section of a community's most stable elements.[362]

However, is it appropriate to assume that a community's most stable elements are identical in each parish? For example, as will be seen in Chapter 7 of this study, the Purbeck stone workers are much more stable than agricultural labourers, but they do leave and return, so events may easily be missed by family reconstitution. Moreover, the case of the Purbeck stone workers suggests that social, cultural and economic factors operating at the local level might act on a community with the effect that different sub-sections of the population make up the migrants and non-migrants in different communities. Nor is there any reason to suppose that non-migrants are the same subset of a community in all cases at all times. Indeed, it seems quite reasonable to suggest that the characteristics of non-migrants, even in one place, might change over time. Unfortunately almost all commentators have neglected this issue.

This would not matter if demographic differences between migrants and those who stay in a parish did not exist. Indeed, this has consistently been the position of Wrigley and Schofield, who have worked on the assumption that those who remained in a parish were representative of the whole population, including migrants.[363] In some instances it has been possible to compare migrants and non-migrants using different sources. For example, David Levine used the 1851 census enumerators' books to compare the families in an English town that could be reconstituted with those that could not. He concluded that 'family reconstitution does yield an accurate approximation of fertility and nuptiality, despite the fact that its carefully defined observational rules restrict the analysis to the experience of a minority of the population'.[364] Despite this endorsement a number of scholars continue to hold serious reservations about the methodology, particularly on the

[361] Ruggles, 'The limitations of English family reconstitution', 115.
[362] Souden, 'Movers and Stayers', 15; also S. King, 'Multiple-source record linkage in a rural industrial community, 1680-1820', *History and Computing*, 6 (1994), 133-42.
[363] This issue is discussed at some length in Ruggles, 'The limitations of English family reconstitution', 116-124.
[364] D. Levine, *Family Formation in an Age of Nascent Capitalism* (London, Academic Press, 1977), 170. In a later review, Levine does appear to be less sanguine about the reliability and representativeness of the Cambridge Group's sample and methodology; see D. Levine, 'Sampling history: the English population', *Journal of Interdisciplinary History*, XXVIII:4 (Spring 1998), 605-32.

question of whether non-migrants are indeed representative of migrants.[365] I would also argue that I have discovered an excellent example in the Isle of Purbeck of a situation where they are not.

Steven Ruggles, in particular, has argued that marriage and migration are competing risks. Through logic and simulation he has demonstrated that studies based upon family reconstitution data systematically underestimate ages at vital events because they do not include migrants, a phenomenon called 'migration censorship'.[366] Ruggles' demonstration is logically correct and is generally accepted as being so. Wrigley, however, challenges its relevance for English studies on empirical grounds, arguing that although logically Ruggles *is* correct, in practice the problem does not affect the English data.[367] Such a defence is highly unsatisfactory, as one is then left with the question of why the logically expected difference does not occur. Moreover, there is recent empirical evidence from North America that does support Ruggles' position. Kasakoff and Adams analysed a large genealogical database for the northern United States, 1620-1880, and found that non-migrants experienced vital events at younger ages than migrants. These disparities were caused not simply by migration censorship as in Ruggles' model, but also by genuine socio-economic differences between the two groups and the places in which they lived.[368] Therefore changes over time among non-migrants cannot be extrapolated to whole populations because they are affected by changing migration rates and patterns. Migrants and non-migrants must be considered together in order to gain an accurate picture of the population as a whole. They conclude that this challenges the validity of results derived from non-migrants alone, as in the methodology of family reconstitution.[369]

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[365] Kasakoff & Adams, 'The effect of migration'; Ruggles, 'The limitations of English family reconstitution'; Eckstein & Hinde, 'Measuring fertility within marriage'.
[366] S. Ruggles, 'Migration, marriage, and mortality: correcting sources of bias in English family reconstitution studies', *Population Studies*, 46 (1992), 507-22. He also returns to this issue in Ruggles, 'The limitations of English family reconstitution', 117-24.
[367] E.A. Wrigley, 'The effect of migration on the estimation of marriage age in family reconstitution studies', *Population Studies*, 48 (1994), 81-97.
[368] Kasakoff & Adams, 'The effect of migration', 235.
[369] Kasakoff & Adams, 'The effect of migration', 234-5.

Total Reconstitution

Some scholars have used an extended form of family reconstitution called 'total reconstitution': for example, Claire Jarvis's study of three parishes in Essex, and Barry Reay's work on Kent.[370] It should be noted, however, that Eckstein and Hinde have cast doubt on whether true total reconstitution has been used in either case.[371] Total reconstitution takes as its foundation a family reconstitution exercise, and links that data with information in other primary sources, such as tithe, land tax, trade directories and, particularly, census enumerators' books. This fills in some of the gaps left by conventional family reconstitution methods and provides an opportunity for socio-economic analysis, a dimension missing from many studies based solely on family reconstitution. The range of questions that can be asked is much greater with the addition of the data from these other sources. However, the fact that the technique is based on a family reconstitution exercise means that many of the reservations about family reconstitution outlined above also apply to the total reconstitution method. It continues to utilise a limited, immobile subset of the population (the non-migrants). We may know more about this group with the additional data from other sources, but they remain an exclusive minority of the whole population.

Community Reconstruction

The discussion earlier in this chapter makes it clear that neither family reconstitution nor total reconstitution is appropriate for the present study of the Isle of Purbeck. In the first instance, the Purbeck parish registers are not suitable for a family reconstitution exercise. It was therefore decided to use a technique called community reconstruction, which has been developed by scholars wishing to ask a broader range of questions than is possible using traditional family reconstitution methodologies.[372] In particular, they have wanted to

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[370] P. Sharpe, 'The total reconstitution method: a tool for class-specific study?', *Local Population Studies*, 44 (1990), 41-51; C. Jarvis, 'The reconstitution of nineteenth century rural communities', *Local Population Studies*, 51 (1993), 46-53; B. Reay, 'Sexuality in nineteenth-century England: the social context of illegitimacy in rural Kent', *Rural History*, 1:2 (1990), 219-47; B. Reay, 'The context and meaning of popular literacy: some evidence from nineteenth-century rural England', *Past and Present*, 131 (1991), 89-129; B. Reay, 'Before the transition: fertility in English villages, 1800-1880', *Continuity and Change*, 9:1 (1994), 91-120.

[371] Eckstein & Hinde, 'Measuring fertility within marriage', 40-1.

[372] P.R.A. Hinde. 'The population of a Wiltshire village in the nineteenth century: a reconstitution study of Berwick St James, 1841-71', *Annals of Human Biology*, 14:6 (1987), 475-85; H. Rhodri

extend their analyses into the nineteenth century. Community reconstruction is, however, perfectly practical for earlier periods. The work of Steve King on proto-industrial communities in the West Riding of Yorkshire between 1650 and 1830 is perhaps the outstanding example of multiple-source nominal record linkage for the pre-census period.[373]

Community reconstruction differs from family reconstitution in that, while the latter uses only data from registers of vital events, a reconstruction utilises a wide variety of sources, but particularly the parish registers and CEBs. These are co-ordinated using nominal record linkage, thus allowing the creation of a collective biography of all those known to have lived in a place for any length of time during the period under consideration. Community reconstruction therefore goes much further than family reconstitution. The latter, theoretically, uses only whole completed life cycles (although the rules can be adapted to incomplete life cycles and still preserve demographic rigour). I say *theoretically* because, realistically, however good the quality of the parish registers used, family reconstitution will inevitably identify incomplete life cycles for some people, or make incorrect linkages that can only be verified using additional sources. Moreover, substantial numbers of people are excluded from the linkage process altogether, because of the narrow reconstitution rules that are applied.[374] A reconstruction, on the other hand, deliberately employs all traces of all life cycles whether complete or not; even one single trace in one source is used. Community reconstruction is not antiquarian, however; it does not seek to record every last detail about a person. The additional sources used in any particular reconstruction will depend on what is available and the research objectives being pursued; their purpose is to enrich life cycles and fill in gaps.[375]

Davis, 'Automated record linkage of census enumerators' books and registration data: obstacles, challenges and solutions', *History and Computing*, 4 (1992), 16-26.

[373] S. King, 'Multiple-source record linkage'; S. King, 'Power, representation and the historical individual: problems with sources for record linkage in two Yorkshire townships, 1650-1820', *Local Historian*, 27 (1997), 78-90; S. King, 'Profitable pursuits? Rural industry and mortality in the proto-industrial West Riding 1650-1830', *Local Population Studies*, 59 (1997), 26-40; S. King, 'Reconstructing lives: the poor, the Poor Law and welfare in Calverley, 1650-1820', *Social History*, 22 (1997), 318-38.

[374] Steve King has tried to address this problem for the eighteenth century. His procedure is, I would suggest, in fact something of a hybrid, in that it takes as its starting point family reconstitution with much broader rules about who can be included and who cannot; S. King, 'Multiple-source record linkage'.

[375] A good focused study of this type is A. Blaikie, 'Infant survival chances, unmarried motherhood and domestic arrangements in rural Scotland', *Local Population Studies*, 60 (1998), 34-46.

Community reconstruction is inherently different from family reconstitution; the focus of each is different, as are the questions each asks. Family reconstitution builds up from the family; community reconstruction starts with the whole community and fills in details. For example, the aim of the Kingston Local History Project (which started in 1996 and is ongoing) is to construct a comprehensive database, detailing major aspects of Kingston's economic and social evolution during the second half of the nineteenth century. The core of the database is the complete census enumerators' returns for each census year 1851-1891 (145,000 records). To these are being added parish register data, street and trade directories, electoral registers, cemetery records, school registers, rate books and virtually any source with local nominal data. By linking these sources together, the scope for examining the socio-economic and demographic characteristics of the population of Kingston is immense.[376] Family reconstitution produces carefully defined demographic trends, and these are important. However, if we are to gain a more complete picture of how people in the past lived their lives, how they interacted socially, economically and culturally, and how their communities worked, we need something more than narrowly-focused family reconstitution studies. This is the key point – family reconstitution says almost nothing about these wider issues. They are, however, the main focus of community reconstruction. The latter takes into account the total social dimension, and therefore operates at a different level where pure demography is simply part of the wider picture.[377]

[376] More details of the Kingston Local History Project can be found in P. Tilley & C. French, 'Record linkage for nineteenth-century census returns: automatic or computer-aided?', *History and Computing*, 9 (1997), 122-33; P. Tilley & C. French, 'From local history towards total history: recreating local communities in the 19th century', *Family and Community History*, 4 (2001), 139-49; P. Tilley, 'Creating life histories and family trees from nineteenth century census records, parish registers and other sources', *Local Population Studies*, 68 (2002), 63-81.

[377] Wrigley implicitly addresses this point in E.A. Wrigley, *The Local and the General in Population History*, (Exeter University Press, 1983). Also see P. Hudson, 'Industrialization in Britain: the challenge of micro-history', *Family & Community History*, 2:1 (1999), 10-11.

Given the large number of records involved, it was not practical to reconstruct the Purbeck parishes by hand. Table 6.1 below lists the total records for each parish.

Table 6.1 Records of individuals available for use in the community reconstruction

	Langton Matravers	Worth Matravers	Swanage	All three parishes
Censuses 1841-91	4,847	1,949	13,274	20,070
Baptism Register	1,760	564	1,934	4,258
Marriage Register	365	74	815	1,254
Burial Register	1,079	486	2,284	3,849
Company Records			754	754
Trade Directories	299	104	2,071	2,474
Other Records	640	64	893	1,597
Totals	8,990	3,241	22,025	34,256

Transcribing the details of all these individuals onto record cards and then performing a manual linkage and analysis would have been prohibitively time-consuming and prone to error. Each entry was therefore keyed into a personal computer using a relational database management system (RDBMS) to store, manipulate and interrogate the data. The software used was Microsoft Access, although any of several commercially-available database packages would be equally suitable.

Before the raw data are entered into a database, the researcher should closely and systematically examine them. As Mawdsley and Munck have said, 'The historian has to be the master of his or her sources, and this can only come with extensive contact with those sources.'[378] A source's structure can be examined to see what it says about how the source came into existence. The census, for instance, did not evolve in a straightforward way as a simple piece of administrative fact-finding. Concerns about poor relief, housing and family structure, community self-help, urban sanitation, social and moral welfare, and military potential all acted to shape the form it took. For example, the household had economic and moral, as well as social, significance for nineteenth-century administrators. Accordingly, the CEBs provide information at varying levels; besides the details of individuals living in a particular location, there is data on composite units like the family

[378] E. Mawdsley & T. Munck, *Computing for Historians: an introductory guide*, (Manchester University Press, 1993).

and the household. The General Register Office designed the census to be considerably more than a simple count of heads.[379]

Indeed, the accuracy and rigorous logic of the computer will often force the researcher to become more aware of the nature and implications of the material. The structure of the source should also be examined to see how the data might be used, and perhaps enhanced editorially, to maximise its legitimate potential to answer the research questions being asked. For example, splitting name fields into their first and surname components considerably enhances the flexibility of the data in terms of its interrogation and manipulation.[380]

At least three factors affect the structure of a database: the information available in the source, how that information might ideally be structured conceptually, and to what extent such an ideal structure can or should be implemented, given the constraints imposed by time and resources.[381] This relationship between the original source and the methods used to turn it into something that can be used by database software is a delicate one.[382] Most fundamental of all is the question of whether the data should be entered into the database in exactly the same form as it appears in the original document. Ideally, this would be the most satisfactory procedure.[383] Realistically, however, any research will be guided by preliminary hypotheses and constraints on time and other resources, including the logic of database design and the capability of the software to process the transcribed data. As the aim was to construct a consistent set of data in order to illuminate specific questions about nineteenth-century rural communities, it was felt that the main thrust should lie in the substantive information in the sources, rather than noting every specific detail about their compilation.

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[379] Higgs, *Making Sense of the Census*; Higgs, *A Clearer Sense of the Census*; Edward Higgs, 'Occupational censuses and the agricultural workforce in Victorian England and Wales', *Economic History Review*, XLVIII, 4 (1995), 700-16.

[380] Mawdsley & Munck, *Computing for Historians*, 79; P. Adman, S.W. Baskerville & K.F. Beedham, 'Computer-assisted record linkage: or how best to optimise links without generating errors', *History and Computing*, 4 (1992), 2-15.

[381] For a good general text on database design for historians, see C. Harvey & J. Press, *Databases in Historical Research*, (Basingstoke, Macmillan, 1996).

[382] Mawdsley & Munck, *Computing for Historians*, 186.

[383] If there is enough time and manpower available, the best method would be to transcribe the original source exactly and have this linked to the data set produced for analysis. This allows the two versions of the same record to be compared if any anomalies or mistakes occur or are suspected.

Of course, if one edits the data, this means that to some degree the source is being altered. However, even a cursory examination of, for example, the CEBs suggests that it would be unwise to automatically replicate their form. This is despite the fact that the CEBs are a highly structured source, and the data contained therein has generally been entered in a legible and consistent manner. In terms of good database design, anomalies do exist and need to be addressed. For instance, it would be sensible to place the forename(s) and surname in separate fields in order to simplify finding people with the same surname (a vital part of nominal record linkage). Similarly, it will be much simpler to extract meaningful birthplace data for migration studies if the 'Where Born' column is divided into fields for place of birth and county (or country) of birth. Should the dittos used (often inconsistently) by enumerators be replicated exactly, or even at all? Should the full version of abbreviated names be used? Is it valid to assume that those individuals who lack an entry in the 'Condition' column are unmarried? Should the abbreviations used by the enumerators be used? Should the process be taken further? Is it necessary, for instance, to write 'Son-in-Law' or could some abbreviation be used? Are any new fields required?[384]

All these questions should be resolved before the researcher begins keying the source data into the computer. It is also vital that he or she should document precisely what procedures have been adopted. This record will outline the sources used for particular items of information and the decisions taken regarding alternative readings and interpretations. It will also note the categories of information that have been summarised rather than entered verbatim, any information that has been excluded, and details of any coding schemes that may have been used in order to standardise data for later interrogation and manipulation. It is crucial that the rules and techniques applied to nominal record linkage are clearly and precisely formulated, as the results of the research will obviously depend on the criteria employed to link individuals. Consistency is also vital, notwithstanding the necessity for some flexibility and sensitivity to the local context. The linkage criteria have to allow for a spectrum of flexibility and uncertainty. They should produce a core of robust, definite links via the computer, but also enable consideration of a wider group of possible links so that as many people as possible are included in the linkage process.

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[384] Mawdsley & Munck, *Computing for Historians*, 52-5.

Something that is frequently ignored by those engaged in nominal linkage studies is that there can be a problem with people representing themselves at different levels in different sources. That is, they are known in different ways in different contexts. As Graeme Morton points out in an important paper on this subject, individuals will inevitably filter the data they provide about themselves to suit their own concerns.[385] Steve King has also addressed this issue in relation to his work on proto-industrial townships in the West Riding of Yorkshire.[386] Family reconstitution studies do not have to address this issue, as it utilises a single source, but it should be a fundamental consideration for multi-source community reconstructions.

Description of Database

Each discrete source for each of the three parishes in this study (baptism, marriage and burial registers, the decennial censuses 1841-1891, and so on) was transcribed into its own database table. The one exception was the trade directory entries. In this case the entries from a number of directories dating between 1842 and 1895 were merged into a single table for each parish.

The nominal data from each source were entered on the basis of one record per named individual. As far as possible each record was keyed in precisely as it was written in the original source. In some cases, however, the structure of the original data was amended to reflect the requirements of good database design and to facilitate the linkage process. Name fields have been split into fields for forename(s) and surname; ages have been decimalised to three decimal points; dates have been separated into Day, Month and Year fields; a field for gender (assigned by reference to forename,) has been added to tables where this information is not specifically provided; in the directory tables, a separate field has been included for titles; in tithe and land tax records each constituent of land area (acres, roods and perches) and monetary values (pounds, shillings and pence) is given its own field; in the census tables from 1851 onwards the age/sex data has been separated into two discrete columns; similarly, the birthplace entries have been divided into fields for birthplace and county (or country) of birth.

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[385] G. Morton, 'Presenting the self: record linkage and referring to ordinary historical persons', *History and Computing*, 6 (1994), 12-20.
[386] King, 'Power, representation and the historical individual', 78-90.

All tables had a field added to contain any notes and comments – whether temporary or permanent. This is used to note any doubts about or problem with an entry during the transcription phase. Comments were also inserted when a hamlet or farm name was given as the place of birth, or a parish was assigned to the wrong county, and enumerators' mistakes generally. This field was also used as a repository for peripheral information such as the marginal notes that occasionally appear in parish registers.

Coding

Once the source data had been entered, several coding fields were added to each table. I would suggest that coding is an unavoidable part of the process of analysing many historical records via computer techniques. Even with highly structured sources such as the nineteenth-century censuses, the same piece of information may well be recorded several different ways over a series of censuses, or between different enumeration districts within the same census. Enumerators had variable standards of spelling and, despite the instructions given about how the CEBs should be filled in, frequently used their own idiosyncratic forms of abbreviation. Similarly, a long series of parish register records is likely to have been entered by several different people over the years, with all the potential for variable spelling and so on that this entails. Consistency of data entry is not commonly found amongst disparate sets of records such as are the focus of this study. This obviously presents a major problem for any researcher undertaking a nominal record linkage exercise. Moreover, a computer database functions through the application of strict rules of logic – in its 'raw' state the information contained in most historical sources is intrinsically too diverse for general analysis by computer. It is usual, therefore, for codes to be applied to the source material to facilitate the interrogation and manipulation of the data. Ideally, these codes should simplify the search, manipulation and linkage processes, whilst preserving the integrity of the original material.[387]

[387] For an in-depth study of coding for nominal record linkage, see K. Schurer, 'The historical researcher and codes: master and slave or slave and master', in E. Mawdsley, N. Morgan, L. Richmond & R. Trainor (eds.), *History and Computing III*, (Manchester University Press, 1990), 74-82; also Mawdsley & Munck, *Computing for Historians*, 68-75.

There are four basic methods for coding historical material in a computer database:

1. Replacing the information in a field with a standard abbreviating code.
2. Adding a coded field that classifies or imposes a structure on information contained in another field.
3. Adding a coded field that contains information derived from the source material, but not explicitly stated in it.
4. Adding a coded field that groups together records based on information in one or more of the table's fields (or even several tables).

Of these four, the first option has not been used in this study and I would argue against its use in any circumstances. The overwhelming objection to this method is that it compromises the integrity of the source material. Clearly, by substituting coded values for the original data in a field, the source is being altered. This is not satisfactory from either a historical or scholarly point of view.

Methods two, three and four, however, have all been utilised in the present study. Option two effectively standardises all the entries in a field to a common form. For example, in the CEBs an individual's marital status may be recorded in several different ways – 'Single', 'Unmarried', 'Unm', 'U', and so on. If one allocates a simple code to marital status and places it in an additional field, all those considered to be married, unmarried or widowed will have the same respective code, regardless of how the original entry is written. Standardised references of this kind are much more convenient to refer to and, most importantly, the form of the original entry is maintained. At the same time, any statistical analysis encompassing marital status becomes a relatively straightforward operation to perform.

Option three is useful where a source clearly contains information of value to the researcher that is not explicitly written down but which can be extracted quite straightforwardly and reliably. For example, in the present case it was felt that it would be useful to know (roughly, at least) the year of birth of all those listed in the CEBs. It was a simple matter to instruct the database software to calculate this (census date minus age) and insert it into an additional field in the tables.

Option four groups or summarises information that is too diverse for general analysis. The most obvious example here is the 'Age' column in the CEBs. Even with the assistance of a computer it is clearly nonsensical to attempt to analyse a census population using the individual ages of those enumerated. The common practice is to use five-year age-bands instead, starting with 0-4 and working up the age range to 65+. Again, it is a simple task to insert an extra column into the database tables and instruct the software to insert in that field '0-5' where the value in 'Age' is less than five, '5-9' where the value in 'Age' is greater than four and less than ten, and so on.

These last three methods of coding have the cardinal virtue that they enhance and complement the original source material without altering it in any way. The form of the original transcription is therefore always available to the researcher if required. By retaining the ability to retrieve the form of the original, the codes used are in a sense irrelevant, since the original data can be used to revise the coding scheme initially used.[388]

All the codes utilised in this study were added after the source material was transcribed into the various database tables. Data that required coding were then identified and empty fields inserted into the relevant tables in preparation for receiving coded values. The computer was then instructed to find all the discrete entries in particular fields in each of the tables. These sets of data were then merged into a single new table and duplicate entries discarded. So, for example, all the different values entered in the marital status column of each census, 1851-1891, for each parish were identified by the computer. These were then inserted into a new table with two columns – one for the original values and one for the coded values. This table contains one single example of each variation of the marital status entries for each parish for the five censuses, 1851-1891. The coding classification was then devised and the coded values entered into the table. This table was then linked to all the census tables using the original values field (linked to the marital status field in the census tables). Update queries were then devised and run which entered the relevant coded value in the empty coding field for each record in each census table.

It is possible to enter values into coding fields during the original transcription phase. However, I would argue that such a method is substantially slower than the one I have

[388] Schurer, 'The historical researcher and codes', 78.

summarized above, even when lookup tables are utilised. Also, typing errors will almost inevitably occur if coding is done during data entry. The biggest problem of all is that a good deal of flexibility is lost. Most particularly, the coding scheme will need to have been designed before data entry begins. If mistakes are found in the scheme or the data is found to possess more variables than originally suspected, the classification will need to be revised part of the way through the data-entry phase. That is clearly an unsatisfactory outcome. The method that I have described above ensures that coding classifications are comprehensively designed, whilst retaining a good deal of flexibility. It is also relatively quick and applies the relevant coded values in one consistent global operation. All the tables in this study have had at least some of the following coding classifications added to them. Data that have been explicitly coded are birthplace, county name, age, occupation, and relationship to head of household. A number of editorial fields have also been used. These cover the following areas: record identifier, table identifier, year of birth, age-bands, household and family composition, standard forename, standard surname and sex. Details of all these coding schemes, with the exception of those for standard forename and standard surname are found in Appendix Three.

Many computer-based linkage studies have made use of specially-written routines for dealing with the myriad variations in the spellings of names in historical documents. Of these, the two best-known and widely used are probably the 'Russell-Soundex code' and the 'Guth algorithm'.[389] However, after reviewing the experience of previous researchers with these routines, and taking into account the highly variable spelling found in the Purbeck documents, it was decided that neither was suitable. Instead, lists of standard forenames and standard surnames were created manually. The forenames and surnames from all possible sources were compiled into two lists and all duplicate entries removed. Each list was then sorted alphabetically. A code (numeric) was then assigned to each name. Names that had variant spellings (for example, Coombes, Coombs, Combs, Coomes) were all assigned the same code. Similarly, those names where there was potential for confusion in the transcription phase, such as Brown and Bower or Hunny and

[389] G.J.A. Guth, 'Surname spellings and computerized record linkage', *Historical Methods Newsletter*, 10:1 (1976), 10-19; D. De Brou & M. Olsen, 'The Guth algorithm and the nominal record linkage of multi-ethnic populations', *Historical Methods*, 19:1 (1986), 20-4; C. Stephenson, 'The methodology of historical census record linkage: a users guide to the Soundex', *Journal of Family History*, 12 (1980), 112-15. For a general discussion of computerized name standardization, see L. Nygaard, 'Name standardization in record linking: an improved algorithmic strategy', *History and Computing*, 4 (1992), 63-74.

Bunny, received the same coding. The same methodology was applied to forenames: for example, the common abbreviation Wm. was assigned the same code as William. It was particularly useful where more than one forename had been given, so Adelaide and Adelaide Jane would both have the same forename code. Once all the names were coded, update queries were used to populate a standard forename and standard surname field in each table. Although somewhat simplistic, this technique is actually quite effective. It may not pick up all possible variants of a name but it certainly catches the vast majority. Nor is it particularly onerous in terms of time, although the relatively few surnames existing among the stone working population obviously helped in this regard.

The Linkage Process

A number of historical studies have utilised the technique of nominal record linkage (NRL). Its purpose is to link named individuals across two or more sources, thereby enriching and enhancing the material being studied. One is also better able to investigate topics longitudinally, i.e. over time; change over time is (or should be) central to the historian's work. The sources most commonly used for NRL have been the manuscript CEBs, parish registers and poll books. The work presented here, when complete, aims to link CEBs, parish registers, trade directories, records of the Company of Purbeck Marblers and Stonecutters, and possibly tithe and land tax records.

Despite the obvious potential of NRL, the number of studies that have utilised the technique before the 1990s is quite small. In large part this was because NRL is extremely time-intensive (and tedious) to do by hand.[390] The rapid development of personal computer technology since then has offered a powerful and versatile alternative to the manual process. Unfortunately, linking historical records is not a straightforward matter, even given the data manipulation capabilities of modern computers and software. The problem has always been how to achieve optimum rates of record linkage between

[390] This is not to say that good NRL studies cannot be done by hand. For example, see the work done on Colyton in Jean Robin, 'From Childhood to Middle Age: Cohort Analysis in Colyton, 1851-1891', Working Paper Series No. 1, (Cambridge Group for the History of Population and Social Structure, 1995); J. Robin, 'Family care of the elderly in a nineteenth-century Devon parish', *Ageing and Society*, 4 (1984), 505-16; J. Robin, 'Prenuptial pregnancy in a rural area of Devonshire in the mid-nineteenth century: Colyton, 1851-1881', *Continuity and Change*, 1:1 (1986), 113-24; J. Robin, 'The relief of poverty in mid-nineteenth-century Colyton', *Rural History*, 1 (1990), 193-218.

multiple, often very disparate sources, whilst maintaining confidence that the links generated are true.

Some scholars have favoured a fully automated approach. For example, H. Rhodri Davies used NRL to link CEBs and civil registration data for mid-Wales.[391] More recently, Harvey, Green and Corfield have adopted a different, though still automatic, approach. They used a series of fully automated multiple pass algorithms to link late-eighteenth-century poll book data.[392] These fully automated systems are claimed to be fast and, most importantly, good at establishing correct links, by their developers. Others, however, are less sanguine about the efficacy of fully automated linkage procedures. Adman, Baskerville and Beedham, who also linked eighteenth-century poll book data, argue strongly that a *semi*-automated procedure that includes a large component of manual interaction with the source material is a superior option. In their view, 'the *optimal* number of true links will only result from an *interactive* process that permits the researcher to bring his or her expertise directly to bear on the sources in question.'[393]

This kind of semi-automated methodology reflects my own views on the issue of how NRL might best be achieved. I have never been convinced of the validity of fully automated linkage routines, certainly for the sources used in the work being undertaken here. This perception is based on long familiarity with the vagaries of the Purbeck data, my experience of linking by hand records from these parishes, and a reasonable knowledge of how computer database software functions. I would argue that the data are too diverse and inconsistent in both form and style, particularly across time. As was noted earlier in this chapter, nineteenth-century census and parish register data suffer from chronic variations in spelling and the reporting of age, occupational and birthplace information. In Purbeck these factors are compounded by a high degree of homonymy (though not as high as that encountered by Davies in mid-Wales). One therefore finds it very difficult to be confident that the logic-driven procedures underlying fully-computerised record-linkage routines are capable of producing accurate links in a large enough proportion of the population under investigation. This does not mean that I consider that the results reported for automated

[391] H.R. Davies, 'Automated record linkage of census enumerators' books and registration data: obstacles, challenges and solutions', *History and Computing*, 4 (1992), 16-26.
[392] C. Harvey, E. Green & P. Corfield, 'Record linkage theory and practice: an experiment in the application of multiple pass linkage algorithms', *History and Computing*, 8 (1996), 78-89.
[393] Adman et al., 'Computer-assisted record linkage', 6.

methods are not valid. Rather, I feel that fully-automated procedures are not robust enough to provide accurate enough linking of the material used in this study. It can also be argued that the fully-automated method has a further drawback; to some extent such a procedure inevitably divorces the historian from the source material. If he or she is simply keying data into a computer and then running an automated linkage routine, then it affords little opportunity for meaningful interaction between the researcher and the data as a historical source in its own right, or the population he or she is studying.

An important requirement for linking the Purbeck data was that the procedure used should operate using the facilities to be found within standard relational-database software, in this case, Microsoft Access, thus avoiding the necessity for any programming. This precluded the direct use of any of the methodologies outlined above. Of these, perhaps the most relevant to the present study was Davies' linking of CEBs and civil registration data for mid-Wales. However, his procedure was developed using a specialised software package that is not generally available.[394] It would also have required some quite complex programming in Visual Basic to adapt it to run under Access. Similarly, although the methodology developed by Adman, Baskerville and Beedham was probably closest of all to what one would have preferred to use to link the Purbeck data; this too was rejected as it would also have involved a considerable amount of programming to make it work as part of an Access database.[395]

Harvey, Green and Corfield used a series of multiple pass algorithms to link late-eighteenth-century poll book data from Westminster. They reported some very impressive results in terms of the linkage rates achieved – around 60 per cent of voters in 1784 were linked with those in 1788.[396] Although their routines were fully automated, investigation showed that it would be relatively straightforward to adapt the kind of algorithm they had used for use within an Access database.

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[394] Davies used a database management system called SIR (Scientific Information Retrieval), mainly found on University mainframe systems.
[395] Adman *et al.*, 'Computer-assisted record linkage'. They wrote a dedicated record linkage program designated CARL (Computer Assisted Record Linkage) for use on a Unix mainframe.
[396] Harvey *et al.*, 'Record linkage theory and practice'. It should be noted that the validity of elements of their methodology has been questioned by P. Adman, 'Record linkage theory and practice: a matter of confidence', *History and Computing*, 9, 1-3 (1997), 150-6.

It was therefore decided to develop a semi-automated approach consisting of two basic components. Firstly, to devise and run a series of algorithms that would establish a base set of *potential* links. These would then be checked manually, utilising a variant of the method described by Vetter, Gonzalez and Gutmann. Their system puts two lists of individuals or households up on screen, side-by-side, allowing the researcher to determine whether links are warranted or not.[397] Such a system seemed to offer a good compromise between the competing issues of time, accuracy and familiarity with the data.

It was decided to link the census tables first, on the grounds that it would be relatively simple to assess the veracity of the links achieved by the linkage algorithms. Seven variables were taken as the foundation for the algorithmic part of the process. These are listed below.

N1 = Standard Forename + Surname

N2 = Standard Forename + Standard Surname

N3 = Surname

O1 = Occupation

O2 = Occupational Group

B = Standardised County of Birth

Y = Birth Year

Combining these in various ways produced 33 algorithms, as shown in Table 6.2 below.

[397] J.E. Vetter, J.R. Gonzales & M.P. Gutman, 'Computer-assisted record linkage using a relational database', *History and Computing*, 4 (1992), 34-51.

Table 6.2 Algorithms used to link nineteenth-century census data

No.	Algorithm Code	Algorithm
1.	N1	Standard Forename + Surname
2.	N1 + O1	Standard Forename + Surname + Occupation
3.	N1 + O2	Standard Forename + Surname + Occ. Group
4.	N1 + B	Standard Forename + Surname + Birth County
5.	N1 + Y	Standard Forename + Surname + Birth Year
6.	N1 + O1 + B	Standard Forename + Surname + Occupation + Birth County
7.	N1 + O1 + Y	Standard Forename + Surname + Occupation + Birth Year
8.	N1 + O2 + B	Standard Forename + Surname + Occ. Group + Birth County
9.	N1 + O2 + Y	Standard Forename + Surname + Occ. Group + Birth Year
10.	N1 + O1 + B + Y	Standard Forename + Surname + Occupation + Birth County + Birth Year
11.	N1 + O2 + B + Y	Standard Forename + Surname + Occ. Group + Birth County + Birth Year
12.	N2	Standard Forename + Standard Surname
13.	N2 + O1	Standard Forename + Standard Surname + Occupation
14.	N2 + O2	Standard Forename + Standard Surname + Occ. Group
15.	N2 + B	Standard Forename + Standard Surname + Birth County
16.	N2 + Y	Standard Forename + Standard Surname + Birth Year
17.	N2 + O1 + B	Standard Forename + Standard Surname + Occupation + Birth County
18.	N2 + O1 + Y	Standard Forename + Standard Surname + Occupation + Birth Year
19.	N2 + O2 + B	Standard Forename + Standard Surname + Occ. Group + Birth County
20.	N2 + O2 + Y	Standard Forename + Standard Surname + Occ. Group + Birth Year
21.	N2 + O1 + B + Y	Standard Forename + Standard Surname + Occupation + Birth County + Birth Year
22.	N2 + O2 + B + Y	Standard Forename + Standard Surname + Occ. Group + Birth County + Birth Year
23.	N3	Surname
24.	N3 + O1	Surname + Occupation
25.	N3 + O2	Surname + Occ. Group
26.	N3 + B	Surname + Birth County
27.	N3 + Y	Surname + Birth Year
28.	N3 + O1 + B	Surname + Occupation + Birth County
29.	N3 + O1 + Y	Surname + Occupation + Birth Year
30.	N3 + O2 + B	Surname + Occ. Group + Birth County
31.	N3 + O2 + Y	Surname + Occ. Group + Birth Year
32.	N3 + O1 + B + Y	Surname + Occupation + Birth County + Birth Year
33.	N3 + O2 + B + Y	Surname + Occ. Group + Birth County + Birth Year

The census data for all three parishes was merged together into a single table for each census-year, 1841-1891. This produced six tables containing all the census records for Langton Matravers, Worth Matravers and Swanage for each census-year. Combining the data in this way yielded two main benefits. Firstly, it reduced the number of times the set of algorithms needed to be run. And, secondly, it allowed the system to link individuals who had moved from one of the three parishes to another between censuses. The aim was to link each census-year table to a copy of the succeeding one, i.e., 1841-1851, 1851-1861, 1861-1871, 1871-1881, and 1881-1891. In order to accomplish this, 33 single-digit fields were added to each census table. Their purpose was to hold an indicator of whether a record is 'list-unique' in its table for each algorithm. Unique records were identified because not to use them would have resulted in many thousands of cross-matched records, most of which would have been spurious links. Establishing list-uniqueness was a little tricky in that it was achieved by using Access's built-in 'find duplicates' query wizard to find duplicate entries, and then modifying slightly the SQL code underlying the resulting select queries. These were then changed to become update queries based on Query by Example (QBE), and run against the earlier of the two census tables being linked. Each record was tested for list-uniqueness by each algorithm and the relevant marker field updated accordingly. The same update queries were then applied to the second census table. Table 6.3 below shows the number of list-unique records in each census table per algorithm.

The figures for 1841 are noticeably lower than those for the other censuses, as one might expect, given the relatively poor quality of the data presented in the 1841 CEBs. Despite some limited variation, the figures for each algorithm over the four censuses 1851-1881 are broadly similar. There is then a substantial increase in the proportion of list-unique records found by all the algorithms for the 1891 census data. This may reflect a better quality enumeration in 1891, and the fact that during the last quarter of the nineteenth century Swanage began to develop as a middle-class tourist resort. One consequence of this was to bring in a number of migrants who would have diluted the homogeneity of the surname pool, thus increasing the list-uniqueness of the town's population.

Table 6.3 Percentage of list unique records per census table for each algorithm

		Census Year					
	Algorithm	1841 (%)	1851 (%)	1861 (%)	1871 (%)	1881 (%)	1891 (%)
1.	N1	52.11	51.69	54.55	58.39	59.27	66.11
2.	N1 + O1	24.52	54.26	59.02	55.31	54.54	65.38
3.	N1 + O2	35.01	68.06	71.43	75.33	74.25	83.76
4.	N1 + B	54.25	55.98	58.37	63.08	64.37	71.70
5.	N1 + Y	96.16	98.04	97.96	98.55	98.14	98.94
6.	N1 + O1 + B	24.52	54.81	59.31	55.66	55.18	65.68
7.	N1 + O1 + Y	27.05	63.15	65.31	61.57	61.75	68.24
8.	N1 + O2 + B	35.39	70.51	73.40	77.70	77.44	86.35
9.	N1 + O2 + Y	45.01	98.56	98.45	98.78	98.68	99.32
10.	N1 + O1 + B + Y	27.05	63.15	65.31	61.57	61.75	68.24
11.	N1 + O2 + B + Y	45.01	98.62	98.57	98.96	99.13	99.43
12.	N2	45.04	45.80	48.85	51.99	53.86	60.28
13.	N2 + O1	24.33	53.25	57.37	54.21	53.41	64.70
14.	N2 + O2	33.22	64.10	67.31	70.91	71.01	79.98
15.	N2 + B	47.83	50.64	53.00	57.38	60.08	67.72
16.	N2 + Y	95.11	97.76	97.60	98.16	97.49	98.61
17.	N2 + O1 + B	24.33	53.86	57.66	54.74	54.31	65.00
18.	N2 + O1 + Y	26.98	63.09	65.24	61.51	61.35	68.18
19.	N2 + O2 + B	33.63	66.83	69.48	73.93	74.96	83.41
20.	N2 + O2 + Y	44.66	98.28	98.22	98.46	98.17	99.16
21.	N2 + 01 + B + Y	26.98	63.09	65.24	61.51	61.41	68.18
22.	N2 + O2 + B + Y	44.66	98.34	98.32	98.64	98.68	99.26
23.	N3	3.01	2.58	3.24	2.64	3.89	5.34
24.	N3 + O1	15.41	24.65	26.89	24.05	24.42	35.71
25.	N3 + O2	11.83	13.80	14.84	15.95	15.21	19.26
26.	N3 + B	4.89	7.66	9.46	9.76	11.10	15.75
27.	N3 + Y	51.76	66.55	68.87	69.87	67.32	73.58
28.	N3 + O1 + B	15.54	26.12	28.15	25.92	25.94	37.89
29.	N3 + O1 + Y	24.68	57.82	59.67	53.38	52.42	63.58
30.	N3 + O2 + B	12.63	18.36	20.05	21.77	21.66	27.92
31.	N3 + O2 + Y	33.76	79.37	82.47	81.29	80.00	84.91
32.	N3 + O1 + B + Y	24.68	58.25	60.16	54.00	53.41	64.10
33.	N3 + O2 + B + Y	33.95	80.69	84.03	82.80	83.35	86.71
Total List-Unique Records Per Census		3,128	3,262	3,087	3,372	3,550	3,671

Source: Nominal record linkage.

Using QBE, 33 select queries were then created. These counted the matched pairs of records in each table for each algorithm, using only records that had been marked as list-unique for that algorithm. Following this, three new fields were added to each census table. Their function was to hold the unique record identifier of paired records from the opposing table, along with the relevant algorithm definition and number. Again using QBE, a further 33 update queries were run, this time in descending sequence of the values of the list unique totals for the first census year. Each query applied the appropriate algorithm on list-unique records and, if a match was found, updated in each table the three fields noted above. Once a record had been updated in this way, it was excluded from further consideration by the remaining algorithms.

Having established a base set of potential links, the next step was to check their authenticity. A 'create table' query was designed that combined those records in the census-year tables that had been designated as possible links (using the linking identifier fields updated during the matching process). This new table was then used as the basis for an Access form designed to display the projected link. A field called Match Status was added to the table and displayed on the form as a set of option buttons. These were labelled True and False, with Initial as an unallocated (default) setting. During the manual checking phase, potential matches were allocated one of these settings. The newly-created CheckLink table was then joined to the census-year tables, thereby allowing two sub-forms to be included on the main form. These show all those in the co-residing group (CRG) to which each of the individual census records on the main form belongs. The individuals linked by the algorithms are normally part of a larger family or co-residing group. By adding their details to the form it is frequently possible to use the details of other CRG members to confirm whether a proposed link is true or not. Once all the potential links had been checked, a crosstab query was applied to the CheckLink table to establish the number of true and false matches for each algorithm. Table 6.4 below shows the total number of records that were linked by the algorithms, along with the proportions that were found to be true and false during the manual review procedure.

Table 6.4 Proportions of True and False matches generated by multiple-pass automatic linkage algorithms for list-unique census records

	1841-51	1851-61	1861-71	1871-81	1881-91
Total list-unique records at earlier census date	3128	3,262	3,087	3,372	3,550
Records linked - N	1,290	1,570	1,555	1,688	1,676
Records linked – (%)	(41.24)	(48.13)	(50.37)	(50.06)	(47.21)
Linked records found to be true matches - N	1,027	1,312	1,290	1,393	1,352
Linked records found to be true matches – (%)	(79.61)	(83.57)	(82.96)	(82.52)	(80.67)
Linked records found to be false matches - N	263	258	265	295	324
Linked records found to be false matches – (%)	(20.39)	(16.43)	(17.04)	(17.48)	(19.33)
True links as % of total list-unique records at earlier census date	(32.83)	(40.22)	(41.79)	(41.31)	(38.08)

Source: Nominal record linkage.

As Table 6.4 above shows, running all the algorithms against each series of data to be linked produced an encouraging number of matches. The 1841-51 linkage had the lowest number of matches, as might be expected, at just over 40 per cent. The remaining four linkages were higher, however, ranging from 47.21 per cent in 1881-91 to 50.37 per cent in 1861-71. The matched records were then subjected to the manual review procedure. Following this it was found that a minor, but substantial, proportion of the links generated were in fact false matches. The figures are quite consistent, being in the range 16.43 to 20.39 per cent. This meant that between slightly less than 33 per cent and a little over 41 per cent of the records marked as list-unique for the earlier census year were correctly linked by the 33 algorithms. These figures represent a core of between one third and 40 per cent of records that have been correctly linked by the automated part of the procedure, with a high degree of confidence. They also highlight the value of the manual checking procedure. In a fully-automated system, many, if not all, of the false matches would have been counted as true. Clearly, however, a good many more links remained to be found.

A useful by-product of displaying the CRG data in the sub-forms is that additional possible links can be identified. A field included on the sub-forms indicates whether the record for a CRG member has been identified by an algorithm (and so matched elsewhere) by exhibiting the relevant algorithm number. If two records in the sub-forms appear to refer to the same person, and neither is showing an algorithm number, they can be detailed for later consideration as a potential link. This is achieved by keying the record identifier from the second sub-form into the relevant blank field on the first sub-form, so updating the first table. Later, all such records are selected by an append query and added to the CheckLink table for final review. Possible links identified in this procedure are assigned a unique algorithm definition and number. Where it is decided that two records do not represent the same person, the details are deleted from the CheckLink table and the algorithm definition and number fields, with the record-identifier field in the census-year tables are emptied.

Table 6.5 Additional matches found as part of the manual review procedure

	1841-51	1851-61	1861-71	1871-81	1881-91
Total list-unique records at earlier census date	3128	3,262	3,087	3,372	3,550
True matches generated by initial automatic linkage - N	1,027	1,312	1,290	1,393	1,352
Additional true matches found during the manual checking process - N	355	180	176	145	138
Total true matches found thus far – N	1382	1492	1466	1538	1490
True matches as % of total list-unique records at earlier census date	(44.18)	(45.74)	(47.49)	(45.61)	(41.97)

Source: Nominal record linkage.

As Table 6.5 shows, these additional matches bring the number of true links to nearly half of the list unique records in all five census pairs. It is interesting that the earlier the census pairing, the more matches were found using this method. This is particularly noticeable for the 1841-1851 census-pairing, where many potential links would have been missed by the automatic linkage procedure due to the poorer quality of the information in the 1841 CEBs.

The availability of household information during the manual checking phase clearly enabled many more links to be established.

The same basic methodology was used to link the census data to parish register information. This is more problematic than linking censuses alone, as the range of data in the parish registers is not as comprehensive as that contained in the CEBs, and the validation of links is therefore more difficult. The baptism register contains the name of the person being baptised, the date of the baptism, the names of both parents, and the occupation and abode of the father. These do allow a degree of validation as they can be compared with the CRG data from the census records displayed in the sub-forms. An actual date of birth is only occasionally recorded. One solution, used here, is to calculate a year of birth based on a standard birth-baptism interval. In this case an interval of three months was used.[398] Making the birth year variable when linking to the census data, i.e. birth year, plus or minus three years, should account for virtually all birth-baptism intervals. Something to be aware of when linking baptism records is that parents sometimes baptised a child with the same forename as a deceased sibling.[399] This does occur from time to time in the Purbeck registers, although to no great extent. Although this has not been undertaken as yet, it is envisaged that parents' names in the baptism registers will also be linked to the censuses. The algorithms used to link the baptism registers with the census data are detailed in Table 6.6.

Table 6.6 Algorithms used to link nineteenth-century census data to baptism and burial register data, and baptisms to burials

No.	Algorithm Code	Algorithm
1.	N1	Standard Forename + Surname
2.	N2	Standard Forename + Standard Surname
3.	N3	Surname
4.	N1 + Y	Standard Forename + Surname + Birth Year
5.	N2 + Y	Standard Forename + Standard Surname + Birth Year
6.	N3 + Y	Surname + Birth Year

[398] I felt that three months would adequately cover the vast majority of baptisms; also see the figures for rural Hampshire produced in S. Dewhurst & A. Hinde, 'Age at baptism in rural Hampshire in the second half of the nineteenth century', *Local Population Studies*, 57 (1996), 72-5.
[399] Peter Razzell uses this practice to measure the accuracy of baptism registers; see Razzell, 'Evaluating the same-name technique' and Razzell, *Essays in English Population History*. The technique was not used here, as its main utility is in terms of pre-census parish registers and the Purbeck data is being compared with the information in the relatively accurate CEBs.

The same algorithms are also used to link the burial registers to the census data, and the baptism registers to the burial registers. Burial records contain even less data than the baptism registers, in that the only variables available for linkage person are name, age and sex (the latter derived from name). Inevitably, this relative paucity of information makes checking potential links somewhat problematic, especially in a place like Purbeck where it is not unusual to find people with the same forename and surname. If the age given in the burial record is wildly at odds with the ages shown in the census details of a proposed match, then that link will be rejected. Limited corroboration is available in some cases, however. For example, an individual may be absent from the census subsequent to the date of burial. This would be viewed as particularly significant if the person had a spouse who is present, and is widowed or who has remarried. In such instances, the link would probably be confirmed. If there are similar entries in terms of name and age, it is likely that the link will be rejected, as there is no way of determining which one is correct.

Marriage records are somewhat more complex than either the baptism or burial register data. In particular, because of remarriage, people can appear in the register on two or more occasions. Also, each record contains three possible links: the groom, the bride before her marriage, and the bride after her marriage. It is therefore necessary to run three iterations of the linkage algorithms for the marriage data. Firstly, the algorithms were executed against males only (as grooms obviously have the same surname in the census and the marriage register). Then the algorithms were run twice against females. Where the marriage date preceded the census date, the algorithm matched the woman's surname in the census against the groom surnames. Where the census date fell after the marriage date, the algorithm matched the woman's surname in the census against the bride's surname in the marriage register. Unfortunately, the information on age found in the marriage registers is of limited utility for linkage purposes. Often, especially in the earlier registers, it is given simply as 'Full' or 'Minor'. However, age, along with marital status at the time of the marriage, can be compared with the same information from the censuses either side of the marriage date, thus enabling at least a measure of validation. Similarly, the name and occupation of the individual's father can be used to help confirm or deny a potential link during the manual review phase. The algorithms used are shown in Table 6.7 below. The inclusion of information concerning the forename and occupation of an individual's father in both sets of records allows a larger set of algorithms to be used when linking the baptism registers to the marriage registers, and these are out below in Table 6.8.

Table 6.7 Algorithms used to link nineteenth-century census data to marriage registers

No.	Algorithm Code	Algorithm
1.	N1	Standard Forename + Surname
2.	N2	Standard Forename + Standard Surname
3.	N3	Surname
4.	N1 + O1	Standard Forename + Surname + Occupation
5.	N1 + O2	Standard Forename + Surname + Occ. Group
6.	N2 + O1	Standard Forename + Standard Surname + Occupation
7.	N2 + O2	Standard Forename + Standard Surname + Occ. Group
8.	N3 + O1	Surname + Occupation
9.	N3 + O2	Surname + Occ. Group

Table 6.8 Algorithms used to link baptism register data to marriage registers

No.	Algorithm Code	Algorithm
1.	N1	Standard Forename + Surname
2.	N2	Standard Forename + Standard Surname
3.	N3	Surname
4.	N1 + SD	Standard Forename + Surname + Standard Dad Forename
5.	N2 + SD	Standard Forename + Standard Surname + Standard Dad Forename
6.	N3 + SD	Surname + Standard Dad Forename
7.	N1 + O3	Standard Forename + Surname + Dad Occupation
8.	N2 + O3	Standard Forename + Standard Surname + Dad Occupation
9.	N3 + O3	Surname + Dad Occupation
10.	N1 + O4	Standard Forename + Surname + Dad Occ. Group
11.	N2 + O4	Standard Forename + Standard Surname + Dad Occ. Group
12.	N3 + O4	Surname + Dad Occ. Group
13.	N1 + SD + O3	Standard Forename + Surname + Standard Dad Forename + Dad Occupation
14.	N2 + SD + O3	Standard Forename + Standard Surname + Standard Dad Forename + Dad Occupation
15.	N3 + SD + O3	Surname + Standard Dad Forename + Dad Occupation
16.	N1 + SD + O4	Standard Forename + Surname + Standard Dad Forename + Dad Occ. Group
17.	N2 + SD + O4	Standard Forename + Standard Surname + Standard Dad Forename + Dad Occ. Group
18.	N3 + SD + O4	Surname + Standard Dad Forename + Dad Occ. Group

Unfortunately, the only data available for linking the burial registers to the marriage registers are Standard Forename, Standard Surname and Surname. The relatively small pool of names in Purbeck means that the lack of suitable variables to match on will almost inevitably result in fewer correct results, and this is reflected in the figures in Table 6.10.

Table 6.9 Percentage of list unique records per parish register for each algorithm

No.	Algorithm Code	Baptisms
1	N1	54.52
2	N2	47.33
3	N3	6.58
4	N1 + Y	96.93
5	N2 + Y	96.22
6	N3 + Y	60.05
	Total Baptisms	4496

No.	Algorithm	Burials
1	N1	50.19
2	N2	42.89
3	N3	7.82
4	N1 + Y	97.87
5	N2 + Y	97.51
6	N3 + Y	75.03
	Total Burials	3849

No.	Algorithm	Marriages
1	N1	63.64
2	N2	56.30
3	N3	16.11
4	N1sd	60.25
5	N2sd	59.61
6	N3sd	25.80
7	N1o3	57.42
8	N2o3	56.26
9	N3o3	26.83
10	N1o4	80.30
11	N2o4	76.04
12	N3o4	27.39
13	N1sdo3	61.56
14	N2sdo3	61.32
15	N3sdo3	37.08
16	N1sdo4	60.73
17	N2sdo4	60.41
18	N3sdo4	30.74
	Total Marriages (Individuals)	2508

Source: Nominal record linkage.

The number of potential links and correct matches achieved are detailed in Table 6.10 below. In each case the parish register linkage algorithms were run against each data-pairing in turn and then subjected to the manual review procedure. The review process is

accomplished using basically the same system as was used to link the censuses. A main form was constructed showing details of the two potential matches, with a sub-form underneath listing details of any CRG members from the census side of the possible link.

Table 6.10 Potential and true matches for parish register linkages

Dataset	Total Potential Matches	True Matches	% True
1841-Baptisms	618	317	51.29
1841-Burials	786	481	61.20
1841-Marriages	709	403	56.84
1851-Baptisms	714	352	49.30
1851-Burials	899	481	53.50
1851-Marriages	729	462	63.37
1861-Baptisms	891	420	47.14
1861-Burials	814	373	45.82
1861-Marriages	756	470	62.17
1871-Baptisms	930	486	52.26
1871-Burials	756	296	39.15
1871-Marriages	784	477	60.84
1881-Baptisms	945	469	49.63
1881-Burials	630	156	24.76
1881-Marriages	593	325	54.81
1891-Baptisms	880	407	46.25
1891-Burials	464	9	1.94
1891-Marriages	682	306	44.87
Baptisms-Burials	1048	612	58.40
Burials-Marriages	500	235	47.00
Baptisms-Marriages	888	419	47.18

Source: Nominal record linkage.

The number of correct matches achieved for the parish register data during this phase of the linkage is quite low. Clearly, the lack of additional variables other than the basic name information in the parish registers limits the effectiveness of the algorithms.

Further Work

The linkage procedure remains, at the time of writing, a work in process and the matching exercises described above are as much as has been implemented thus far. A number of other linkage phases remain to be undertaken before the database is finished. At this time the algorithms have been applied solely to list-unique records. However, limiting the

scope of the algorithms in this way clearly excludes many potential matches from the linkage process. That is apparent from the many additional links that were culled from the CRG data in the census linkages and the relatively small number of matches from the parish register data. It is possible that this may be a particular problem for rural areas like Purbeck, where the range of occupations, birthplaces and names is likely to be smaller than in towns and urban industrial areas.

The next step, therefore, will be to look for additional links using non-list-unique records. As it would not be practical to apply all the algorithms to such records for the census to census linkages – the less effective ones would produce vast quantities of cross-matches – this phase will be restricted to the six strongest algorithms. The links produced will then be added to the CheckLink table for review. Where manual checking confirms that links are true, a unique algorithm definition and number will be entered into the relevant fields. Records that have already been identified as part of a valid link will be excluded from the population interrogated. A similar process will also be applied to the parish register linkages.

As the aim is to link as many individuals as possible, a further procedure will then be undertaken for the census to census linkages and the linkages from census to baptisms and burials. A many-to-many relationship will be applied to the fields of sex and year of birth (plus or minus five years) in the two tables being linked. Previously-matched records will be excluded, as will anyone aged five years or under in the second table. Inevitably this will produce a large number of cross-matches and potential links. However, many of these will be patently false, so the review process should not be particularly time-consuming. Again, this procedure will be assigned its own algorithm definition and number.

When time allows it is also hoped to link two further sources to those already matched. The first of these are the trade directories, which contain the following information: date of publication, name, abode or address, and occupation. Unfortunately these provide little in the way of additional material for validating potential links. It can be assumed that those listed in the directories are aged 21 years and over, and, in conjunction with the date of publication, this may help in resolving a few cases. Meaningful addresses are rarely given in rural CEBs, if an address is given at all, so, except for a limited number of directory entries, the address information is effectively worthless. The only realistic option for

confirming or denying a potential link when linking on name, therefore, is the occupation field. The second source is the records of the Company of Purbeck Marblers and Stone Cutters. Regrettably, however, the only data suitable for linkage purposes are name and date. It can, however, be assumed that all those listed in the various Company tables are 21 years of age and over. In conjunction with the date, this may help in validating a few potential links.

When all the record matching is complete, three new tables will be created. The first of these is named the Life table. It holds a life record for every individual identified in at least one of the census or parish register tables. The life record consists of standard forename, standard surname, surname and a unique identifier or LifeID. The purpose of the latter is to enable an individual to be identified across all the data tables used in this study. As each person can have only one entry per census year, the Life table will be populated, first, with the entire 1841 census. LifeIDs are entered automatically as records are added to the table. An update query then attaches the LifeIDs to the appropriate record in the original 1841 census table. Where there are confirmed matches between the 1841 and 1851 census tables, the relevant LifeID from the 1841 table will be assigned to the matched individual in the 1851 table. Unmatched records from the 1851 table are then appended to the Life table. Update queries are used to insert the assigned LifeIDs into the original 1851 census table. The process will be repeated for each successive census pairing: 1851-1861, 1861-1871, 1871-1881, and 1881-1891. Parish register records will be added using the same procedure.

The second table to be created will be the Family table, consisting of fields for an individual's LifeID, along with those of his or her spouse, mother and father, derived from the relation- to-head column in the census table. The latter three fields will be added to each census table and then used to update the Family table. Despite there being no relation-to-head information included in the 1841 census, they will be added to that table also. In many cases these details can be realised from records linked to the 1851 census and, later, from parish register data. A similar procedure will be undertaken for parents and their children recorded in the baptism registers. All relevant records will be appended to this table from all seven tables, meaning that there could be as many as seven identical records for the same individual. The table will be constructed in this way to facilitate the creation of inter-generational linkages and to allow for remarriage.

The third table, named the History table, will consist of the following fields: LifeID, standard forename, standard surname and surname. These details for every record from all the linked tables will be appended to it, thus catering for all name variants.

In some instances it may be that a previously identified person was absent from an intermediate census, but reappeared in a later one. Often this was the result of stone masons leaving Purbeck temporarily to 'follow the stone' and work on a particular construction project. Young women who had moved away to take up positions in domestic service and then returned to Purbeck also account for some of these individuals. If a person is found to be linked to two non-successive censuses, the two life records will be reduced to one, based on the earliest instance of the individual concerned. The Family and History tables will be updated accordingly.

Once all the linkage processing has been completed, every record in each table will have a LifeID and some will include the LifeID of one or both parents. The Life, Family and History tables can then be linked to each other and to the various data tables. This will allow the creation of individual life histories and inter-generational charts or family trees and also facilitate cohort analysis over time.

Conclusion

The nominal record linkage techniques used in this study are very similar to those developed by the Kingston Local History Project in Surrey. However, their methodology and procedures are rather more sophisticated than those which I devised for the three Purbeck parishes. Their conclusions about the efficacy of the technique are also broadly similar to my own.[400] The results of this linkage exercise reinforce the reservations I presented earlier concerning the use of automatic linkage routines. Certainly, on its own, the methodology of fully-automated multiple-pass algorithms applied to list-unique records is unsuitable for application to nineteenth-century Purbeck census and vital registration data. It generates too many false matches, and misses many links altogether. Without

[400] Tilley & French, 'Record linkage for nineteenth-century census returns', 32-3.

checking links manually, using the additional CRG information from the census, many matches that turned out to be false could have been accepted as true. This is not to say, however, that the technique is not of value when linking census records. The multiple-pass algorithms did provide a substantial number of potential links, the majority of which were found to be true matches. However, I would suggest that this has to be viewed as a starting point only. The links thus generated do, I feel, need to be checked by a human researcher and other techniques applied to the data in order to maximise the number of links that can be achieved. Indeed, I would suggest that such checks should probably be made with all NRL techniques that utilise some form of computer algorithm. This is a consequence of the way in which database software functions rather than of the methodology itself. The quality of much of the nominal data available to historians is so variable that even the most sophisticated algorithms will either fail to recognise true matches or make incorrect ones

As the previous section makes clear, much remains to be done before the linkage database is fully complete. This has not, however, affected to any great degree the various analyses undertaken throughout the thesis. Chapter 5, for instance, which looks at household structure, age distributions, and so on, draws on a combination of published aggregate data and summary data derived from the individual tables within the linkage database. Much of Chapter 7, which examines aspects of the stone working population's migration behaviour, is also based on this combination of published aggregate data and summary data extracted from individual tables within the database. Unfortunately the linkages between the tables that make up the linkage database were only partially complete when Chapter 7 was written. Consequently, the cohort analysis on which Tables 7.5 and 7.6 are founded was undertaken as a separate, stand-alone linkage exercise. The results were later used to validate links produced by the automated linkage algorithms within the linkage database. Chapter 8 focuses on the mortality characteristics of the stone workers, and utilises published aggregate data and data extracted from the linked tables in the linkage database. The linkages used at various stages in the analysis are: census-census, census-baptism register, census-burial register, and baptism register-burial register.

Chapter Seven

Migration

Studies of internal migration in nineteenth-century England and Wales have a long history. The first major study was that of E.G. Ravenstein at the end of the nineteenth century.[401] The initial impetus for such work came from rapid urbanisation and the realisation that large parts of the countryside were being depopulated through the movement of individuals to the towns and cities. Huge changes in the residential structure of the population were taking place. Before 1850 most of the population lived in rural areas; after 1850 the majority lived in urban areas.

Until quite recently, most studies of migration have focused primarily on population aggregates, and have adopted one of two major approaches. The first utilises place-of-birth data from the published census reports to identify the magnitude and direction of lifetime migration streams; the second estimates net migration for specific areas (usually either the 50 counties or the 600 or so registration districts) using the demographic accounting equation.[402] This line of research is responsible for much of the received wisdom about internal migration in nineteenth-century England. Rural areas were losing population through migration for much of the century, but the rate of depopulation accelerated after 1851. By contrast, urban areas in general were gaining population. There were, however, differences within rural and urban areas in the rate of loss and gain. In particular, rural areas in southern England were experiencing a slightly greater loss, relative both to their population and to the rate of natural increase, than were rural areas in

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[401] E.G. Ravenstein, 'The laws of migration', *Journal of the Royal Statistical Society*, XLVIII (1885), 167-227; E.G. Ravenstein, 'The laws of migration', *Journal of the Royal Statistical Society*, LII (1889), 214-301.

[402] Important specific works include J. Saville, *Rural Depopulation in England and Wales, 1851-1951*, (London, RKP, 1957); D. Baines, *Migration in a Mature Economy: Emigration and internal migration in England and Wales 1861-1900*, (Cambridge University Press, 1985); D. Friedlander & R. Roshier, 'A study of internal migration in England and Wales', *Population Studies*, XIX (1966), 239-279; R. Lawton, 'Population changes in England and Wales in the later nineteenth century: an analysis of trends by registration districts', *Transactions of the Institute of British Geographers*, XLIV (1968), 55-74; and C.T. Smith, 'The movement of population in England and Wales in 1851 and 1861', *Geographical Journal*, CXVII (1951), 200-10. Many studies of this type have recently been reviewed in G. R. Boyer & T. J. Hatton, 'Migration and labour market integration in late nineteenth-century England and Wales', *Economic History Review*, L (1997), 697-734.

the north.[403] Industrial towns in the north of England and old established towns throughout the country were not gaining population at anything like the same rate as were London, certain port towns and the residential towns of the south.[404]

Although important, net migration was not the main factor driving population change in many areas. Population growth in large towns after 1841, for instance, was affected much more by natural increase than it was by net in-migration. In urban areas as a whole, net migration was only responsible for just over one-sixth of the overall population increase. In fact, migration had a much greater impact on the population of rural areas, where it almost cancelled out the natural increase.[405] Migration to the cities, it was believed by Ravenstein, tended to be a step-by-step process, people moving in stages from remoter rural areas to less remote parts closer to the principal urban areas to replace inhabitants of those less remote parts who had moved into the cities.[406] Thus it was thought that individual moves tended to be short, and people who ultimately moved long distances tended to achieve these long moves by a series of shorter moves in the same general direction. Finally, it was suggested that most migration tended to involve young people, especially those in the age-groups 15-29 years.

Aggregate-level studies have focused largely on rural-urban migration, and they have provided a comprehensive description of the balance of flows at the county or registration district level. However, their conclusions as to the causes of the process of rural depopulation are perhaps less impressive. Most authors have tended to support Ravenstein's view that the principal causes of migration were economic: people were essentially being 'pushed' out of the countryside by low wages, underemployment, and unemployment, and 'pulled' towards urban areas by the prospect of higher wages in the rapidly-growing industrial and service sectors.[407] This conclusion is often backed up by regression analyses using county or registration district data. In some cases these

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[403] See Table 2 in Boyer and Hatton, 'Migration and labour market integration', 705.
[404] Lawton, 'Population changes', 70. Indeed, Lawton's results indicate that the industrial towns and several old established towns actually lost population through net migration over the period 1841-1911.
[405] See Table 2 in Boyer and Hatton, 'Migration and labour market integration', 705. Also see Table 14.2 in Andrew Hinde, *England's Population: A history since the Domesday Survey*, (London, Hodder Arnold, 2003), 251.
[406] See Boyer & Hatton, 'Migration and labour market integration', 703-4.
[407] D. B. Grigg, 'E. G. Ravenstein and the "laws of migration",' *Journal of Historical Geography*, III (1977), 53.

regression analyses are largely exploratory in nature; in others they are designed to test the applicability to nineteenth-century England of specific models of migration, for example the human capital model of Harris and Todaro.[408]

Since the 1960s, the availability of the individual-level census enumerators' books (CEBs) under the 100-year rule has produced a host of local studies. These have largely analysed migration in two ways. First, the place-of-birth data has been used to chart the extent of lifetime in-migration to particular places, and to chart the geographical origins of the in-migrants.[409] Second, record linkage of successive censuses for a particular place, together with Church of England burial registers, has enabled some limited analysis of out-migration.[410] By using the other information provided in the CEB for the earlier of the two censuses, out-migration can be analysed for different age, sex and occupational groups.[411] Using the CEBs approach also makes it possible to identify migrants' position within local kinship networks, although this has rarely been done in practice.[412] In

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[408] For an example of the first type of regression model, see D. Friedlander, 'Occupational structure, wages, and migration in late nineteenth-century England and Wales', *Economic Development and Cultural Change*, XL (1992), 295-318. Boyer & Hatton, 'Migration and labour market integration'; and G. R. Boyer, 'Labour migration in southern and eastern England', *European Review of Economic History*, I (1997), 191-216 include examples of the latter. For the Harris-Todaro model, see M. Todaro, 'A model of labour migration and urban unemployment in less developed countries', *American Economic Review*, LIX (1969), 138-48; and J. Harris & M. Todaro, 'Migration, unemployment and development: a two-sector analysis', *American Economic Review*, LX (1970), 125-42.

[409] For examples, see D. Mills and J. Mills, 'Rural mobility in the Victorian censuses: experience with a micro-computer program', *Local Historian*, XVIII (1988), 69-75; and W. Turner, 'Patterns of migration of textile workers into Accrington in the early-nineteenth century,' in D. Mills & K. Schürer (eds.) *Local Communities in the Census Enumerators' Books*, (Oxford, 1996), pp. 246-52. A general discussion of the use of the CEBs for the analysis of local migration will be found in D. R. Mills & K. Schürer, 'Migration and population turnover', in Mills & Schürer, *Local Communities*, 218-28.

[410] See, for example, J. Robin, *Elmdon: Continuity and change in a north-west Essex village 1861-1964* (Cambridge University Press, 1980); P. R. A. Hinde, 'The population of a Wiltshire village in the nineteenth century: a reconstitition study of Berwick St James 1841-71', *Annals of Human Biology*, XIV (1987), 475-85; B. Wojciechowska, 'Brenchley: a study of migratory movements in a mid-nineteenth century rural parish', *Local Population Studies*, XLI (1988), 28-40 (reprinted in Mills & Schürer, *Local Communities*, pp. 253-66); and J. Robin, 'From childhood to middle age', Cambridge Group for the History of Population and Social Structure working paper no. 1 (Cambridge University Press, 1995).

[411] Wojciechowska, 'Brenchley'; Robin, 'From childhood to middle age'.

[412] There has, however, been some very interesting work on family migration: see M.B. White, 'Family migration in Victorian Britain: the case of Grantham and Scunthorpe', in Mills & Schürer, *Local Communities*, 267-77; and K. Schürer, 'The role of the family in the process of migration', in C. G. Pooley & I. D. Whyte (eds.) *Migrants, Emigrants and Immigrants: A social history of migration*, (London, Routledge, 1991) 106-42.

addition, the use of supplementary sources (such as trade directories) to augment the information in the CEBs and parish registers can help place people more precisely within the local economic structure.

These local studies have confirmed that out-migration from rural England was indeed characteristic of young people. In addition, they have shown that a very large proportion of those born in English villages, especially in southern England, had left those villages by the time they were twenty-five years of age.[413] Virtually all local studies also reveal a great deal of short-distance, circulatory migration within the countryside, which increased in volume as the century progressed.[414] Unfortunately, it has hitherto been impossible in most cases to ascertain where out-migrants have gone to. Consequently, many of the most interesting questions about migration, such as the extent of chain migration, and the role of kinship and family networks in the choice of destination, are unexamined and unanswered.

It is important to note that neither of the approaches so far described measures actual 'moves', but rather 'transitions'. In other words, they compare people's residence at two points in time, and consider migrants to be those whose residence has changed during that period. In this instance, the nineteenth-century censuses (from 1851 onwards) provide us with data about a person's place of birth and their place of residence when the census was taken. Obviously, however, a change of residence between these two time-points, or between censuses, may disguise a great many other moves during the interim period. Unfortunately, there are few mechanisms by which such interim moves can be identified, although the birthplaces of children sometimes indicates that their parents have lived elsewhere at some point. Moreover, it is possible that a person whose residence appears not to have changed may have moved away and back again. Indeed, as is described below, this was not uncommon among the Purbeck stone workers who form the main subject of this study.

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[413] For example, in the Wiltshire village of Berwick St James, almost all the females, and three quarters of the males born between 1841 and 1851 had left the parish by the time they were aged 25 years: see Hinde, 'The population of a Wiltshire village', 481-2.

[414] A number of such studies can be cited in support of this statement. See, for example, D. G. Jackson, 'Short-range migration and the parish of Borden, Kent, from the 1851 census enumerators' books', *Local Population Studies Society Newsletter*, 23, (1998), 3-10. Data on the percentages of native-born in mid-nineteenth century rural parishes will be found in Mills & Schürer, 'Migration and population turnover', 221 & 223. See also N. Goose, *Population, Economy and Family Structure in Hertfordshire in 1851. Volume 1: the Berkhamsted Region*, (Hatfield, University of Hertfordshire Press, 1996).

It has long been believed that many, probably a majority, of actual moves are thus concealed from the historian's view. Therefore, in recent years, there has been an effort made to obtain data relating to actual 'moves'. Perhaps the most well-known study of this type is that undertaken by Pooley and Turnbull.[415] They obtained a sample of more than 16,000 residential histories from family historians, and used these to chart the often complex paths traced across England by individual men and women during the nineteenth century. Their conclusions are highly relevant for our understanding of regional and local migration networks. They found that there was a very high degree of short-distance mobility within regions, and, in rural areas, most of this did not involve movement to or from a town. Just over 50 per cent of all moves involved distances of less than ten kilometres. After 1840, more than 40 per cent of moves involved distances of under one kilometre; the majority of which must have been within the same settlement. Long-distance moves, those over 100 kilometres, made up only around ten per cent of the total. Although this meant that regions were relatively isolated from one another, the patterns observed in different regions were quite similar. Longer-distance migrants from all parts of Britain tended to go to London. In terms of urbanization, Pooley and Turnbull's data confirms the general trend towards population concentration, at least up to 1880, with a greater proportion of moves being to a settlement of larger size than to a smaller one. During the last two decades of the nineteenth century the picture becomes less clear, as the figures for both types of migration reach equilibrium after 1880.[416] It is possible that this is associated with the onset of suburbanization, when the middle classes started to move out of the cities, away from the labouring classes, to a cleaner, more exclusive and pleasant environment.

Pooley and Turnbull's study highlights some interesting points concerning the nature of migration in the nineteenth century. In particular, the large number of moves of less than one kilometre confirms the long-held suspicion that many movements are missed by conventional migration studies based on the CEBs. At the same time, however, one might question whether such short-distance residential moves actually represent migration at all. There can be little doubt that the vast majority of these occurred within the same settlement

[415] See C. G. Pooley & J. Turnbull, 'Migration trends in British rural areas from the 18th to the 20th centuries', *International Journal of Population Geography*, II (1996), 215-37; and C. G. Pooley & J. Turnbull, 'Migration and mobility in Britain from the eighteenth to the twentieth centuries', *Local Population Studies*, 57 (1996), 50-71.
[416] Pooley &Turnbull, 'Migration trends' 234-5.

or, at least, the same parish, and were probably related to factors such as the availability of housing, rents, proximity to workplace or family, and the like. It could be argued, therefore, that in fact they represent day-to-day residential realignments within settlements rather than true migratory movement. My own position at this time is that such moves do not represent migration – certainly in terms of commonly used definitions. However, there may well be a debate to be had around this issue.

Although their work is an immensely valuable contribution to our knowledge of people's movements in the nineteenth century, Pooley and Turnbull's data and methodology are of limited utility for detailed small-scale studies of migration in particular localities or places. As they say: '[A]lthough the total data set is large, when broken down by time period, locality and population characteristics some sample become quite small. The data are thus best suited to examining broad regional trends rather than migration characteristics in specific places.'[417] The main source for studying migratory behaviour in local communities in the nineteenth century, therefore, remains the census enumerators' books.

Of course, the CEBs are themselves far from ideal as a source. Their main limitation, as I mentioned earlier in this chapter, is that rather than recording actual moves, they record the change between an individual's birthplace (as given in the CEB) and his or her place of residence when the census was taken. Consequently many moves are missed. On the other hand, the CEBs do have considerable virtue as a source for the study of migration. They are comprehensive in their coverage. A few individuals may have escaped the enumerators' attentions, but they can generally be assumed to cover the entire population. Also, importantly, the data they contain was, on the whole, consistently and uniformly recorded. The CEBs therefore provide a solid, albeit imperfect base upon which to build studies of migration in nineteenth-century England. They are also a parish-based record. The parish was the main local administrative unit in most parts of England from the mid-sixteenth century onwards. When, in the nineteenth century, the decision was made to count the population, the parish was the obvious unit on which to base the census.

It is clear that short-distance inter-parish movement was commonplace. Pooley and Turnbull's evidence that more than half of all moves involved distances of less than 10

[417] Pooley &Turnbull, 'Migration and mobility' 54.

kilometres reinforces this point. People moved freely and often – the parish boundary was not an impermeable barrier for most of the rural population. In these circumstances, where a group of parishes were particularly closely associated in some way, we might question whether it is appropriate to think of inter-parish movement between them as truly being 'migration'. For example, the quarrying of Purbeck stone was located entirely within the three neighbouring parishes of Langton Matravers, Worth Matravers and Swanage in Dorset. The quarriers and masons who worked in the stone industry were further bound together through their membership of the Company of Purbeck Marblers and Stonecutters. This institution is discussed in detail in Chapter 4 above, but, in summary, men could only work in the Purbeck stone industry if they were either a freeman of the Company, or apprenticed to a freeman. And only the son of a freeman could become an apprentice. Essentially, therefore, the workforce of the Purbeck stone industry was hereditary in nature. The conventional definition of migration is movement into or out of a parish. In the case of Purbeck, outlined here, there might be an argument for viewing the three stone working parishes as a single entity for migration purposes, at least as an alternative or supplemental definition to the conventional one.

My own view, however, is that this may represent something of an over-simplification. As Table 5.4 above and Table 7.1 below illustrate, a substantial proportion of the population of each parish did not depend on the stone trade for their livelihood. Other significant occupational groups included agricultural workers, sea-related occupations, trades/crafts (although many of these would have depended in part, at least, on the stone industry for their business) and, after 1870, the tourist trade, especially in Swanage. Moreover, although collectively the Purbeck stone workers, organised through the Company, had been remarkably successful over several centuries in preserving their hegemony over the stone trade, internal rivalries and tensions were not uncommon. In particular, the Swanage men and the Langton Matravers (with Worth Matravers) men frequently clashed over control of the Company.[418]

Undoubtedly, strong social and economic links existed between the three parishes, particularly those associated with the stone trade. The latter did not, however, dominate the area completely. The three parishes were far from being a homogenous group; each

[418] Benfield, *Purbeck Shop*, 136.

parish retained its own distinct identity and socio-economic power structures and relations. It is likely that migration between the three parishes constituted a very different experience for stone workers, on the whole, than it did for members of other occupational groups whose intra-parish links were likely to be much less strong, if they existed at all. It also suggests that the overall migration characteristics of the three parishes may be more differentiated than we might think, particularly in terms of occupation. In these circumstances the validity of viewing the three parishes as a single entity for is perhaps less clear than might initially seem to be the case. Table 7.4 does, however, include some data for the three parishes combined, categorised by distance from birthplace.

Pooley and Turnbull's approach is perhaps best viewed as complementary to the individual-level analysis of CEB data. While residential histories furnish detailed information about moves, it is usually difficult to place the individuals whose histories we know about within their local context.[419] Conversely, the CEB data does allow migrants to be set in their local context but provides incomplete information about moves. In fact, even the two existing approaches using CEB data are inadequate in their contextualisation of the migrants, since usually it is possible either to study the migrant in his or her destination or in his or her place of origin, but not in both.[420]

That migration flows increased considerably during the nineteenth century is beyond dispute. That much of this migration was economically motivated, particularly when viewed from a macro-level perspective, also seems clear. However, except in particular instances, notably where whole industries collapsed, it is unlikely that people were forced to move away from their native parishes purely through economic necessity.[421] It is more likely that people moved to take advantage of some perceived economic opportunity. Developments in communications, especially the growth of the railway network, were an important enabling factor in this. Not only did they facilitate the movement of people directly, but they also facilitated a free flow of relatively reliable information between

[419] This could, in principle, be done by linking the residential history data to the CEBs. Such a procedure would be immensely laborious, however, and has not so far been attempted.
[420] One study which has managed to look at migrants in both their origin and destination places is M. Anderson, *Family Structure in Nineteenth Century Lancashire*, (Cambridge University Press, 1971).
[421] This was probably confined to particular regions at particular times. Such instances might include the migration of those engaged in obsolete craft industries, such as hand-loom weaving, in the early nineteenth century.

sending- and receiving-areas, both verbal and written. As the nineteenth century wore on, increasing numbers of people must inevitably have had family and friends who had migrated previously. These kin and friendship links must have been a major source of information about employment prospects, urban life and experiences of migration. Indeed, recent studies of migration flows in the late nineteenth century have reinforced this view, suggesting that the benefits perceived to be obtainable from moving, the cost of moving, and the amount of information available about employment opportunities elsewhere, were instrumental in informing decisions about whether to move or not, and when and where to go.[422] This suggests that the overall patterns of nineteenth-century migration can be explained satisfactorily by 'human capital' models of migration, whereby migration is simply reduced to being a function of the difference between the economic prospects perceived as being available in the place of origin, compared to those elsewhere, adjusted to take into account the costs of moving from one place to the other. However, I would argue that models based on 'push' and 'pull' factors and the human capital model are rather simplistic, and, particularly in the case of the latter, somewhat mechanistic. They do not allow for what might be termed the 'human element' in the migration decision-making process. In order to provide a fully comprehensive account of the migration of individuals and groups of people, a detailed knowledge of local social and economic conditions, as well as the contexts in which decisions about moving were made, is required. For example, in the northern Pennines, Christine Hallas has shown that migration was an integral part of the population's successful response to poverty, but that its role can only be understood in the context of a local economy characterized by non-agricultural by-employments.[423]

This chapter examines the migration patterns and networks among a specific rural occupational group: the stone workers of the Isle of Purbeck. One of the main characteristics of Purbeck was its dual dependence on agriculture and the quarrying of building stone. This makes it a particularly suitable locality for the analysis of occupational variations in migration patterns, a topic which has been rather neglected hitherto. By focusing on a specific group, it is hoped to be able to set the migrants'

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[422] Perhaps the most thorough of these is Boyer & Hatton, 'Migration and labour market integration'.

[423] C. Hallas, 'Poverty and pragmatism in the Northern uplands of England: the North Yorkshire Pennines c. 1770-1900', *Social History*, XXV, (2000), 67-84.

experience more fully in its social, economic and historical context than was possible in many previous studies of population mobility in nineteenth-century England.[424]

A variety of sources and methods are used, including elements of both the census-based aggregative and individual-level approaches described above. This means that migration is considered to have occurred when individual's parish of residence at a census is different to his or her place of birth (as described in the enumerator's book). Residential histories of the kind analysed by Pooley and Turnbull were unfortunately not available. However, unlike earlier census-based studies, it has been possible to look at the destinations of out-migrants from Purbeck using a relatively newly-available source: a transcription of the entire set of CEBs for the 1881 census of England and Wales which has been undertaken under the auspices of the Genealogical Society of Utah. Although the main focus of attention will be on the stone workers, their migration patterns will be compared with those of other occupations living in the same locality, especially agricultural workers. It should also be noted that this study deals mainly with the migration of men.[425]

During the nineteenth century, the county of Dorset was, as it still is, largely agricultural in character. Fishing and other maritime activity was carried out along the coast, and there was a small industrial sector in the few towns (such as Bridport, Dorchester and Poole), but the vast majority of the population was based on the land. Rapid population growth in the late-eighteenth and early-nineteenth centuries had created a surplus population in the countryside. However, the relative remoteness of Dorset meant that out-migration, at least to other parts of England and Wales, during the early decades of the nineteenth century was not intense. The result was an impoverished, underemployed rural labour force

[424] Studies of migration among occupational 'communities' of this sort are quite rare in the literature. One important exception is H. R. Southall, 'The tramping artisan revisits: labour mobility and economic distress in early Victorian England', *Economic History Review*, XLIV (1991), 272-96, in which the mobility of members of the Steam Engine Makers' Society is studied, using records which amount to residential histories. In the context of this chapter, the work of M. Jones, 'Combining estate records with census enumerators' books to study nineteenth-century communities: the case of the Tankersley ironstone miners, c. 1850', in Mills & Schürer, *Local Communities*, 200-16 is also relevant, although it contains only a limited amount of information about migration.

[425] Studies that focus specifically on women are still rare in the literature: an example is B. Hill, 'Rural-urban migration of women and their employment in towns', *Rural History*, V (1994), 185-94.

receiving some of the lowest cash wages in England.[426] Although payments in kind supplemented these, the position of the Dorset labourer was generally thought to be no better than that of most labourers elsewhere in England, and inferior to that of many. Dorset farmers were of the view that the cash value of the payments in kind that were usual in the county, taken together with the wages that were actually paid in cash, meant that the overall earnings of the Dorset labourer were not lower than those in other counties (e.g. Kent).[427] In certain areas, such as the Vale of Blackmore in the north of the county, the wives and daughters of poor rural labourers supplemented meagre agricultural wages by out-work, notably the making of gloves.[428] It has been argued that the very poverty of the Dorset farm worker acted as a disincentive to out-migration during the early decades of the century. This was because the Poor Law system then in operation was administered on a parish basis, and payments tended to be restricted to those living in their parishes of birth. Since a large proportion of Dorset farm workers needed such payments from time to time, they were discouraged from leaving the security of their native parishes.[429]

There were, however, three rural areas within Dorset where men might find employment outside agriculture. These were the rope and net-making industry around Bridport in south-west Dorset, the Isle of Portland, to the south of Weymouth, and the Isle of Purbeck in the south east of the county. In the latter the quarrying of fine building stone had been

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[426] The low wages of Dorset labourers were remarked upon by contemporaries such J. Caird, *English Agriculture in 1850-51* (2nd edition) (London, 1852). Also see P.E. Razzell & R.W. Wainwright (eds.), *Letter XXVIII*, 'The Stone Quarries of Swanage'. For comparative figures, see A. L. Bowley, 'The statistics of wages in the United Kingdom during the last hundred years', *Journal of the Royal Statistical Society*, LXI (1898), 704-7. On the causes of poverty in rural Dorset during the first half of the nineteenth century, see B. Kerr, 'The Dorset agricultural labourer 1750-1850', *Proceedings of the Dorset Natural History and Archaeological Society*, LXXXIV (1962), 162, 171, 174-5.

[427] See the lecture given by Mr Clements to the Dorchester Farmers Club on 20 Feb. 1864: 'The system of hiring, and the payment of agricultural labourers', *Proceedings of the Dorchester Farmers' Club, (1861-1869)*, 70; and a report of a meeting held on 30 Dec. 1865: 'The payment of agricultural labourers in Dorset', *Proceedings of the Dorchester Farmers' Club, (1861-1869),* 116. Whether or not they were correct, it may be argued that the practice of paying Dorset agricultural labourers partly in kind maintained the latter in a more subservient position than labourers elsewhere in England.

[428] See M. J. D. Edgar, 'Occupational diversity in seven rural parishes in Dorset', *Local Population Studies*, 52 (1994), 48-54.

[429] This argument is advanced most cogently in K. D. M. Snell, *Annals of the Labouring Poor: Social Change and Agrarian England 1660-1900*, (Cambridge, Cambridge University Press, 1985), 61, 72, 211, 334-339. See also Kerr, 'The Dorset agricultural labourer', 175-6; and B. Kerr, *Bound to the Soil: a Social History of Dorset 1750-1918*, (London, 1968), 24-5, in which it is maintained that out-migration from Dorset to the towns did not take off until some improvement in the agricultural labourers' conditions had been effected.

carried out for centuries, and provided an alternative means of getting a living. It is with this last area that this chapter is concerned.

By the nineteenth century, the stone trade was largely confined to three parishes within the Isle of Purbeck: Langton Matravers, Swanage and Worth Matravers, and it is these three parishes that form the focus of this study. The occupational structure of these parishes in 1851 is shown in Table 7.1. In this table, quarriers and stonemasons are treated as a single category of 'stone workers'.[430]

Table 7.1 Occupational structure of stone-working parishes in the Isle of Purbeck, 1851.

Occupational Group	Percentage of those stated to be employed		
	Langton Matravers	Swanage	Worth Matravers
Farmers	3	1	5
Farm workers	24	8	41
Trades and crafts	16	28	11
Maritime occupations	0	5	12
Professionals	3	5	3
Servants	10	10	6
Stone workers	42	36	22
Others	3	2	1
Total number employed	309	807	143
Employed as percentage of total population	40.8	39.6	36.7

Notes: 'Trades and crafts' includes both masters and 'journeymen'. 'Maritime occupations' includes coast guards (who were employed against smugglers). 'Professionals' includes landowners and other rich and/or educated persons.

Source: The National Archives: Census enumerators' books, 1851 (HO 107/1856).

[430] In addition to the fact that movement between these two activities was common, it seems likely that nineteenth-century census enumerators failed to distinguish consistently between the two.

In Langton Matravers, which was the most important quarrying parish by the mid-nineteenth century, more than two out of every five occupied males were in the stone trade. Agriculture was the other important occupation in Langton Matravers and Worth Matravers, whereas in the port and small town of Swanage, trades and crafts provided the main alternative source of employment.

The stone-working population displayed a similar proportion married to the rest, and lived in households which were not appreciably different in size.[431] However, this hides the fact that children aged 0-14 years constituted a higher proportion of the population in agricultural labouring households than they did in the stone workers' households. Conversely, in the stone workers' households, offspring aged 15 years and over were relatively more numerous. The difference is explained largely by the tendency for stone workers' sons to remain at home and work in the stone trade, often in their fathers' quarries, whereas the teenage sons of agricultural labourers tended to be much more mobile, many leaving the parish to work elsewhere.

The conventional aggregate approach estimates net migration during a defined period as the residual arising after subtracting the natural increase (the difference between the number of births and deaths occurring in the period) from the population change during the period. This approach was applied to estimate net migration for each of the 273 parishes in Dorset for each intercensal decade between 1801 and 1901.[432] Using this approach for areal units as small as parishes is problematic, since, although it can be assumed that the parish census populations are reasonably reliable, assumptions must be made about birth and death rates. Data on the latter are only available for registration districts, which in rural areas were groups of about 20 parishes. In effect, the technique assumes that every parish within a registration district had the same birth and death rates. This works fairly well for the later decades, when registration district-specific birth and death rates are available in the decennial supplements of the Registrar General. For the earlier decades,

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[431] Edgar & Hinde, 'The stone workers of Purbeck'. This statement is based on data from the 1881 CEBs, but data for other years reveals a similar picture.

[432] P. R. A. Hinde, 'Out-migration from the villages of southern England in the nineteenth century', *Revista Española de Antropología Biología*, XVIII (1997), 104-5. Hinde has since refined this technique so that it is possible to produce estimates of age-specific in- and out- net migration to and from local areas during particular census decades, see P.R.A. Hinde, 'The use of nineteenth-century census data to investigate local migration', *Local Population Studies*, 73 (2004), 8-28.

especially those before the introduction of birth and death registration in 1837, the estimation of even registration district-specific birth and death rates is based on such large assumptions that the estimates of net migration by parish must be treated with great caution.[433] The estimates of net migration thus obtained may easily be converted into crude net migration rates.

Table 7.2 Average net migration rates (per thousand per year) in parishes in Dorset: summary statistics by decade, 1801-1901

	Percentiles of distribution		
Decade	25th	50th	75th
1801-11	-11.7	-3.0	4.0
1811-21	-6.4	0.5	9.3
1821-31	-11.5	-3.5	4.2
1831-41	-9.8	-2.4	4.4
1841-51	-12.9	-5.7	1.2
1851-61	-18.7	-12.0	-4.8
1861-71	-16.3	-9.6	-2.4
1871-81	-26.5	-17.7	-9.4
1881-91	-24.4	-17.7	-10.2
1891-1901	-28.1	-20.0	-9.8

Notes: The figures in this table are percentiles of the distribution of estimated annual net migration rates (per thousand of the population) for the 273 parishes in Dorset in each decade. Thus, in the decade 1801-11, 25 per cent of parishes had average net migration rates of less than -11.7 per thousand per year (that is, net out-migration of more than 11.7 per thousand per year); half of the parishes had average net migration rates of less than -3.0 per thousand per year (that is, net out-migration of more than 3.0 per thousand per year); and 25 per cent of parishes had average net migration rates of more than 4.0 per thousand per year (that is, net in-migration of more than 4.0 per thousand per year).

Source: P.R.A. Hinde, 'Out-migration from the villages of Southern England in the nineteenth century', 104-5.

[433] Although the estimates are necessarily approximate, I believe that they do provide an indication of the direction of net migration, and a rough indication of its magnitude. The results for certain parishes where it is known from other sources that large net flows were taking place in certain decades are consistent with what those other sources are telling us. This is true, for example, of parishes with military establishments during the first two decades of the century, during the war with France.

Table 7.2 above summarises the distribution of the resulting rates for each of the 273 parishes by decade. From this it can be seen that until 1841 net out-migration from Dorset parishes was quite modest, with the median parish only experiencing a rate of about three per thousand per year, and a substantial minority of parishes (many of them rural) gaining people through migration. After 1851, net out-migration was much greater, and much more widespread. The decade 1841-51 was transitional between the two periods. In this, Dorset seems to have been similar to other counties in southern England. Previous work has indicated that in the rural south as a whole, net losses by migration were greater in the decades after 1851 than they were during the decade 1841-51.[434]

So much for the county as a whole. How do the three main stone-working parishes of Purbeck conform to the general pattern? Table 7.3 below shows the estimated net migration and net migration rates per thousand per year for the three parishes of Langton Matravers, Swanage and Worth Matravers. It is immediately clear that trends in all three parishes deviate from the county average. For example, Langton Matravers' rate is below the 25th percentile of the county distribution in the decade 1801-11, but above the 75th percentile in the following decade. As its occupational structure reveals, Langton Matravers was heavily dependent upon the stone trade. It seems reasonable to expect, therefore, that there would be some relationship between net migration and fluctuations in the demand for stone.

The volatility of the net migration figures shown in Table 7.3 clearly reflects the economic ups and downs of the stone trade during the nineteenth century. In the early part of the century, the port of Swanage was also largely a stone-working town, and migration patterns tend to reflect this. During the second half of the century, and particularly after 1870, however, it sought to develop a rather genteel type of tourism, with increasing success. The influx of tourists brought additional employment to the town and resulted in considerable in-migration. This is reflected in its relatively small net loss in the decades 1871-81 and 1881-91, and a net gain in the last decade of the century.

[434] W. A. Armstrong, 'The flight from the land', in G.E. Mingay (ed.) *The Victorian Countryside* (2 Vols., London, Routledge & Kegan Paul, 1981), 119.

Table 7.3 Net migration by decade for parishes in the Isle of Purbeck

	Estimated net migration over the decade			Estimated annual net migration rate per thousand population		
Decade	Langton Matravers	Swanage	Worth Matravers	Langton Matravers	Swanage	Worth Matravers
1801-11	-105	- 81	29	-22	-6	12
1811-21	82	-100	4	-15	-7	1
1821-31	-47	-115	-18	-7	-7	-5
1831-41	-2	27	-25	0	1	-7
1841-51	-89	- 93	-25	-12	-5	-7
1851-61	-124	-398	-93	-17	-19	-25
1861-71	85	-119	-94	10	-6	-29
1871-81	-155	-98	-35	-17	-4	-12
1881-91	-235	-38	-110	-28	-2	-42
1891-1901	-28	471	-25	-4	15	-11

Notes: Decadal net migration has been estimated as a residual using the formula:

$$\text{net migration} = P_{t+10} - P_t - \text{births} + \text{deaths},$$

where P_t is the population in the first census year, and P_{t+10} is the population in the second census year, and 'births' and 'deaths' mean the number of births and deaths occurring during the interval between years t and t+10. The rate per thousand population per year has been estimated very crudely by assuming that the average population of the parish during an intercensal decade was equal to $(P_{t+10} + P_t)/2$, and that one tenth of the decadal net migration occurred each year.

Sources: Parish population data from G. S. Minchin, 'Table of population, 1801 to 1901', in W. Page (ed.), *The Victoria History of the County of Dorset,* Vol. 2 (London, Constable, 1908), 264-73. Birth and death rates estimated using data from the decennial supplements to the Registrar General's *Annual Reports* for the decade 1861-70 (*British Parl. Papers* [hereafter B.P.P.], 1875, XVIII -2); 1871-80 (B.P.P. 1884-5, XVII); 1881-90 (B.P.P. 1895, XXIII - 1); and 1891-1900 (B.P.P. 1905, XVIII); and E. A. Wrigley & R. S. Schofield, *The Population History of England, 1541-1871: a reconstruction* (Cambridge University Press, 1981), 534-5.

The trend in Worth Matravers is rather closer to that of the county as a whole. This is to be expected, as the economy of Worth Matravers was always dominated by agriculture (the stone trade being very much a secondary activity measured in employment terms), so it had greater similarities to the bulk of Dorset parishes than did Langton Matravers or Swanage.

Unfortunately, analysing net migration in this way obscures a great deal.[435] First, the actual number of moves is unknown. The same amount of net migration can result from very different amounts of gross migration. Second, any estimate of net migration for an areal unit will ignore intra-unit moves, and these constituted a large proportion of total moves, as was noted earlier in this chapter. By working at the parish level the extent of this difficulty can be reduced, but it is not eliminated. Third, social and economic differentials in migration are obscured. Finally, it should be remembered that net migration is an abstract quantity – as Daniel Courgeau has pointed out, 'nobody ever met a net migrant' – and so its study cannot shed light on migration behaviour at the individual level.[436] In the remaining part of this chapter, alternative methods of analysis at the individual level based on the census enumerators' books are used to shed light on some of these topics.

Table 7.4 Occupied male population of three Purbeck stoneworking parishes in 1851 classified by place of birth and occupation

	Langton Matravers		Swanage		Worth Matravers		Three parishes combined	
Occup-ational group	% native born	% born within 8 km	% native born	% born within 8 km	% native born	% born within 8 km	% native born	% born within 8 km
Farmers	25	63	29	58	14	28	23	50
Farm workers	43	82	67	88	56	85	53	85
Trades and crafts	60	90	56	65	30	50	56	72
Stone workers	75	96	93	97	81	100	87	97
Others	53	67	54	67	18	35	51	65

Notes: 'Others' includes occupations related to the sea (mainly coast guards) and servants. Those classified as 'occupied' in this table are all those stated to be occupied in the 1851 census. This includes all but a handful of males aged over 15 years.

Sources: See Table 7.1 above.

[435] Armstrong, 'The flight from the land', 118 & 125.

[436] D. Courgeau, 'Measuring flows and stocks of internal migrants: selected statistical issues', *Bulletin of the International Statistical Institute*, Proceedings of the 44th Session (Madrid, 1983), 1,208.

First, the birthplaces of males living in the three stone-working parishes in 1851 are examined. Table 7.4 above classifies the inhabitants of these parishes in 1851 by occupation, and according to whether they were born in the parish where they were living in that year, whether they were born in a nearby parish (within eight km), or whether their birthplace was further afield. It is immediately clear that there was a major difference between the stone workers and the rest of the population. More than 87 per cent of stone workers had been born in the parish where they were living in 1851, compared with only 53 per cent of agricultural labourers, 56 per cent of tradesmen and craftsmen and 51 per cent of those in 'other' occupations. This high proportion of native-born among the stone workers stems from two main factors. First, of course, it reflects the geographical location of the stone (and particularly the accessible beds). Second, it bears testimony to the efficacy of the restrictions on who could work in the stone trade, and the strongly familial nature of the industry as described in Chapter 4.[437]

The fact that only about half the workers in the remaining occupational groups (except for the small number of farmers) had been born in the parishes where they were living in 1851 also shows that there was a great deal of in-migration to these parishes, even during periods when overall net out-migration was occurring. In the case of farm workers, most of the in-migration was from nearby (with only about 15 per cent of farm workers in 1851 having been born more than eight kilometres from the parish where they were living in that year). For some other occupations, however, longer distance migration was common. This is particularly the case with those in 'other' occupations in Worth Matravers. Many of these men were coast guards, based there to prevent smuggling. It was the practice never to employ local people as coast guards, in order to minimise the potential for collusion with local inhabitants (smuggling was an activity which, of course, could profit the local people considerably). The farmers were the most mobile of all the occupational groups, although their numbers were small.[438]

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[437] Jones, 'Combining estate records', 215 also found that a large proportion of the ironstone workers of Tankersley, in the West Riding of Yorkshire were locally born, a fact which he ascribes to the organisation of the industry.

[438] The high mobility of farmers who frequently moved considerable distances to take up farms has been reported in previous work in southern England: see, for example, P. R. A. Hinde, H. R. Davies and D. M. Kirkby, 'Hampshire village populations in the nineteenth century', *Southern History*, XV (1993), 150.

More can be done with the birthplace data in the CEBs. The geographical information can be used to analyse the strength of lifetime migration streams. However, what is often even more revealing is the information about the birthplaces of spouses and children, since these can reveal information about successive moves for a given family.[439] Previously, I have analysed the reported birthplaces in the 1881 census of those members of stone workers' and agricultural workers' families in Langton Matravers who were born outside the Isle of Purbeck.[440] The differences between the stone workers and the agricultural labourers were striking. The latter had extensive links with the rest of Dorset, but virtually no contact with other counties. Out of 35 members of agricultural workers' families who were born outside Purbeck, 33 were born in Dorset. In this they resemble agricultural workers throughout most of rural England in the late nineteenth century.

The stone workers, on the other hand, appear to have had rather limited links with the rest of Dorset, but quite strong links with certain other counties. Of 44 members of stone workers' families born outside Purbeck, only 11 had been born elsewhere in Dorset. This, in itself, is at one level not surprising, since skilled stone workers might be expected to move to places where their skills were in demand, and such places were relatively scarce in a rural county like Dorset.[441]

Nevertheless, the list of places with which stone workers had connections is indicative of rather more than this, since most of these localities are known from other sources to have historical links with the Purbeck stone industry. These included Hampshire (seven members), Kent (five members) and the London area (five members), all of which were, or had been, major markets for Purbeck stone.[442] Another county with which a connection existed was Lancashire. This probably came about through the London-based building

[439] This type of analysis was pioneered by D. Bryant, 'Demographic trends in south Devon in the mid-nineteenth century', in K. J. Gregory & W. L. D. Ravenhill (eds.), *Exeter Essays in Geography in Honour of Arthur Davies* (University of Exeter, 1971), 125-42.
[440] Edgar & Hinde, 'The stone workers of Purbeck'.
[441] The Isle of Portland was another Dorset area where stone was quarried. However, it seems that there was no love lost between the quarriers of Purbeck and Portland during the nineteenth century, and contact between the two groups was limited. In the twentieth century, it seems that relations between the two areas had improved to the extent that some Purbeck stone workers went to Portland to undertake part of their apprenticeship.
[442] Ramsgate, where the harbour had been constructed of Purbeck stone at the end of the eighteenth century, is in Kent.

contractor John Mowlem and Company, which was founded by a Swanage man of that name and which was being run by his nephew in 1881.

Out-migration has been, and continues to be, much harder to analyse than in-migration. There is no single source which will furnish information both on who has moved away from a particular area and where they went, in the way that the CEBs will simultaneously assist the identification of who has moved in and where they came from (or, at least, where they were born). Thus, as was pointed out above, researchers have largely been confined to analysing who moved and who stayed, without being able to provide much in the way of information about where the out-migrants went. Even the analysis of movers and stayers is time-consuming, for it relies upon nominal record linkage of successive censuses and parish burial registers. This exercise allows the investigator to classify those resident in a place at one census according to whether they were (1) still resident at the next census, (2) recorded in the Church of England burial register of the parish during the intervening period, or (3) neither (1) nor (2). Persons in group (3) are assumed to have moved out of the parish between the two censuses. Persons in group (3) may have died prior to the later census, but their death is not recorded in the burial register for the parish in question. This suggests that, if they did die prior to the second census, they had moved away from the parish prior to death and so should still be classified as out-migrants. It is possible that some deaths in the parish were not recorded in the burial register. To the extent that this occurred, people who died will be wrongly classified as out-migrants. However, it is generally thought that the recording of deaths in the Church of England burial registers was fairly complete at this time, at least in rural areas.

There are a number of studies of this type reported in the literature. Some begin as described above, with all those resident in a parish at a particular census. The majority of these show that ten-year persistence rates in nineteenth-century English rural parishes are low, with typically only about 40 per cent of persons in one census remaining in the parish ten years later.[443] Other studies begin by identifying all those born in a particular parish within a specific period. This birth cohort is then traced for a number of years using the CEBs from successive censuses and the parish burial registers. One of the key findings of

[443] Robin, 'From childhood to middle age'; Wojciechowska, 'Brenchley'; P. D. Howard, 'An analysis of migration in rural northern Hampshire 1841-1861' (Unpublished M.Sc. thesis, Department of Social Statistics, University of Southampton, 1966), 7.

such studies is that the majority of those born in English villages during the mid-nineteenth century had left their native parish before their 25th birthday. Not only were most migrants young, but most young people moved.[444]

The investigation of out-migration below begins with a study of the second type. Using the Church of England baptism registers and the CEBs for Langton Matravers, as many boys who were born in the parish between 1841 and 1861 as possible have been identified.[445] These boys were then searched for in subsequent censuses up to and including that of 1881; and in the parish burial register for the period between each boy's birth and the date of the 1881 census. The results of this exercise enabled the identification of the number of boys still living in the parish at each census after their birth, and the number who had died in the parish and been buried in the churchyard.[446] For the majority of boys, it also proved possible to identify their father's occupation (either from the baptism register or from the CEBs), which allows the examination of persistence rates by occupational group. The results are presented in Table 7.5 below for two birth cohorts, 1841-1851 and 1851-1861. For convenience, these cohorts have been defined on the basis of census dates. Therefore, the 1841-1851 cohort consists of all boys born between 6 June 1841 and 30 March 1851 (the dates of the 1841 and 1851 censuses) and the 1851-1861 cohort comprises all boys born between 30 March 1851 and 7 April 1861 (the dates of the 1851 and 1861 censuses).

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[444] Hinde, 'The population of a Wiltshire village'.

[445] It is almost certain that some births which took place have been missed. The recording of births in Church of England baptism registers in the nineteenth century was usually much less complete than was the recording of deaths in the burial registers. In an attempt to ameliorate this problem, all those who were aged less than 10 years in the 1851 and 1861 censuses, whose birthplace was stated to have been Langton Matravers, but who do not appear in the baptism register have been added to the sample of births. Similarly, there have been added in a small number of boys whose deaths are reported in the burial register, and whose age at death indicates that they were born within the period 1841-61, but for whom there is no record in the baptism register. However, this will still not capture the births of boys whose baptisms are unrecorded, and who moved away from the parish prior to the subsequent census or their death. To this extent, the method will tend to underestimate out-migration.

[446] A similar exercise for girls is much more difficult because they change their name on marriage, and in many cases their marriages take place outside the parish and so their married name is unknown. If one is prepared to assume that every girl who married outside the parish moved away prior to marriage, then it is possible to carry out the analysis for girls. However, as the focus of this analysis is on the different migration networks of stone workers and others, and these are revealed principally by the experience of males, there has been no analysis of female migration.

Table 7.5 Persistence rates among males born 1841-1851 and 1851-1861 in Langton Matravers, by father's occupational group

1841-1851 birth cohort

		1851			1861			1871			1881		
Fathers' occ. group	No. born	P	D	M	P	D	M	P	D	M	P	D	M
Farmers	5	1	0	4	4	0	1	1	0	4	2	0	3
Farm workers	30	20	5	5	4	6	20	5	6	19	4	7	19
Trades and crafts	18	7	4	7	4	5	9	2	5	11	1	5	12
Stone workers	53	42	4	5	28	7	18	15	10	28	12	11	30
Others	8	2	2	4	0	2	6	0	2	6	0	2	6
Totals	114	72	15	25	40	20	54	23	23	68	19	25	70

1851-1861 birth cohort

		1861			1871			1881		
	No born	P	D	M	P	D	M	P	D	M
Farmers	8	6	2	0	4	2	2	0	2	6
Farm workers	39	20	15	14	15	5	19	3	5	31
Trades and crafts	7	5	1	1	3	1	2	3	1	2
Stone workers	65	46	7	12	38	3	19	28	14	23
Others	34	21	4	9	13	5	16	7	5	22
Totals	153	98	29	36	73	16	58	41	27	84

Notes: Figures in columns headed 'P' are the number of each birth cohort and occupational group present in Langton Matravers in the census of that year. Figures in columns headed 'D' are the number who have died (and whose burial has been recorded in the Langton Matravers burial register) prior to the year in question. Figures in columns headed 'M' are the numbers who do not appear in either of the other two columns: thus, for each census year and occupational group:

M = number born - number still in parish - number dead.

Any return migrants appear in the 'P' column. Thus an increase in the number in the 'P' column from one census year to the next indicates return migration (e.g. for farmers' sons in the 1841-1851 birth cohort between 1851 and 1861, and again between 1871 and 1881).

Sources: The National Archives: Census enumerators' books, Langton Matravers, 1851 (HO 107/1856), 1861 (RG 9/1343), 1871 (RG 10/1992), 1881 (RG 11/2098). Dorset Record Office: Church of England baptism registers, Langton Matravers, 1841-61; and burial registers, Langton Matravers 1841-81 (PE LAM).

This table is very revealing. The first point to note is that the conclusion of previous studies that most boys moved away from their parish of birth by the time they were 25 years old is confirmed. The 1841-51 birth cohort were aged 20-30 years by 1871 (so they were, on average, aged 25 years). Only 23 out of 114 boys born were still living in Langton Matravers at this time. The corresponding proportion for the 1851-61 birth cohort (which of course must relate to the census year 1881) was 41 out of 153. Since 23 members of the 1841-51 birth cohort had died in Langton Matravers by 1871, and 27 members of the 1851-61 birth cohort died in the parish before 1881, it is estimated that 60 per cent (68/114) of the 1841-51 birth cohort and 55 per cent (85/153) of the 1851-61 birth cohort had moved away from the parish by the time they were about 25 years of age.[447] Second, there are great occupational differentials in out-migration. The major distinction is between the sons of stone workers and the rest. The sons of stone workers were much less likely to leave the parish than were other boys.

Table 7.6 Percentages of stone workers' and farm workers' sons still living in Langton Matravers at various ages, 1841-51 and 1851-61 birth cohorts

Occupational group	Percentage still living in parish at ages			
	0-10 years	10-20 years	20-30 years	30-40 years
1841-51 birth cohort				
Farm workers	67	13	17	13
Stone workers	79	53	28	23
1851-61 birth cohort				
Farm workers	51	38	8	
Stone workers	71	58	43	

Source: Table 7.5

Table 7.6 above compares the percentages of stone workers' and farm workers' sons who were still living in the parish at various ages. The difference between the two groups is striking. Whereas fewer than one in five of the sons of farm workers remained in Langton

[447] In fact, these percentages are slight underestimates, since a number of return migrants in Table 7.5 have been classified as if they had remained in the parish throughout the period. If the return migrants are included with the out-migrants, the percentages of those who had ever left Langton Matravers by their 25th birthday increase to 62 per cent for the 1841-1851 birth cohort and 58 per cent for the 1851-1861 birth cohort.

Matravers by the time they were in their twenties, between a quarter and a half of the sons of stone workers did so.[448]

Turning to the destinations of out-migrants, as was mentioned above, in the past it has been almost impossible to trace out-migrants because no indication is given in the CEBs as to where they might have gone. In recent years, however, the appearance of a new source has opened up new possibilities for the analysis of individual-level migration using census data. Under the auspices of the Church of Jesus Christ of Latter Day Saints in Utah, a small army of family historians spent many years transcribing the entire set of CEBs for the 1881 census. These are now indexed by county and made available to the public on microfiche in local archives as well as online. They have since been made available in electronic format from AHDS History in the UK Data Archive at Colchester, University of Essex. Thus, in principle, it is now possible to find out fairly efficiently the place of residence in 1881 of everyone who was alive and living in England and Wales. This means that the study of out-migration from rural areas using record linkage methods can now be extended to include some analysis of destinations, at least for the decades prior to 1881. It is still only possible to observe transitions between the last date at which people were living in the study area and 1881, rather than complete residential histories, but out-migrants from any locality who were still alive in 1881 and who were living in England and Wales can be traced, and placed in context in the communities where they were living at that time.[449] One limitation of this method is that, for the most part, it can only be applied to males, since it requires linkage on the basis of surname, and this cannot be achieved for women who have married prior to 1881.

Searches of the microfiches must be carried out by surname. Since the indexes are county-specific, a complete search of England and Wales for a particular out-migrant necessitates searching 50 or so discrete County files, which is a tedious process.[450] Such a search should uncover any male who is alive in 1881 and living in England and Wales. However,

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[448] It is worth noting that the results in Tables 7.5 and 7.6 show that out-migration from Langton Matravers during the 1860s was lower than it was during the 1850s and 1870s. This is consistent with the results of the estimation of net migration reported in Table 7.3.

[449] Intermediate moves prior to 1881 can sometimes also be observed by recording the birthplaces of spouses and children.

[450] However, a machine-readable version of the 1881 census transcription is now available from the UK Data Archive at the University of Essex.

it will still not be known whether a failure to find a particular person means that person is dead, or has emigrated.

Given these difficulties, a rigorous analysis of these data was not undertaken. Rather, they have been used to gain an impression of the kinds of destinations favoured by out-migrants from the parish of Langton Matravers. Two searches of the 1881 data were performed. The first was a limited search for all those members of the 1841-61 birth cohort who were neither living in Langton Matravers in 1881 nor recorded in the Langton Matravers burial registers. This search covered the entire county of Dorset, the neighbouring county of Hampshire, and the county of Surrey, which includes a large area of south London.

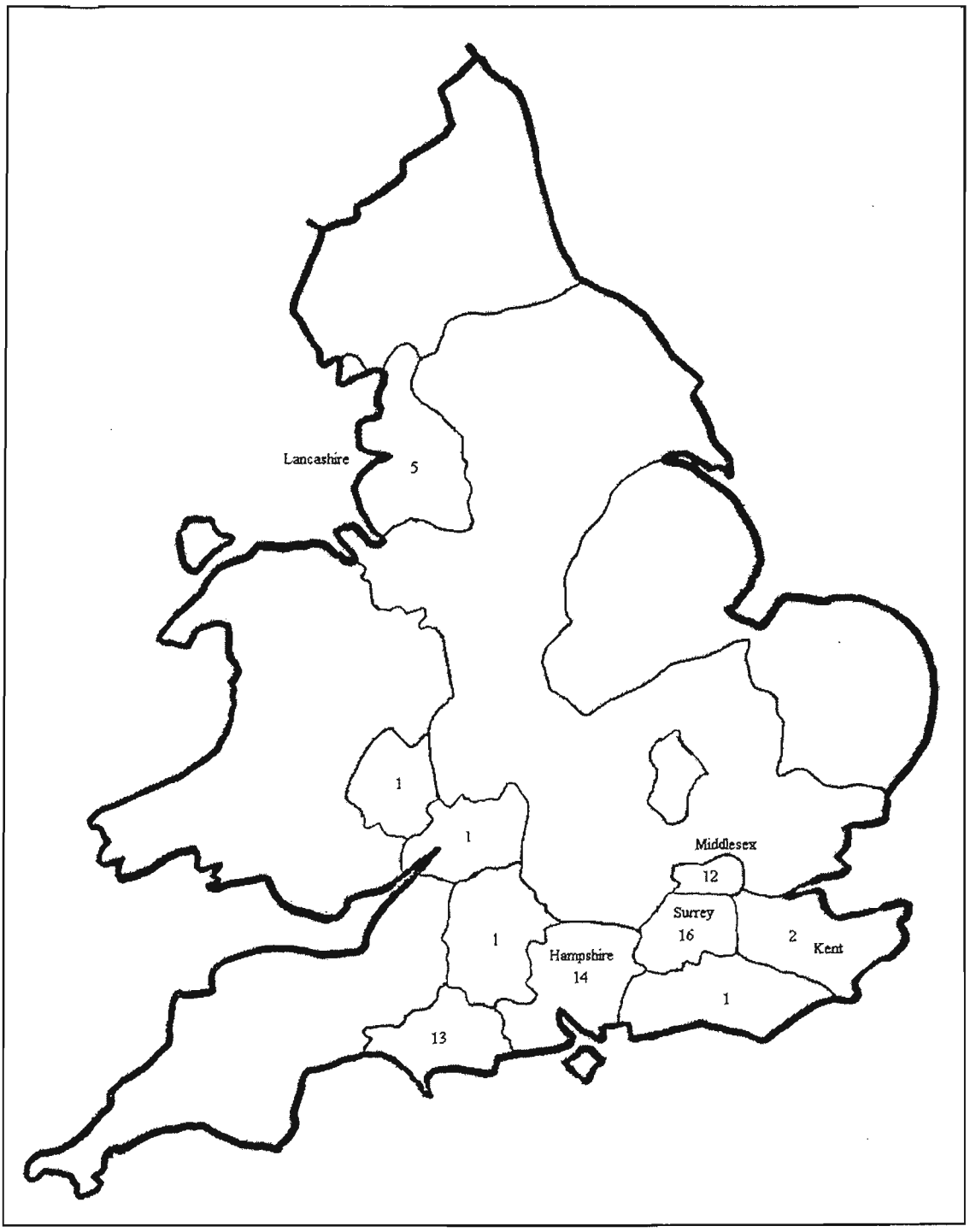
The second search is in one sense more restricted, yet in another more complete. Because the stone trade was carried on in families, the great majority of stone workers had one of a relatively small number of surnames.[451] Restricting attention to these few surnames vastly speeds up the searching process, and it was possible to search the 1881 data for a much wider area of England for anyone with one of these surnames who was born in any of the three stone-working parishes of Purbeck.[452]

The geographical distribution of out-migrants among these stone-working families may be illustrated by considering just the 356 members of these families born in Langton Matravers who were traced in the 1881 census (see Figure 6.1 below). Of these, 256 (or 75 per cent) were living in the parish where they were born. Of the remainder, 24 were living in the neighbouring parishes of Swanage and Worth Matravers, and only 13 elsewhere in Dorset.

[451] See Edgar & Hinde, 'The stone workers of Purbeck', for more details of the stone workers' families.

[452] The surnames searched for were as follows: Benfield/Bonfield, Bower, Bridle, Chinchen, Corben, Edmonds/Edmunds, Lander, Phippard, Saunders/Sanders, Vye and Webber. Eighty-nine per cent of stone workers recorded in the six censuses of Langton Matravers between 1841 and 1891 inclusive had one of these eleven surnames (see The National Archives [hereafter TNA]: CEBs for Langton Matravers, 1841 (HO 107/278/2), 1851 (HO 105/1856), 1861 (RG 9/1343), 1871 (RG 10/1992), 1881 (RG 11/2098) and 1891 (RG 12/1641).

Figure 7.1 Geographical distribution of out-migrants from stone working families in Langton Matravers



The 53 who were living in other counties in 1881 were concentrated in Hampshire (14), Surrey (16), Middlesex (12) and Lancashire (5). All these are counties with which Purbeck had connections through the stone trade. [453]

Some of those who left Purbeck moved around considerably after leaving. For example, Henry Edmonds, aged 54 years, was in 1881 living (rather appropriately) at 120 Dorset Road, Lambeth, Surrey with his wife, four children and one grandchild.[454] His eldest son, aged 20 years, had been born in Southsea in Hampshire, and his three younger children in and around Chatham in Kent. From this, it seems that, although out-migrant stone workers were highly mobile, they moved between places which had historical links with the stone trade. This was the case with both the Southsea area of Hampshire and the north Kent coast.

Stone workers who moved away from Purbeck during the nineteenth century largely remained in the stone trade. Most of them became stonemasons in their new homes (both Henry Edmonds and his eldest son were described as 'stonemasons').[455] This option was open to them because of the requirement that a freeman of the Company of Marblers and Stone Cutters be skilled as a mason as well as a quarrier. Because masons were in general demand, a Purbeck worker who wished to leave the Isle was likely to be able to find work in almost any reasonably populous place. Unlike workers in other extractive industries (for example the tin miners of Cornwall), therefore, the Purbeck stone workers were not constrained to migrate to other places where quarrying or mining was taking place.[456] Instead, they not unreasonably chose places where they had built up family or trade links.

The 1881 census listings reveal that it was common for out-migrants to go to places where previous out-migrants had gone. For example, at 1 Trigon Road, Lambeth were found Henry Corben, a stonemason, born in Worth Matravers, with three sons and a daughter (all

[451] The search in the 1881 census for members of stone working families was not confined to those born between 1841 and 1861. I here consider all members of these families who were described in the 1881 census as being born in Langton Matravers.
[454] TNA: RG 11/603.
[455] TNA: RG 11/603.
[456] For example, several Cornishmen were to be found in the lead mining parish of Sheldon in Derbyshire in the mid-nineteenth century (TNA: HO 107/2149, RG 9/2539 and RG 10/3627). See T. D. Ford & J. H. Rieuwerts (eds.), *Lead Mining in the Peak District* (Bakewell, 1968), 59.

born in London or Lambeth).[457] In the same street, at number 21, is Joseph Saunders, also a stonemason. He was born in Portsea, in Hampshire, but his wife and his eldest son were born in Worth Matravers.[458] Similarly, in the parish of Holdenhurst in Hampshire were found the families of Thomas Chinchen and John Bridle (both stonemasons, and both born in Langton Matravers) living next door to one another in Terrace Road.[459] Finally, at 15 St Stephens, Lambeth, were living the household of Won. Wil. Bower (sic), a stonemason born in Portsmouth, but whose wife was born in Langton Matravers. Described as 'boarders' in this household were Walter Nineham, aged 25, a stonemason born in Worth Matravers, and Samuel C. Clarke, aged 21, a stonemason born in Langton Matravers.[460] Since the Bowers' three children (aged four, six and eight years) were born in Lambeth, it can be surmised that their movement to Lambeth took place at least eight years before 1881. It is likely that the two boarders were more recent migrants, living temporarily with the Bowers while they gained a foothold in the Lambeth area.

Finally, return migration to Purbeck was common among the stone workers. Some young men moved away for a short period and then moved back. In other cases, members of stone-working families who were born outside Purbeck might move back to the area. For example, Frederick Brown, a stonemason, was living in 1881 in Lambeth.[461] He had been born in Woolwich in north Kent. His wife, Alice, however, was born in Langton Matravers. With them in 1881 were their three sons: Arthur, aged nine, was born in Worth Matravers; Hubert, aged six, was born in Lambeth; and Sidney, aged one year, was born in Worth Matravers. It appears, therefore, that Frederick Brown had moved from Kent to Purbeck, then to Lambeth in Surrey, then back to Purbeck, and then back to Lambeth again. Slightly different was the case of James Corben. His parents, Peter and Mary were both from quarrying families in Langton Matravers. They married in Swanage in 1802, and moved to Portsea in Hampshire with their first two young children between 1804 and 1809. James was born in 1812. When he was 14 years of age he was sent back to Purbeck to be apprenticed to the stone trade, initially with a maternal uncle in Swanage, and then with his father's brother at Langton Matravers. He did not get on with his uncle and having served his time and become a Freeman of the Company of Purbeck Marblers and

[457] TNA: RG 11/602.
[458] TNA: RG 11/602.
[459] TNA: RG 11/1195.
[460] TNA: RG 11/603.
[461] TNA: RG 11/604.

Stonecutters, he returned to Portsea where he worked in the stone trade as a mason. He never lived in Purbeck again, but did return on several occasions to visit relations. [462]

The well-defined migration network of the stone workers contrasts with that of the agricultural workers and other groups. Although the data on the destinations of others is much less complete, there is sufficient evidence to indicate that in 1881 they were living in a wide variety of areas in Dorset and Hampshire. The search failed to find any member of the 1841-61 male birth cohort living in south London in 1881 who was not the son of a stone worker. Clearly, then, London does not seem to have been the major destination of these other groups.

Where, then, were the migrant sons of these other groups living in 1881? The limited evidence available suggests that many of them had not moved very far. Some examples of the members of the 1841-61 birth cohort illustrate this. James Bradford, the son of a dairyman, who was born in 1857, was living in 1881 with his family in the neighbouring parish of Corfe Castle.[463] Edward Cattle, son of a carpenter, born in 1852, is to be found in Parkstone in 1881 working in the same trade.[464] Parkstone was between the town of Poole and the rapidly expanding resort of Bournemouth. Henry Damon, Joseph Diffey, John Gould, and William Guy, all the sons of agricultural workers, were to be found living in Swanage.[465]

How might the patterns revealed by the above analyses be interpreted? Consider first the stone workers. A superficial reading of the results might suggest a classic case of a declining rural industry leading to out-migration, mainly to large urban areas, and especially London, in much the same way that the decline of craft industries elsewhere had been a major force driving people to leave the countryside.[466] The tendency for migrant stone workers to concentrate in a small number of urban areas and to live in relatively close proximity to one another when they arrived in these towns might also be interpreted

[462] R. J. Saville (ed.), *A Langton Quarryman's Apprentice: James Corben's Autobiography*, (Langton Matravers, Dorset, The Langton Matravers Local History and Preservation Society, 1996).
[463] TNA: RG11/2099. A 'dairyman' in this area of Dorset refers to a man who rented cows and made a living out of selling their milk.
[464] TNA: RG 11/2096.
[465] TNA: RG 11/2098.
[466] See Saville, *Rural Depopulation*, 20-30.

as a form of chain migration. Furthermore, there appears, on the face of it, to be some evidence of the maintenance of kin networks in the destination areas. However, while each of these interpretations contains some truth, the real situation is more complicated.

The migration streams and networks which have been identified among the stone workers in the nineteenth century almost certainly originated many centuries before. It is known that in medieval times masons from Purbeck went with their stone to London and elsewhere to work on cathedrals and churches.[467] This habit of working 'on site' continued into the eighteenth and nineteenth centuries, when it was known as 'following the tools'. Thus out-migration among the stone workers was long established, and had originally been associated not with a contraction of the industry, but with expansion. The men who left Purbeck in the nineteenth century should not, therefore, be seen primarily as economic refugees fleeing rural poverty. Indeed for many, returning to Purbeck was always a distinct possibility.[468] Nevertheless, the fortunes of the stone trade did rise and fall over time. Despite the fact that the stone merchants to some extent dampened down the effect of variations in the demand for stone on the quarriers and their families, it is clear that at various times, some of those born into stone workers' families would find employment in the trade hard to come by.[469] Moreover, even in good times, the number of employees which the trade could absorb was limited, and fewer than the number of sons which stone workers were producing.[470]

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[467] G. D. Drury, 'The use of Purbeck marble in medieval times', *Proceedings of the Dorset Natural History and Archaeological Society*, LXX (1948), 78, 97-8; Page, Victoria History (vol. 2), 334-5.

[468] The aforementioned John Mowlem, who eventually founded a large construction company which is still in existence, records in his diary that when he started work as a foreman in London: 'I was put over men old enough to be my father. It is true I knew but little, but I moved upwards, knowing I could any day go back to the bankers [the piles of stone stored either at the quarry head or at the stone quay at Swanage prior to shipment].' See D. Lewer (ed.) *John Mowlem's Swanage Diary, 1845-1851* (Dorchester, Dorset Publishing Co., 1990), p. 17.

[469] The stone merchants operated a form of Truck system in the stone quarrying parishes during much of the nineteenth century. See Chapter Four for more details of this.

[470] Stone workers tended to have large families. Although it has not been possible to make a detailed study of the fertility of stone workers and their wives, it is clear from a preliminary analysis that families of six and seven children were usual. Assuming that half of these were males, and even allowing for a fairly high rate of child mortality (the mortality characteristics are examined in detail in Chapter Eight), it is clear that for all sons born to stone workers to have been absorbed by the industry, the number of workers would roughly have had to double every 25-30 years. This did not happen. The number of persons described as stonemasons or quarriers in Langton Matravers was 132 in 1851, 93 in 1861, 105 in 1871, 145 in 1881 and 68 in 1891 (TNA: HO 107/1856, RG 9/1343, RG 10/1992, RG 11/2098 and RG 12/1641).

Two options were available to stone workers who could not find work in the stone trade. First, they could take up other occupations in Purbeck (the main options were agriculture or some other trade). Second, they could move away. Among the stone-working families of Langton Matravers, work in the agricultural sector in the same parish, at least, was very rarely chosen. This may have been because of a cultural aversion to working on the land. However, it is more likely that, in view of the notoriously low wages of agricultural workers in Dorset, work on the land was a very unappealing prospect (even if work could be found). Moreover, as is pointed out above, members of the stone trade had a ready-made escape route provided by their skills as stonemasons, and numerous trade links with other parts of the country.[471]

It is true that some members of stone-working families did take up trades and crafts in Purbeck. For example, one John Bower is described as a 'blacksmith' in the censuses of 1851 through 1881; and Ambrose Lander is described as a 'grocer and draper' in 1861, but a 'stonemason' in 1871, when his son Samuel is described as a 'grocer'.[472] Despite these few individual cases, however, the overwhelming impression given by the census information is that the stone workers of Purbeck either worked in the stone trade in Purbeck, or, if that was not possible, worked in the stone trade elsewhere.[473] Leaving the stone industry entirely was a very unusual option. Indeed, although I have no direct evidence for it, I strongly suspect that several of the tradesmen, such as Ambrose Lander, above, were actually stone masons or quarriers who also owned a small shop or whatever. These were probably run by other members of the family, in this case by Ambrose's son Samuel. It is also likely that many, if not all, of the small tradesmen and craftsmen in the quarrying parishes took payment for goods in stone; the public houses certainly did.[474]

Because of the long history of out-migration along well-defined paths, those wishing to pursue their trade outside Purbeck were likely to follow in the footsteps of their ancestors. When they arrived in these destinations, they found support and assistance from those

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[471] See M. Moore, 'Stone quarrying in the Isle of Purbeck: an oral history' (Unpublished MA thesis, Department of English Local History, University of Leicester, 1992), p. 70. I am grateful to Dr K. D. M. Snell for drawing my attention to this thesis, and kindly allowing me to see a copy of it.

[472] TNA: HO 107/1856, RG 9/1343, RG 10/1992 and RG 11/2098.

[473] Throughout the five censuses from 1851 to 1891, in Langton Matravers, only 17 members of the eleven main stone-working families were described as tradesmen or craftsmen.

[474] P.E. Razzell & R.W. Wainwright (eds.), *Letter XXVIII*, 'The Stone Quarries of Swanage', 46.

Purbeckians already there. This assistance, however, probably did not arise simply because of kinship bonds and networks: it is more likely that it was a result of shared membership of the Company of Marblers. Among the stone-working community in Purbeck, while kinship links within families were strong, links between families were relatively weak.[475] Moreover, out-migration of whole families was rare. A stone worker who arrived in, say, Lambeth in Surrey, therefore, would probably not find many members of his immediate family there. What he would find was other members of the Company of Marblers, who would not necessarily have any close family connection, but who would nevertheless provide some assistance in finding accommodation, and probably employment. Thus I would suggest that in this instance, rather less emphasis should be placed on the role of family and kinship networks in assisting integration into the destination community than was placed, for example, by Anderson in his study of migration into the Lancashire town of Preston.[476]

The migration patterns of other sections of the population of Purbeck are, in general, consistent with those found in other areas of the country for similar groups. There was a great deal of short-distance circulatory movement among farm workers and those engaged in trades and crafts. As the century progressed, this movement grew to involve the vast majority of men in these occupations: typically more than three quarters of the sons of agricultural labourers or tradesmen and craftsmen had left their native parishes by the time they were in their twenties. Only a small minority of those born after, say, 1841 remained tied to their parishes of birth. However, it seems that relatively few of those who left their native parishes went immediately to the large towns. More common, perhaps, was for people to make several moves within the countryside before ultimately settling in an urban area.

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[475] See Edgar & Hinde, 'The stone workers of Purbeck' for more discussion of this issue.

[476] Anderson, *Family Structure*. The argument in this paragraph is speculative, and further study of kinship networks among the stone workers is needed. However, it is possible to say that intermarriage among stone workers in Purbeck seems not to have been any more common than would be expected under a 'random mating' hypothesis: see Edgar & Hinde, 'The stone workers of Purbeck'.

Chapter Eight

Mortality

Introduction

Between 1801 and 1901 the population of England and Wales rose from just under nine million to more than 32 million. During the same period life expectancy at birth increased from around 40 years to about 50 years; in other words, there was an unprecedented decline in mortality over the course of the century.

Unfortunately, studies of mortality decline before the mid-nineteenth century are hampered by a lack of vital registration data. It was not until July 1837 that a system for the comprehensive registration of births, marriages and deaths in England and Wales was put in place. For periods prior to 1837, indices of demographic behaviour have to be estimated from the data contained in the Anglican parish registers of baptisms, marriages and burials. The new system was a considerable improvement over ecclesiastical registration: it focused directly on births and deaths as opposed to baptisms and burials, and it was designed to cover the whole population rather than just those who belonged to the Church of England. By the 1830s, the rise of nonconformity and increasing secularization meant that a substantial minority of the population no longer subscribed to the Anglican Church.[477] Civil registration included most of the details collected in parish registers, together with some additional information. Mortality was of particular interest to those administering the civil registration system, and the name, age, sex and occupation of the deceased, along with information on cause and place of death were all collected. With this more detailed data it becomes possible to calculate age-, sex- and cause-specific death rates for a variety of population aggregates.[478]

In order to administer the new system, England and Wales was divided into over 600

[477] For the geography of religious attendance in the mid-nineteenth century, see K.D.M. Snell and P.S. Ell, *Rival Jerusalems: the Geography of Victorian Religion*, (Cambridge University Press, Cambridge, 2000).
[478] Andrew Hinde, *England's population: a history since the Domesday Survey*, (London, Hodder Arnold, 2003), 272.

registration districts. These were based on the Poor Law Unions created under the Poor Law Amendment Act of 1834, and were further split into registration sub-districts. The registration districts were conflated into 45 registration counties and eight registration divisions. These administrative entities were retained until 1911, when they were superseded by local government administrative areas.[479] Civil registration data based on the registration districts are available in two forms. The *Annual Reports of the Registrar General* summarise the numbers of births, marriages and deaths in each year and are contained in the Parliamentary Papers. Particularly useful, however, are the decennial supplements to the annual reports. These provide more detailed analysis, especially in terms of mortality by cause of death and occupation of the deceased.[480] Inevitably, perhaps, in the early years of the civil registration system its coverage was less than complete. It is estimated that in the first full decade of civil registration (the 1840s) roughly six to eight per cent of births were unregistered, declining to less than two per cent by about 1870.[481] The death registers are considered to be substantially more complete than the birth registers, although there may have been some problems with infant deaths. Other areas where concerns have been raised regarding the mortality data are age reporting, and the accuracy of cause of death information (especially regarding infant deaths).[482] Prior to 1875 no doctor's certificate stating the cause of death was required to support death registration. Even after the introduction of medical certification the data remains unreliable, as 'the etiology of many of the most important infectious diseases was little understood by members of the medical profession in the mid-nineteenth century.'[483] The Registrar-General's statistics also combine typhus and typhoid until 1869, and 'other' is often the single largest category of cause of death, which is unhelpful.

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[479] R. Woods, *The Demography of Victorian England and Wales*, (Cambridge, Cambridge University Press, 2000), 37.

[480] Most of this information has been extracted and made available in electronic form. A particularly important collection is that deposited in the United Kingdom Data Archive at the University of Essex by Robert Woods. It consists of the number of deaths classified by age, sex, and cause for each registration district in England and Wales for each decade from 1851-61 to 1891-1901. The catalogue of the UK Data Archive may be consulted online at http://www.data-archive.ac.uk.

[481] Woods, *Demography*, 42.

[482] Woods, *Demography*, 68.

[483] R.I. Woods and P.R.A. Hinde, 'Mortality in Victorian England: Models and Patterns', *Journal of Interdisciplinary History*, XVIII (1987), 66.

The lack of accurate civil registration data prior to 1837 means that, for earlier periods, estimates of life expectancy at birth have to be derived from parish burial registers, analyzed using back projection techniques. Current estimates are that mortality in England and Wales began to decline after about 1750, when the expectation of life at birth was around 35 years. The decline was modest, however, and by 1800 life expectancy at birth had reached only about 37 years. After 1800 the rate of decline picked up a little, and by 1830 there had been a further rise to around 40 years. The mortality decline then seems to have faltered, and life expectancy at birth remained at around the 40-41 years mark for the next four decades. About 1870, however, a second, much more rapid phase of increase began, which saw it reach 50 years during the early years of the twentieth century.[484] This was not, however, a consistent process; these are *national* figures, and they conceal substantial temporal, spatial, occupational and age-specific variations.

The causes of the secular decline in mortality have provoked considerable discussion since the nineteenth century. One of the most prominent explanations in modern times has been what has become known as the 'McKeown thesis'. This was proposed by Thomas Mckeown and his colleagues during the 1970s as an attempt to provide an account of the reasons for the conquest of infectious diseases. They believed that the 'decline of mortality was due to a reduction of deaths from infectious diseases, almost wholly until 1900'.[485] They also considered the effects of improvements in hygiene in reducing deaths from intestinal infections but concluded that in England and Wales 'the reduction occurred in spite of deteriorating hygienic conditions associated with industrialization and the movement to towns.'[486] They believed improvements in nutrition and the standard of living to be fundamental to the reduction of mortality. In a later exposition, McKeown attributed the secular decline in mortality to four factors:[487]

a) Improvements in living standards, diet and housing conditions.
b) Government intervention in public health and sanitary conditions.
c) Autonomous decline in the virulence of certain diseases.
d) A reduction in levels of mortality and morbidity through medical intervention.

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[484] Hinde, *England's population*, 194-195.
[485] McKeown, T., Brown, R.G. and Record, R.G. 'An interpretation of the Modern Rise of Population in Europe', *Population Studies*, 26, (1972), 381.
[486] McKeown, Brown, and Record 'An interpretation', 381.
[487] McKeown, T. *The Modern Rise of Population*, (Edwin Arnold Ltd, London, 1976)

He attributed weights to the factors. However, he has been strongly criticised for these relative weights; in particular, for underestimating the effects of medical intervention and for over-emphasizing the role of improvements in the standard of living and nutrition.[488] McKeown took some interest in age-specific mortality but paid little or no attention to regional variations.

The lack of any regional analysis in McKeown's work is a significant omission. More recent work has emphasized the importance of getting away from a reliance solely on national averages. As Johannson and Kasakoff have said, 'When national-level mortality data are disaggregated, England seems to have had a multiplicity of mortality histories, along with its multiple family and fertility histories.'[489] Johansson further argues that 'macro-level generalizations remain minimally informative until they can be rooted in more fully contextualized, micro-level research'.[490] The spatial complexity of the mortality decline has been summarized thus:

> In Victorian England and Wales, where one lived had great bearing on when and how one died. The distinctive morbidity and mortality environments created by industrialization, occupational specialization, urban growth, and residential segregation, in conjunction with the effects of climate, relief, aspect and proximity, are fundamental to our understanding of the ways in which life expectancy began to improve during the Victorian era.[491]

One of the great strengths of Robert Woods' book *The Demography of Victorian England and Wales*, in contrast, is the close attention paid to the role of regional and local variations. This detailed geographical framework allows a more sophisticated examination of the data than has hitherto been possible and allows a far more nuanced discussion of specific factors and their relationship to particular types of place.

There were enormous differences in the mortality experience of rural and urban areas in the nineteenth century. Urban mortality rates were generally much higher than those in

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[488] An important recent critique can be found in Woods, *Demography*, 344-359.
[489] S. Ryan Johansson and Alice B. Kasakoff, 'Mortality history and the misleading mean', *Historical Methods*, 33, 2, (2000), 57.
[490] S. Ryan Johansson, 'Macro and micro perspectives on mortality history', *Historical Methods*, 33, 2, (2000), 70.
[491] R. Woods and N. Shelton, 'Disease environments in Victorian England and Wales'. *Historical Methods*, 33, 2, (2000), 73.

rural areas, especially the larger urban centres (although London did not follow this trend). In large industrial towns such as Sheffield, Newcastle, Manchester and Liverpool, life expectancy at birth was less than 35 years; in parts of the rural south and south-west it was more than 50 years.[492] This difference between urban and rural is potentially very significant, as throughout the period of mortality decline there was a massive transfer of population from rural areas to urban areas. Effectively, large numbers of people moved from relatively healthy rural areas to unhealthy urban environments. It could be that this large-scale population movement distorted the national-level trend in mortality decline, with the effect that the expectancy of life at birth is understated to some degree. In relation to this, it might be significant that migration from rural to urban areas was particularly strong during the middle-third of the nineteenth century – precisely the period when the national level figures suggest that the decline in mortality came to a temporary halt.

The data collected via the civil registration system means that from the late 1830s it has been possible to calculate (reasonably) accurate age-specific death rates for the population of England and Wales. These show quite clearly that within the overall nineteenth-century mortality decline certain age groups fared much better than others. Virtually the entire mortality decline was concentrated in the ages between one and forty years. By the last decade of the nineteenth century, mortality in those age groups was 30-50 per cent lower than in the period 1838-1854. The greatest relative decline was among older children, those aged 5-15 years. Infant mortality, on the other hand, remained virtually unchanged during the second half of the nineteenth century. Indeed, the death rate among those aged under one year was higher during the 1890s than it had been for several decades.[493] This is particularly significant; infants under one year of age were a substantial proportion of total deaths and, consequently, the scale of infant mortality was an important modifier of the overall expectation of life at birth.

The spatial characteristics of infant mortality in the second half of the nineteenth century were similar to those of overall mortality. On the whole, infant mortality rates were high in large urban centres and some heavy industrial and mining areas (for example, the tin mining districts of Cornwall). Rural areas generally experienced much lower rates of

[492] Hinde, *England's population*, 204.
[493] Hinde, *England's population*, 196 and Table 12.2.

infant mortality. In some parts of southern England and the far northern uplands more than 9 out of 10 babies survived past their first birthday, whereas some large towns – for example, Sheffield and Birmingham – experienced infant mortality rates in excess of 200 per thousand.494 There was a close correlation between infant mortality and population density, suggesting that environmental factors played a crucial role in determining a person's survival chances.[495] At the same time, however, there do seem to have been some exceptions to this relationship. Parts of rural Norfolk and the fen country around the Wash, for example, displayed much higher infant mortality rates than would be anticipated given the expectation of life at birth. Indeed, there was 'a zone of anomalously high infant mortality' covering 'most of Norfolk, much of the East Midlands, Lincolnshire and east Yorkshire.'[496]

A wide range of diseases and conditions affected mortality in the mid-nineteenth century. However, four groups of causes were particularly prominent.[497]

1) Food- and waterborne diseases (e.g., cholera, diarrhoea, dysentery, typhoid).
2) Childhood infectious diseases (e.g., scarlet fever and measles).
3) Respiratory diseases (e.g., bronchitis and pneumonia).
4) Pulmonary tuberculosis (also known as 'consumption' or 'phthisis').

The first group of diseases were particularly prevalent in urban environments and were responsible for a large proportion of infant deaths. The second group, infectious childhood diseases, caused few deaths at ages above 15 years, but were a major cause of mortality among young children.[498] The third group caused up to 20 per cent of all deaths. The age distribution of mortality stemming from these respiratory diseases was very similar to that of overall mortality.[499] The fourth 'group' is actually a single disease: pulmonary tuberculosis. Phthisis was responsible for around 10 per cent of all deaths, though there

[494] Hinde, *England's population*, 212; Chris Galley, 'Social intervention and the decline of infant mortality: Birmingham and Sheffield, c.1870-1910', *Local Population Studies*, 73, (2004), 29-50.
[495] Woods, *Demography*, 192-193.
[496] Hinde, *England's population*, 204-205; also Woods, *Demography*, Figure 7.5 (between 96-97).
[497] This grouping is that of Woods, *Demography*, 311.
[498] Woods, *Demography*, 317.
[499] Woods, *Demography*, 317.

were marked geographical variations in its incidence.[500] It largely affected young adults, accounting for roughly one-third of deaths among the 20-24 age group, and females were, on the whole, more susceptible than males.[501]

Woods has estimated the relative contributions to mortality change of different causes of death between the 1860s and the 1890s.[502] The impact of three of the four groups of diseases listed above was substantial. Diarrhoea and typhus (particularly the latter), the diseases associated with sanitation, were together responsible for nearly 30 per cent of the overall decline in the number of deaths between the 1860s and 1890s. Much of this decline was concentrated in large urban centres, most notably London. This suggests that substantial improvements in the sanitation infrastructure were being made in large towns and cities.[503] Turning to measles and scarlet fever, these diseases of childhood cause most of their deaths at ages between one and ten years. They are associated with overcrowded living conditions and mortality rates from them in the mid-nineteenth century were markedly higher in densely-populated urban districts than in rural areas. Given the scale of urbanization in the second half of the nineteenth century, and the lack of any effective medical intervention, there seems to be no reason why deaths from either disease should decline. Indeed, the mortality rate for measles appears to have remained constant between the 1860s and the 1890s. Deaths from scarlet fever, on the other hand, declined dramatically, being responsible for around 22 per cent of the overall decline in mortality during this period.[504] Furthermore, the association between population density and mortality rates from scarlet fever had also largely disappeared. The most plausible explanation for this appears to be that there was a significant decline in the virulence of scarlet fever.[505]

Diseases of the lung actually increased during the last four decades of the nineteenth century. In part, at least, misclassification and/or changes in classification may have

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[500] Woods, *Demography*, 311.
[501] Woods, *Demography*, 317.
[502] Because the Registrar-General's classification of causes of death changed over time, a number of assumptions had to be made in order to construct the distributions for the two decades. These are described in detail in Woods, Demography, 349-352; also see the table on 314-315. The figures are also summarized in Table 12.2 in Hinde, *England's population*, 209.
[503] Woods, *Demography*, 359; also see the map at 97.
[504] Woods, *Demography*, 350.
[505] Woods, *Demography*, 359.

contributed to this. However, it seems likely that airborne diseases were not susceptible to the environmental improvements being made at this time. This is reinforced by the fact that while London was 'probably a substantial beneficiary as far as sanitation was concerned', the same could not be said of 'the environmental conditions that fostered the respiratory diseases'.[506] The single most important contribution to the mortality decline after 1860 was that made by tuberculosis of the lung, or phthisis, accounting for some 35 per cent of the overall figure.[507] As was noted above, phthisis was a particular problem for young adults, but between the 1860s and the 1890s death rates at all ages declined by around 50 per cent. Mortality from phthisis declined more for females (who were more susceptible to the disease).[508] Unlike diarrhoea and typhus, there appears to be no clear association between population density and the decline in phthisis mortality. Geographic differentials did, however, exist: throughout the second half of the nineteenth century death rates from phthisis were highest in sparsely populated districts of west Wales and relatively low in the areas surrounding London and parts of the Midlands.[509]

Woods suggests that the cause of the decline in deaths from phthisis was that, like scarlet fever, 'the disease became less virulent and that this was the principal reason for a reduction in the risk of the disease developing and leading to early death [and] that this process occurred slowly and everywhere'.[510] He also emphasizes the lack of any evidence for a relationship between death rates from phthisis and any identifiable measure of living standards. In taking this view, he firmly rejects McKeown's assertion that the virulence of phthisis did not change significantly, and that the reduction in mortality from the disease (and therefore a large proportion of the overall mortality decline) was due to improvements in nutritional status and the standard of living.[511]

Other parts of the McKeown thesis are less controversial. He seems to have been broadly correct in his belief that medical interventions had little impact on the mortality decline, although it has been suggested that immunization against smallpox may have been

[506] Woods, *Demography*, 332.
[507] Woods, *Demography*, 350-351.
[508] Woods, *Demography*, 318 and 334-335.
[509] Hinde, *England's population*, 211.
[510] Woods, *Demography*, 340.
[511] Woods, *Demography*, 339-40.

significant in the first half of the nineteenth century.[512] His suggestion that the decline of scarlet fever was caused by autonomous changes in the virulence of the disease appears to be accepted; as does his acknowledgement that improvements in sanitation were an important factor in the mortality decline, particularly towards the end of the century.
It is the standard of living component of the McKeown thesis that has been most roundly dismissed by demographers and historians. However, Hinde has recently argued that the standard of living thesis should perhaps not be rejected out of hand. He notes that recent research into real wage trends between 1750 and 1850 suggests that real wages performed rather better than economic historians have hitherto suggested, with an increase of 35-40 per cent by 1850, from a low-point in the 1770s. If this revised wage data is correct, it could be seen as lending weight to the possibility that improvements in the standard of living contributed to mortality decline before 1850. Moreover, it is accepted that the living standards of all sections of the workforce, even the lowest paid, did rise rapidly during the second half of the nineteenth century. Given these circumstances, Hinde offers the suggestion that rising living standards might have affected mortality indirectly - by, for example, encouraging and enabling local authorities to undertake improvements in sanitation and other public health measures. He also makes the rather salient point that critics of the standard of living thesis have still to find a definitive replacement for it.[513]

Although infant mortality rates failed to reflect the overall mortality decline during the nineteenth century, there was an extraordinary change at the very end of the century. Nationally, between 1899 and 1910, the infant mortality rate fell by around 30 per cent; and, notwithstanding some occasional but temporary rises, infant mortality after 1900 went into sustained decline.[514] It appears that several mutually reinforcing factors operating in both the short and the long term were responsible for this secular decline in infant mortality. These include environmental and public health improvements, economic improvements, lower fertility (which meant fewer pregnancies and longer child spacing, which in turn improved the mother's health), the expansion of women's education and the

[512] Hinde, *England's population*, 201-201.

[513] Hinde, *England's population*, 218.
[514] Hinde, *England's population*, 212-213.

provision of better information about and access to childcare, higher quality food and safer supplies of milk.[515]

Occupation was a major determinant of mortality for males aged over 20 years, and there was intense interest in nineteenth-century England concerning the mortality differentials between different occupational groups. Indeed, much of the work of the early administrators and statisticians of the civil registration system, established in 1837, focused on this issue.[516] It was thought that the mortality characteristics of those employed in any given occupation (and their families) were primarily a consequence of the particular environment in which they lived and worked. For example, the expectation of life at age 20 years for male farmers and clergymen during the 1860s was over 45 years; for chimney sweeps and earthenware manufacturers it was less than 35 years.[517] One group of workers who experienced high levels of mortality were miners - both coal miners and those who mined metallic ores. Explanations of their high mortality followed the pattern described above. Adult male miners were particularly prone to various lung diseases, brought on by sustained exposure to extremely dusty working environments.[518] They generally lived in poorly-constructed, overcrowded and unsanitary housing, and their children suffered high mortality as a result. The latter was compounded by the fact that coal mining families had the highest fertility of all the major occupational groups. Consequently their children suffered more than others from the well-known hazards associated with short birth intervals.[519]

Previous research on the mortality of those working in extractive industries has largely focused on coal miners and certain other large groups, for example Cornish tin miners.[520]

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[515] Woods, *Demography*, 294-306. Galley, 'Social intervention', 46. Galley's research into infant mortality in Birmingham and Sheffield tends to confirm Woods' view of the causes of the underlying infant mortality decline.

[516] See J. Eyler, *Victorian social medicine* (Baltimore, Johns Hopkins University Press, 1979); S. Szreter, *Fertility, class and gender in Britain 1860-1940* (Cambridge, Cambridge University Press, 1996); and E. Higgs, *Life, death and statistics: civil registration, censuses and the work of the General Register Office, 1836-1952* (Hatfield, Local Population Studies, 2004).

[517] Woods, *Demography*, 224-226.

[518] N. Woodward, 'Why did South Wales miners have high mortality? Evidence from the mid-twentieth century,' *Welsh History Review*, 20, (2000), 116-42.

[519] Woods, *Demography*, 295-305.

[520] R. Burt and S. Kippen, 'Rational choice and a lifetime in metal mining: employment decisions by nineteenth-century Cornish miners', *International Review of Social History*, 46, (2001), 45-75.

However, there were many other, smaller, extractive industries in England and Wales, including lead mining, copper mining, iron-stone mining and stone quarrying. The stone quarriers and stone masons of the Isle of Purbeck in Dorset, for example, shared many of the occupational hazards associated with miners. As was described in Chapter 4, their quarries were effectively stone mines, consisting of shafts and tunnels rather than the more conventional open-cast workings. They also, like many mining populations, formed a tightly-knit society, suspicious of outsiders and adhering to customs and ways of living that differed markedly from those of others living in the same locality.[521]

The mortality of the stone-working populations of Langton Matravers and Swanage, including wives and children, is measured utilising a database of individual life histories derived from census and ecclesiastical burial register data. A two-state model is applied to this data to produce estimated age-specific death rates (ASDRs). These ASDRs were then used to construct life tables for the stone workers and other occupational groups within the two parishes. The results of this exercise are discussed first in the context of general levels of mortality prevailing in the area surrounding the Isle of Purbeck. Discussion then focuses on differences between the mortality of stone workers and other occupational groups living in Langton Matravers and Swanage. The results reveal that the mortality characteristics of the Purbeck stone workers are not the same as those of other groups of miners, and some possible reasons for this are proposed.

By the middle of the 19th century stone working was concentrated almost entirely in the parishes of Swanage and Langton Matravers (with a smaller number of quarries in the neighbouring parish of Worth Matravers). The occupational structure of the three parishes in 1851 is outlined below. Table 8.1 reveals that in Swanage and Langton Matravers stone workers formed more than one in three of all occupied adult males, and in Worth Matravers about one in five. In Swanage the most common other occupational group was 'trades and crafts' reflecting its status as a small town. Langton and Worth Matravers were both agricultural villages as well as stone parishes, and in Worth Matravers 'farm workers' formed the largest single occupational group.

[521] M. Edgar and A. Hinde, 'The stone workers of Purbeck', *Rural History* 10 (1999), 75-90.

Table 8.1 Occupational structure of stone-working parishes in the Isle of Purbeck, 1851

Occupational group	Percentage of those stated to be employed		
	Swanage	Langton Matravers	Worth Matravers
Farmers	1	3	5
Farm workers	8	24	41
Trades and crafts	28	16	11
Maritime occupations	5	0	12
Professionals	5	3	3
Servants	10	10	6
Stone workers	36	42	22
Others	2	3	1
Total number employed	807	309	143
Employed as a percentage of whole population	39.6	40.8	36.7

Notes: 'Maritime occupations' include coast guards who were employed against smugglers. 'Professionals' include landowners and other wealthy or educated persons.

Source: Census enumerators' books, 1851, The National Archives HO107/1856.

Data and methods

The analysis that follows calculates age-specific death rates (ASDRs) for the stone-working population and for other occupational groups in Purbeck. For the reasons outlined above, the mortality rates among infants and children, and among adult males, are the main focus of enquiry. Using the information about occupation and relationship within the household recorded in the CEBs it is a relatively straightforward matter to identify adult stone workers and their children. Because of the hereditary nature of recruitment to the stone trade, occupational mobility between it and other occupations was rare.

In order to estimate ASDRs two sets of data are required: information about deaths (classified by the age at death), and the population exposed to the risk of dying.

Unfortunately, access to civil death registers of deaths in England and Wales is not possible.[522] Consequently, we have to rely on the Church of England burial registers for data on deaths. The accuracy of the estimated ASDRs therefore depends on the accuracy of the burial registers, that is, how comprehensive they are in terms of the registration of deaths. However, with the civil registers unavailable there is nothing against which this can be assessed. It appears that only one study, of a parish in Wales, has been able to cross-check ecclesiastical burial registers against civil death registration.[523] The results of this work suggest that Church of England burial registers were substantially more complete as a record of deaths than the Church of England baptism registers were as a record of births.

Although far from ideal, this does provides an indirect way of assessing the completeness of burial registration, as there *is* a benchmark against which the completeness of baptism registration can be measured. The CEBs record an individual's age and place of birth. They can therefore be used to identify all those persons born in a particular parish, and their approximate dates of birth. The baptism register can then be searched to establish what proportion of those identified was also recorded in the baptism register. This exercise was undertaken for the parishes of Langton Matravers and Swanage for each of the decades 1841-51 to 1881-91. The baptism registers were searched for all those recorded in the CEBs at the end of each decade as being aged ten years or under, and born in one of the two parishes. For Langton Matravers the proportion successfully matched to entries in the baptism register ranges from 59 per cent in the decade 1881-91 to 80 per cent in the decade 1861-71. For Swanage the proportions are lower, ranging from 57 per cent in 1851-61 to only 33 per cent in 1871-81.

The Welsh evidence cited above suggests that burial registers are likely to be substantially more comprehensive in their coverage than are baptism registers. On that basis, it seems reasonable to conclude from these figures that the Church of England burial registers for

[522] Access to individual death certificates is permitted. However, the names of the deceased must be specified in advance and a charge is incurred for each certificate examined. This makes it impossible to gain access to large numbers of death records classified on the basis of, say, place and period of death.

[523] H.R. Davies, 'Nominal record linkage of historical data: procedure and applications in a North Wales parish', (unpublished PhD thesis, University of Southampton, United Kingdom, 1993).

Langton Matravers probably constitute a fairly complete record of deaths. It seems likely, however, that the Swanage register probably omit a proportion of deaths. Although the latter is unfortunate, it should not affect the validity of the analysis that follows. The comparison of the mortality of the stone workers in Swanage with that of other occupational groups will not be compromised by the under-registration of deaths provided that the proportion of deaths omitted did not vary by occupation. There is no reason to suppose that this was the case.

A combination of individual-level census data from the CEBs and information about births drawn from the Church of England baptism registers were used to estimate the population exposed to risk. The CEBs used were those for the five censuses of 1851, 1861, 1871, 1881 and 1891.[524] The baptism registers contain the date of baptism and the occupation of the father of the child being baptised. Only rarely do they contain an actual date of birth. Where they did give a date of birth it was used; otherwise date of birth was inferred from the baptism date (most baptisms in England in the second half of nineteenth-century England took place within three months of birth), supplemented by data from the CEBs on age and place of birth. The baptism registers normally stated the age of the child being baptised if the child was not an infant.[525] The definition of 'infant' used here is a child less than one year of age.

Birth, then, is inferred from an entry in the Church of England baptism register or from the age and place data contained in the CEBs. Regrettably, as is noted above, the baptism registers do not constitute anything like a complete record of births. Several factors may affect the completeness of baptismal registration in any particular parish. Some children, for instance, were simply never baptised. In some cases it may have been that children were baptised in a parish other than the one in which they lived. Perhaps more common, however, the growth on Nonconformity during the nineteenth century meant that many

[524] The CEBs are also available for 1841, but the information on occupation is less detailed, and there is no information on relationships within the household. They are also now available for 1901, but because of a 100-year closure rule the 1901 census enumerators' books were not available when I began this research. The 100-year closure rule means that no individual-level data are yet available for censuses after 1901.

[525] See S. Dewhurst and A. Hinde, 'Age at baptism in rural Hampshire in the second half of the nineteenth century', *Local Population Studies* 57 (1996), 72-75.

children were baptised into churches other than the Church of England, although the scale of this would vary geographically. Of course, many of those children not recorded in the baptism register show up in the next census (or in the burial register).

Death is considered to have occurred when an individual has an entry in the Church of England burial register. It is generally accepted that, on the whole, the Church of England burial registers are a much more complete record of deaths than the baptism registers are of births. However, having said that, under-registration of deaths is not uncommon (as is suspected to have occurred in Swanage). Again, the scale of any deficiencies will vary from parish to parish. There are perhaps two main reasons why a person's death did not result in an entry in the Church of England burial register for the parish in which they died. Firstly, although a person may have lived and died in a parish, his or her body could have been taken elsewhere for burial. Secondly, in some places, individuals could be buried in cemeteries or burial grounds belonging to denominations other than the Church of England. Unfortunately, the technique used in this study of mortality will assume that any person to whom either of the above circumstances applies has out-migrated, as he or she will not be observed in the burial register or the next census.

A further issue that could affect both the baptism and burial registers is that of poor record-keeping. Not all parish priests and curates were as conscientious as the might have been. Obviously, persons omitted from the registers for the reasons outlined above were not considered by the linkage routines that defined the population at risk in this study. However, that should not matter in this instance as long as none of the deficiencies vary by occupation, and there is no reason to suppose that they do so in Langton Matravers and Swanage.

Estimation of age-specific death rates.

The method used to estimate mortality is a two-state model. Here I gratefully acknowledge the invaluable assistance of Dr P.R.A. Hinde, Division of Social Statistics, School of Social Sciences, University of Southampton, who not only introduced me to the

two-state model, but very kindly undertook the statistical analysis from which the tables that follow are derived.[526] In this model there are only two possible states that an individual can occupy: 'alive' and 'dead', and there is only one possible transition (which occurs when a person dies). Before the model can be applied, the population under investigation has to be divided into suitable age groups. Age-specific death rates (ASDRs) are then estimated separately for each age group. For each age group the quantity ${}_nq_x$ is estimated, which is the probability that an individual aged exactly x years will die before exact age $x+n$.

The technical details of the estimation are presented in Appendix Four. However, in summary, separate investigations are conducted for each intercensal decade from 1851 to 1891. The analysis is confined to the parishes of Langton Matravers and Swanage, as the population of Worth Matravers was too small to provide statistically viable figures. The population at risk was identified in three stages. The first of these utilized the links generated during the first phase of the development of the linkage database described in Chapter 6. These links were established by executing a series of queries, derived from nominal record linkage algorithms, which linked together individuals recorded in the separate census and parish register tables. The resulting record-pairs were then subjected to an on-screen manual review process and confirmed or rejected as appropriate. In order to maximise the information available for validation purposes during the manual review, the potential matches were reviewed in the context of the household or co-residing group (CRG) within which each person lived. A useful consequence of conducting the manual review in this fashion was that the CRG information enabled the identification of a considerable number of additional links that had been missed by the automated procedure.

The automated linkage algorithms were, however, applied solely to list-unique records. As a consequence, a large number of records were inevitably excluded from the initial automated linkage exercise. While many of these were subsequently accounted for (and

[526] Parts of this chapter have also been presented as a paper: Andrew Hinde and Michael Edgar, 'Death on a strange isle: the mortality of the stone workers of Purbeck in the nineteenth century', paper presented to the Family and Demography Panel of the European Social Science History Conference, Amsterdam, 22-25 March 2006.

linked) during the manual review process, it was likely that some links remained to be found. Two additional linkage procedures were therefore undertaken. Firstly, for each table pairing used in the mortality analysis, a query that matched on a combination of Standard Forename, Standard Surname, Sex, and Year of Birth (plus or minus five years) was run. Records that had already been linked were excluded from consideration by the query. As it was applied to *all* previously unlinked records, rather than simply to list-unique records, the query generated a large number of potential matches and cross-matches. However, including the sex of the individual and his or her year of birth (plus or minus five years to counter some of the vagaries of nineteenth-century age-reporting) kept these to a manageable number. The potential matches were then subjected to the same manual review procedure used in the initial linkage of list-unique records. Many of the proposed matches were clearly spurious, and were quickly rejected. Following completion of the manual review, a second query was run, this time confined to Standard Forename, Sex and Year of Birth (plus or minus five years). Again, records that had been linked previously were excluded. The resulting potential matches were also put through the manual review procedure. Between them, these two supplementary queries yielded a substantial number of additional links.

For each decade, the matches generated during the three linkage exercises described above were used to identify those individuals in the first census who were linked to either the burial register (in the case of those who had died within the decade) or the subsequent census (in the case of those who survived). Persons who were not linked to either the burial register or the succeeding census were assumed to have out-migrated at some point during the decade, and before their death. Babies born during the decade (inferred from entries in the baptism register) and who were linked to either the burial register or the census following their birth were also extracted. Again, those children who were not linked to either source were assumed to have out-migrated before the next census and before their death.

These linkages produced a dataset from which it was possible to derive a period of observation for each person for each decade. Each period of observation began either at birth or with the initial census, and ended either with death, the subsequent census, or the

assumed date of out-migration. For the census-to-census linkage, the out-migration was assumed to have occurred three years after the date of the initial census. Three years after the date of the initial census was used in preference to five years (the mid-point between the two census dates) for two reasons. First, individuals whose observation is terminated by out-migration rather than death are known to have left before their death. As a consequence, their true dates of out-migration will tend to be shifted to an earlier period within the decade. Second, the 'mover-stayer' hypothesis suggests that populations can be divided into two groups – highly mobile 'movers' who migrate frequently, and 'stayers' who remain in the same place for many years. If such a sub-division of the population is valid, the majority of those assumed to have out-migrated will belong to the 'movers' category and are therefore likely to have left quite soon after the initial census was taken. For the birth to census linkage, the date of out-migration was assumed to be half-way between the date of birth and the date of the subsequent census. Having established the initial period of observation, it was then divided into a framework of shorter periods corresponding to time spent in one of the age groups used in the analysis. The age-groups utilised were: under 1 year, 1-4 years last birthday, 5-9 years last birthday, five-year age groups up to 85-89 years last birthday, and 90 years and over.

It may be useful to illustrate this, using the example of a baby born on 1 January 1856, who was enumerated in the 1861 census (taken on 7 April). During the decade 1851-1861 this child will contribute 12 months exposure in the age group 'under 1 year' (the period from 1 January 1856 until 1 January 1857), four years of exposure in the age-group '1-4 years last birthday' (from 1 January 1857 until 1 January 1861) and approximately three months in the age group '5-9 years last birthday' (from 1 January 1861 until 7 April 1861).

The record linkage, and hence the calculation of the periods of observation for reach person, were carried out separately for each decade. The resulting data were then pooled across the four decades from 1851-1891 in order to increase the number of person-years exposed-to-risk in each age-group. This produces a series of periods of observation classified by age, corresponding to the time each individual lived in the parish between 1851 and 1891. The technique does, however, miss certain periods of observation. Individuals who in-migrate from elsewhere are not observed until the first census

following their arrival. Consequently those who in-migrate and then die before the census is taken are not observed at all. The same applies to the unknown numbers of people who in-migrated and then out-migrated before the next census. These omissions will inevitably impart some bias to the estimates of the ASDRs, though the biases will almost certainly be small and cancel each other out to some extent. Specifically, the omission of the period of exposed-to-risk among in-migrants prior to the census following their date of in-migration means that the ASDRs will be over-estimated, because none of the relevant persons can have died during the omitted exposed-to-risk period. Conversely, the omission of the exposed-to-risk period for those who in-migrated and died before the subsequent census will result in the ASDRs being under-estimated. In principle, a more comprehensive record-linkage exercise that considered the whole 40-year period at the same time, could allow the incorporation of some of the omitted periods, albeit at a considerable cost in terms of time and effort.

Separate record linkage exercises, and therefore the estimation of ADSRs, were undertaken for the parishes of Langton Matravers and Swanage. Once the estimates of ${}_nq_x$ were obtained for all age-groups, they were used to estimate the expectation of life at birth by calculating a life table. Having estimated the expectations of life at birth in the two parishes of Langton Matravers and Swanage, they were compared with those calculated using aggregate civil registration data on deaths for the Wareham registration district in which the Isle of Purbeck is located.[527] A life table was also constructed using aggregate civil registration data on deaths for the Wareham registration district, of which Purbeck formed part. The registration district (RD) is the smallest geographical extent for which aggregate data on deaths, classified by age and sex, are published. Wareham registration district included the whole of the Isle of Purbeck, together with a portion of the county of Dorset around the market town of Wareham, just to the north of Purbeck.

[527] The method used to estimate the life table is described in A. Hinde, *Demographic methods* (London, Arnold, 1998), 30-34.

Results

In the Wareham RD during the decades between 1851 and 1891, the expectation of life for the sexes combined increased from 47 years to 53 years. On average females lived for 2-3 years longer than did males.

Table 8.2 Expectations of life at birth in Wareham registration district (RD) compared with the parishes of Langton Matravers and Swanage

	Expectation of life at birth		
Decade	Wareham RD	Langton Matravers	Swanage
Both sexes			
1851-1861	47.1		
1861-1871	50.2	51.8	56.0
1871-1881	52.0		
1881-1891	52.9		
Males			
1851-1861	47.0		
1861-1871	49.1	49.8	53.9
1871-1881			
1881-1891	51.5		
Females			
1851-1861	47.3		
1861-1871	51.4	53.6	57.6
1871-1881			
1881-1891	54.3		

Note: For the decade 1871-1881, deaths were not tabulated separately for males and females for the Wareham registration district.

Source: Wareham RD figures calculated from data in the decennial *Supplements* to the Registrar General's *Annual reports*. See R. Woods, *Causes of death in England and Wales, 1851-60 to 1891-1900: the decennial supplements* [computer file] (Colchester, UK Data Archive [distributor], 1997), SN 3552. This is available from the UK Data Archive at the University of Essex (www.data-archive.ac.uk).

As Table 8.2 shows, the pooled results for the period 1851-1891 for the parish of Langton Matravers are very close to the average expectation of life in Wareham RD for both males and females. The estimated expectations of life at birth for Swanage, however, are higher than those in Wareham RD. It seems unlikely that mortality was lower in Swanage than in Langton Matravers, and the explanation for this apparent disparity probably lies with the less complete registration of burials in Swanage, mooted earlier in this chapter. Incomplete registration of burials would result in the omission of a proportion of deaths, a downward bias in the estimated ASDRs, and hence an upward bias in the expectation of life. In Langton Matravers, where the tentative conclusion was that the burial register probably comprised an almost complete record of deaths, the congruence with the Wareham RD figures is reassuring. On this basis, therefore, it seems reasonable to conclude that in terms of the expectation of life at birth there is no evidence that overall mortality in the two stone-working parishes was higher than in Wareham RD as a whole.

The population of Swanage is large enough to allow the estimation of separate life tables for stone workers and others. In order that large enough numbers were available for valid statistical analysis, it was decided to compare stone workers with those engaged in other manual occupations (that is, excluding 'middle class' occupations).

Table 8.3 Expectations of life at birth for stone workers and others in Swanage, 1851-1891

	Expectation of life at birth		
	Whole population	Stone workers	'Non-stone' manual workers
Both sexes	56.0	52.9	54.2
Males	53.9	47.9	51.3
Females	57.6	57.8	56.8

Note: 'Non-stone' manual workers included all other occupied persons except for professionals, farmers, those engaged in occupations requiring educational qualifications, and those in trades and crafts who were employers.

Table 8.3 shows that, as might be expected, the expectation of life at birth for both stone workers and those engaged in manual occupations was lower than that in the population as a whole. Stone workers also had slightly higher mortality than other manual workers. However, the main difference between stone workers and others is found in a marked differential between males and females. Females in stone-working families could expect to live an average of almost ten years longer than their male relatives, whereas for other manual workers the sex differential in the expectation of life at birth was only 5.5 years. The main reason for the difference was the higher mortality of male members of the stone-working population, whose expectation of life at birth was just under 48 years.

The immediate thought was that this excess male mortality among the stone workers in Swanage resulted from the hazardous nature of their work. Contemporaries certainly considered it to be a dangerous occupation. There are a number of entries in the parish burial registers for both Langton Matravers and Swanage indicating that individual deaths were the result of accidents in the stone 'mines'. In order to confirm or deny this hypothesis the occupation-specific life tables for Swanage were used to estimate the probability that a male aged 15 years would still be alive on his 50th birthday. If working in the stone quarries *was* particularly hazardous, it would be reasonable to expect this probability to be lower for stone workers than for other occupations. In fact this is not the case. The chance of surviving from age 15 to age 50 for men was identical for stone workers and other manual workers at 79 per cent, and just a touch higher than that for the population as a whole (78 per cent). Adult male mortality among stone workers was no higher than it was among the population as a whole. It seems, therefore, that contemporary perceptions that stone working was a particularly hazardous occupation were misplaced or over-stated.

Turning to the analysis of infant and child mortality, Table 8.4 compares infant mortality in Wareham RD and the two stone-working parishes of Langton Matravers and Swanage.

Table 8.4 Infant mortality (deaths under 1 year per 1,000 live births): Wareham registration district (RD) and the two stone parishes compared

	Infant mortality rate		
Population and period	Both sexes	Males	Females
Wareham RD			
1861-1871	106	122	89
1871-1881	102		
1881-1891	101	111	90
Langton Matravers 1851-1891	116	120	112
Swanage 1851-1891	92	102	83
Children of stone workers in Swanage	129	173	85
Children of 'non-stone' manual workers in Swanage	89	76	102

Note: For the decade 1851-1861 deaths at ages under one year were not tabulated separately for Wareham RD. For the decade 1871-1881, deaths were not tabulated separately for males and females.

Source: Wareham RD figures calculated from data in the decennial Supplements to the Registrar General's Annual reports. See R. Woods, Causes of death in England and Wales, 1851-60 to 1891-1900: the decennial supplements [computer file] (Colchester, UK Data Archive [distributor], 1997), SN 3552. This is available from the UK Data Archive at the University of Essex (www.data-archive.ac.uk).

A little over ten per cent of the babies born in the Wareham RD between 1861 and 1891 failed to survive until their first birthday. The results for infant mortality in the two stone parishes between 1851 and 1891 are mixed. At Langton Matravers the figures suggest that infant mortality was somewhat higher than in the Wareham RD. Those for Swanage, on the other hand, indicate rather lower infant mortality than that experienced in the RD as a whole. However, the Swanage figures should be interpreted with some caution, as it is likely that the burial register there is not a comprehensive record of deaths.

Table 8.4 also records separate estimated infant mortality rates for the children of stone workers and 'non-stone' manual workers in Swanage. These figures are striking. Infant mortality amongst all children of stone workers is 129 per thousand, more than one third higher than that among the population as a whole. This excess mortality, however, is

entirely among males, whose infant mortality rate is 173 per thousand. A similar pattern is apparent in the figures for child mortality (deaths at ages 1-5 years per thousand survivors to exact age one year), as Table 8.5 illustrates.

Table 8.5 Child mortality (deaths under 5 years per 1,000 survivors to exact age 1 year): Wareham registration district (RD) and the two stone parishes compared

	Child mortality rate		
Population and period	Both sexes	Males	Females
Wareham RD			
1861-1871	74	76	72
1871-1881			62
1881-1891	60	68	52
Langton Matravers 1851-1891	52	59	45
Swanage 1851-1891	39	39	39
Children of stone workers in Swanage	57	69	46
Children of 'non-stone' manual workers in Swanage	33	21	47

Notes: For the decade 1851-1861 deaths at ages under one year were not tabulated separately for Wareham RD. For the decade 1871-1881, deaths were not tabulated separately for males and females.

Source: Wareham RD figures calculated from data in the decennial *Supplements* to the Registrar General's *Annual reports*. See R. Woods, *Causes of death in England and Wales, 1851-60 to 1891-1900: the decennial supplements* [computer file] (Colchester, UK Data Archive [distributor], 1997), SN 3552. This is available from the UK Data Archive at the University of Essex (www.data-archive.ac.uk).

The death rate in this age group is lower in the two Purbeck parishes than in the Wareham RD as a whole, but as expected is again higher in Langton Matravers than in Swanage. Turning to the children of stone workers in Swanage, their rates are substantially higher than those for the parish population as a whole, and markedly higher than those for the children of 'non-stone' manual workers. The most significant differential, however, is between males and females, where male mortality at 69 per thousand is 50 per cent higher than the 46 per thousand recorded for female mortality. It seems clear from this that the reason for the excess mortality of male stone workers in Swanage lies with the sons of

stone workers. They have much higher mortality in infancy and childhood than do boys in the population as a whole, or, indeed, the daughters of stone workers.

The question then arises as to whether this difference between the mortality experienced by the male offspring of stone workers and other male children is statistically significant. The method detailed in Appendix 4 enables the estimation of 95 per cent confidence intervals around the estimates of infant and child mortality among the sons of stone workers and 'non-stone' manual workers. For infant mortality, these are 125 - 217 deaths per thousand births for the sons of stone workers, and 37 – 114 for the sons of 'non-stone' manual workers. Since these do not overlap, the conclusion is that the difference between the infant mortality of male children between these two groups is statistically significant. The 95 per cent confidence intervals for the number of deaths before exact age five years per thousand survivors to exact age one year is 39 – 99 for the sons of stone workers, and 4 – 39 for the sons of 'non-stone' manual workers. Again, the fact that there is no overlap suggests a statistically significant difference.

Conclusion

The substantive results of this analysis are somewhat unexpected and a not little puzzling. As was noted earlier in this chapter, the Purbeck stone quarries were in effect stone 'mines'. It would not be unreasonable to expect, therefore, that the mortality characteristics of the Purbeck stone quarriers would echo those experienced by other groups of miners elsewhere in England and Wales. However, the analysis undertaken here suggests that they apparently did not experience heavier mortality on account of occupational hazards. It might have been expected that deaths from accidents and, in the longer term, the effects of dust inhalation to have affected the mortality of stone workers rather more than they appear to have done so. The reasons for this are not clear, but it is possible to suggest some factors that may have affected the issue. These include the scale of the quarry workings, the environment underground, and the dual roles of quarrier and stone mason adopted by many of those working in the Purbeck quarries. As Chapter 4 makes clear, the Purbeck quarries were small, family-operated concerns. Most of these probably only employed two or three men underground at any one time. This is a very different kind of enterprise to, for instance, large coal mines, where hundreds of men could be working underground. Similarly, although digging the stone generated a lot of dust, especially in the summer, it would not have been as severe as the huge quantities of dust

generated in other forms of mining. Nor was there any risk of gas and/or explosion in the Purbeck quarries, and therefore nothing like the sudden mass deaths that occurred in coal mining areas. The majority of Purbeck's stone workers probably worked as stone masons, shaping the quarried stone into whatever form was required. Like the quarrying itself, this generated large amounts of dust. However, the stone masons normally worked either out in the open air or in three-sided shelters built close to the quarry shafts. It may be, therefore, that the sea-breeze substantially mitigated the potentially deleterious effects of dust on the stone workers.

With regard to sudden physical trauma or death, it is possible that injuries were more common than deaths. Quarrying the stone was undoubtedly dangerous work, and a number of work-related deaths were recorded in the burial registers. However, those entries may have been made because such deaths were relatively unusual and thus noteworthy. Given the nature of the work involved it is feasible that injuries to limbs and eyes were more common than deaths. Thousands of tons of stone were being quarried by hand and moved around in essentially manual operations. It would be surprising if hands and feet in particular did not suffer somewhat. The large blocks of quarried stone were split down using hammers and iron wedges before being worked with hammer and chisel. Flying chips of stone must presumably have posed a constant threat to the eyes of those engaged in these activities. Unfortunately there is no way of knowing the scale of injuries as opposed to deaths, but it does seem to offer a potential explanation for the apparent lack of excess deaths among the stone workers. Of course, it should be remembered that, important though the working environment was, it was not the only factor acting on the mortality experience of adult males. As Robert Woods puts it, 'the mortality experienced by adult men grouped in terms of occupation reflects far more than just the risks that are particular to that occupation.'[528]

By far the outstanding feature of the latter's mortality was the high death rate among male infants and young children, and it is difficult to find any convincing explanation for this phenomenon. Environmental factors are commonly cited to explain the high mortality of coal miners' children. However, such explanations do not seem plausible in this context, because if they were an issue one would not expect to see the large sex-differential evident

[528] Woods, *Demography*, 239-240.

in Purbeck. Nor is there any reason to suppose that the stone workers preferred daughters to sons and consequently treated them differently. Indeed, given that entry into the stone trade was hereditary through the male line and the quarries were operated mainly with family labour, it would not be unreasonable to assume that stone-working families valued their male children. Moreover, evidence of differential treatment of male and female offspring in nineteenth-century England is almost non-existent.[529]

It is possible that genetic factors were responsible. On the other hand, most life-threatening genetic disorders that affect males (for example, haemophilia) are passed to sons through their mothers. The evidence from Langton Matravers, however, is that the mothers of stone workers were not drawn from a closed population.[530] Analysis of the occupational information in the Swanage marriage register has not been undertaken, so it is possible that in Swanage (where the evidence for excess infant and child mortality is clearest) there was a tendency for in-marriage within the stone-working population.[531] On the other hand, there is no reason to think that the marriage behaviour of the Swanage stone workers differed from that of the Langton Matravers men. There was a good deal of contact between the two parishes – social and work-related – and the stone industry was effectively a single organisation.

Although male stone workers were descended through many generations from a relatively small number of men, few genetic disorders are passed down through the male line. The few disorders stemming from Y-chromosome defects, which clearly only affect males, are mainly related to male infertility, and therefore not life-threatening. A lengthy search in the local history archives has failed to identify any contemporary reference to the high mortality of the male children of stone workers in Swanage in the second half of the nineteenth century. There does not appear to be anything in the secondary literature either. However, it may be worth conducting another search to try and shed more light on this issue.

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[529] For a good summary of this issue see B. Harris, 'Gender, health and welfare in England and Wales during industrialisation', paper presented to the European Social Science History Conference, Amsterdam, 22-26 March 2006.

[530] Edgar and Hinde, 'The stone workers of Purbeck', 84-85.

[531] Another potential topic for future research might be to look at whether the excess mortality was concentrated in particular families.

Chapter Nine

Conclusion

This work has set out to critically examine a number of commonly held perceptions regarding the occupational structure of rural England in the nineteenth century; in particular, it explores the notion of 'occupational community' which has been used to describe rural villages in England in the mid-nineteenth century.

Howard Newby argues that by the middle of the nineteenth century the vast majority of rural villages in England had become 'occupational communities'. There are two main strands to this characterisation. The first is that the economies of English rural villages were, with a few exceptions, overwhelmingly dependent on a single industry by 1850, namely farming. Secondly, as a consequence, social relations in the countryside were defined exclusively on the basis of occupational hierarchies and relationships within agriculture – specifically, the classic tripartite structure of landowner, tenant farmer and landless agricultural labourer. Newby suggests that two main factors were responsible for the evolution of rural villages into agricultural occupational communities. The first of these is that most of the small-scale manufacturing and domestic handicraft production which historically had been located in rural villages had been superseded by factory-based production in urban areas. Secondly, by mid-century, agriculture itself had developed into a fully-commercialized industry, epitomized by the so-called 'High Farming' period that spanned, roughly, the years between 1850 and 1875. We have a view, then, of the English countryside as being essentially devoid of industry and populated by landowners and those engaged in agriculture, leavened with a few tradesmen and craftsmen who serviced their immediate needs. This account encapsulates many common perceptions of what rural England was like at this time. However, is it an accurate one? To what extent does it reflect the reality of life in the English countryside after 1850?

Both strands of Newby's conceptualisation are open to question on a number of counts. Newby's own empirical work on East Anglia appears, in large part, to be the foundation on which his ideas about occupational community are built. East Anglia is, of course, the region of England where agriculture was perhaps at its most developed in the nineteenth century. Unfortunately he seems to have abstracted from parts of East Anglia to the

country as a whole. He does concede that in a few places non-agricultural industries did survive in a rural setting, and that mining and quarrying were important in some places. However, he clearly underestimates the extent to which primary industries such as fishing, forestry, mining and quarrying co-existed with agriculture in many localities. In addition, although a considerable proportion of rural industrial production had moved to factories in urban areas by 1851, not all had done so by any means. There is also evidence that some rural villages possessed their own highly localised micro-industries. These are rarely, if ever, mentioned in the literature. In a relatively small corner of north Dorset in 1851, for example, groups of plasterers, sawyers and the workforce of a brick, tile and pottery manufacturer all feature in the CEBs of small rural villages. There is no reason to suppose that these villages were atypical in any way, which suggests that similar small-scale enterprises are likely to have existed elsewhere in the country. Also effectively ignored are the many secondary activities, frequently female by-employments, which supplemented agriculture in many rural areas. Some of the better-known examples of such industries are lace-making in Devon, gloving in Somerset, and straw-plaiting in the Home Counties. Again, there was almost certainly much more female employment of this kind than the literature recognises. Hundreds of female glovers are recorded in the CEBs of villages in north Dorset in 1851. Presumably these women and girls were out-workers for the Somerset gloving industry, but they are not mentioned anywhere in the literature. Indeed, there is strong evidence that much work by females was not even recorded in the censuses, either because it was seasonal or because it was considered to be peripheral.

These examples are, of course, very localised in nature. The Gatley database was therefore utilised to gain a sense of the scale of non-agricultural employment in rural areas at the national level. Because the recording of female employment in the censuses is recognised to have been deficient, the analysis is based on the data for employed males aged twenty years and over. The proportion of males aged 20+ who were employed as farm workers ranged from less than one per cent in parts of London, to seventy-seven per cent at Hoo in Kent. Almost forty-five per cent of all the registration districts in England and Wales had less than forty per cent of their employed adult males working in agriculture. In a further thirty-seven per cent of registration districts the agricultural workforce was between forty and sixty percent of the total. The proportion of registration districts with more than sixty per cent of adult males employed in farming was a touch over eighteen per cent. It is clear

from these figures that non-agricultural elements were a sizeable component of the employment structure in many areas.

Closer analysis of the data reinforces this point. A large number of registration districts combined proportions engaged in agriculture of less than fifty per cent with a population of less than one person per hectare. We can assume from this, with a reasonable degree of certainty, that employment in such areas was not based solely on agriculture, while their population density suggests that they were not urban areas. In fact, a significant majority of registration districts whose population density was under one person per hectare had between ten and forty per cent of their adult male working population engaged in manufacturing of some kinds. Clearly, then, a substantial amount of manufacturing activity was still being undertaken outside large urban centres in 1861.

However, these figures do not take into account variations in population size between registration districts. Although a majority of registration districts possessed a substantial manufacturing sector, they might account for a much smaller proportion of total manufacturing employment if the populations of rural registration districts were markedly smaller than urban ones. Indeed, looking at the share of total employment in England and Wales in selected occupational groups in registration districts of different ranges of population density does modify the picture somewhat. Slightly less than twenty per cent of those males engaged in manufacturing lived in registration districts with a population density of less than one person per hectare, as did a quarter of those working in quarrying and mining. There can be little doubt, therefore, that the English countryside was not, in fact, the sole preserve of the farmer and agricultural labourer. There will have been regional variations, but a significant minority of rural parishes must have retained some kind of non-agricultural activity even after agriculture moved into its High Farming phase.

In emphasizing the landowner-tenant farmer-agricultural labourer model of rural society, Newby, in common with many commentators, also ignores the many small farmers who continued to survive in large numbers across the country. For example, as late as 1880, more than seventy per cent of agricultural holdings were less than fifty acres in size. Most of these small farms employed family labour and, in many instances, operated a number of strategies, not exclusively agricultural in nature, in order to make a living. Indeed, they appear to have been quite successful in their efforts, as farm size distribution remained

remarkably constant for over a century after 1851. They tend to be disregarded, perhaps, because although they were numerous the total acreage that they farmed was relatively small. However, with their families, they were a substantial population and an important contributor to rural society. Their survival also points to agriculture not being the fully commercialized capitalist enterprise which Newby suggests was in place by 1850.

In fact, I would argue that the case that farming generally espoused capitalist principles of profit and loss by 1850 very much remains to be made. Agricultural productivity certainly increased markedly during the nineteenth century. Some of this was due to improvements in agricultural methods, but additional land was also brought into cultivation. Moreover, a rapidly rising population, especially in the increasingly prosperous urban areas, meant that demand (and therefore prices) remained buoyant. There was little foreign competition at this time and continuing over-population in the countryside meant that labour was plentiful and relatively cheap (compared to industrial areas). In these circumstances it would be remarkable if farmers were *not* making a great deal of money during the so-called High Farming period. However, the fact that farmers *were*, on the whole, making a lot of money does not mean that agriculture had necessarily become a fully commercialized industry. Indeed, there is considerable evidence to the contrary. The pre-occupation of many farmers with image and social status is well documented. Similarly, while traditional rural paternalism may have been on the wane, it was far from dead. Farmers were also notoriously poor book-keepers and many, including those from East Anglia where agriculture was probably at its most industrial, had little idea of whether they had actually made a profit or not in any given year. It is also generally accepted (by Newby amongst others) that farmers, on the whole, displayed little in the way of entrepreneurial spirit.

The ineffectual response of many farmers to the agricultural depression that began in the mid-1870s serves, I suggest, to reinforce this interpretation. No doubt farming had become more business-oriented during the first half of the nineteenth century. However, it seems unlikely that the process was anything like complete by 1850, as Newby proposes. Indeed, it is more plausible that the main catalyst for change in this direction was the depression that hit agriculture so hard in the 1870s. High demand and high prices during the High Farming period arguably insulated farmers against competition, to a large degree. There was therefore no particular pressure on most farmers to pursue a wholly rational capitalist system of agriculture founded on profit and loss. Despite high rents, it was possible to

accrue substantial profits relatively easily, which allowed many farmers to indulge their fascination with image and status, to ape the gentry, to behave paternally towards their labourers if they were so minded. The shock of the recession in agriculture and its depth, especially in arable areas, forced farmers to become much more business-like in their operations or face going out of business (which many did). Over the next twenty years this manifested itself, for example, in the increased use of machinery on farms. As the depression fuelled the pace of out-migration from rural areas, farmers lost the large reserve of underemployed cheap labour (who had frequently been opposed to mechanisation) that had contributed so handsomely to farmers' profits in the High Farming days.

The last quarter of the nineteenth century also saw much (though by no means all) of the remaining rural industry succumb to competition from foreign imports and domestic factory-based production. By the end of the nineteenth century, therefore, it is likely that the majority of rural villages *were*, on the whole, occupational communities as defined by Newby. Although he is surely correct in arguing for the development of this phenomenon, it seems clear that in many areas their evolution was much slower than he proposes. There must be serious doubt as to whether the agricultural occupational community was genuinely ubiquitous in rural England by 1850. Indeed, it is probable that many villages became true agricultural communities *after* the High Farming period drew to a close. The major stimuli for this transition being the harsh realities of prolonged agricultural depression, especially in the arable sector, the sustained out-migration of surplus labour, and the continued urbanisation of manufacturing industry.

In Newby's notion of the occupational community, the term 'community' is clearly meant to be synonymous with the population of a rural village. Such a usage is, of course, common and in this context the population of these villages comprised a community of people who depended entirely on farming for their livelihoods. This is straightforward enough. However, he also characterises rural communities as isolated and self-contained places, where local customs and traditions played an important role in providing villagers with a strong sense of identity and morality that helped to sustain them in their daily lives. This created a sense of place, both geographical and social, which was viewed and accepted as being the natural order of things. Newby perceives 'community' in nineteenth century rural England as revolving around social class relations and class conflict. He suggests that in most rural villages the core of the occupational community was a working-

class sub-culture that excluded those in authority. This sub-culture was sustained by the isolation of rural villages, close kinship links within villages, and the need for cooperation in times of family crisis. These conditions, in Newby's view, resulted in the nineteenth century village being a very close-knit society with a strong sense of group identity.

This conceptualisation is, I suggest, somewhat simplistic and dogmatic in nature, and its general validity open to question. The Gatley database indicates that the scale of non-agricultural employment in rural areas has commonly been considerably underestimated. Different occupations and work regimes stimulated quite specific cultures and behaviour patterns. Social and community structures were often markedly different in places where rural industries operated, as they were in mining and quarrying districts. Nor should it be forgotten that the agricultural workforce itself was not a homogenous group. Farming and its associated hiring practices varied enormously in different parts of the country, which produces a complex variety of experiences for those working on the land. Clearly, the lives of most people *were* largely structured by their relationship to social and economic power. However, this relationship was mediated through local circumstances and socio-economic systems and there is considerable evidence that the class and occupational structure of rural villages was much more finely nuanced than historians have generally allowed.

It does not seem unreasonable to suppose that the agricultural labouring population in many places possessed a strong group identity. However, is it appropriate to assume from this, as Newby appears to do, that they also constituted a 'close-knit' community? Unfortunately, 'community' is a notoriously difficult concept to pin down. Literally dozens of definitions have been proposed over the years. It generally appears to mean whatever the person using the term wants it to mean at a particular moment in time. Anthropologists and social scientists have expended considerable effort over many decades in attempting to resolve the issue, but with no great success. With a few honourable exceptions historians have been much less energetic and enterprising in this regard. Indeed, it appears to be almost an article of faith amongst many historians that rural villages in the nineteenth century represented some sort of communal nirvana, based on consensus and harmony, which has since been eroded by the pressures of modern life.

Such a view is a beguiling one. However, it rather ignores the vagaries of human nature, and evidence to sustain it is not easily found. In reality we know little about what the labouring population's sentiments of local and communal attachment were. Biographical or other sources that might illuminate the issue are rare. Consequently, it is all too easy to make inferences about neighbourly linkages, especially when there exists a strong feeling that close communal bonds *must* have existed. Conflict is generally acknowledged solely in terms of friction between the labouring population and farmers and landowners. Conflict within the labouring population is largely ignored, in part, perhaps, for reasons of dogma and partly because of a lack of source materials. However, much of the work of the church courts in the seventeenth and eighteenth centuries revolved around petty squabbles and disputes among the inhabitants of rural villages. There is no reason to suppose that their descendants in the nineteenth century were any more harmonious in their relations. Tension and conflict are surely a constant in any human society. To suggest otherwise is both unreasonable and unrealistic. No doubt many rural villages were close-knit communities, certainly compared to the present day. But, equally, it seems perfectly plausible to suggest that many were not particularly so. Unfortunately, 'close-knit', like 'community' itself, does not easily lend itself to empirical investigation.

The related suggestion that rural villages were 'isolated and self-contained' is, however, more amenable to empirical enquiry. A substantial corpus of work exists that examines population movement in the nineteenth century. This clearly shows that the movement of people was ubiquitous in most areas, though obviously there were local variations. Broadly speaking, this movement took two forms. Out-migration from the countryside towards urban areas was stimulated by the rapid growth in population that characterised the nineteenth century, as the land could only support a finite level of labour. However, there was also a huge amount of circulatory movement within local and regional areas. The scale of this movement within the countryside rather contradicts any assertion that rural villages in the nineteenth century (on the whole) were isolated and self-contained communities. For many places, if not most, change and external contact were a normal part of life, not an exception. One obvious corollary of this is that over time the internal homogeneity of any given community could change quite markedly, as families and individuals moved in and out. It also potentially modifies the notion that villages were generally close-knit communities founded on strong links of kinship. Networks of kin (and friends) must have extended over a much wider area than a single village or parish.

Overall, it is clear that change, movement and migration were just as significant a part of community life as was stability.

Notwithstanding the substantial criticisms that I have tendered concerning the detail of Howard Newby's concept of the 'occupational community', the concept itself is a plausible and interesting one. It is likely that during the second half of the nineteenth century, and especially towards the end, rural villages increasingly evolved into occupational communities dependent exclusively on farming for their livelihoods. But it is also clear that non-agricultural industries were more extensive in rural areas than has commonly been allowed. What was the situation in places where farming and a non-agricultural industry co-existed? Did villages with a dual economy possess two occupational communities? The three stone working parishes in the Isle of Purbeck, Dorset, with their significant agricultural sectors, offer an ideal opportunity to investigate whether this was indeed the case. Of course, the difficulty then is how 'community' is to be defined. Given the lack of any meaningful evidence about people's thoughts and sentiments, it seemed that the demographic characteristics of the two occupational groups might constitute an appropriate proxy. This does make a great deal of sense. Firstly, there is a considerable body of reasonably systematic and reliable evidence available in the form of parish registers and census enumerators' books. And, secondly, information relating to factors such as migration, mortality, fertility and nuptiality, in combination with social and economic evidence from other sources allows us to make deductions and inferences about how these populations were living their lives.

In order to achieve this goal the technique of community reconstruction has been utilised. This involved linking together as much information as possible about the people living in the three parishes of Langton Matravers, Worth Matravers and Swanage between 1841 and 1891. The prime sources are, of course, the parish registers and the census enumerators' books, although other records such as trade directories have also been utilised. The volume of data militated against doing the nominal record linkage by hand, so a computer database was developed to hold and link the various data files. Each separate source for each parish was transcribed into its own table within the database. As far as possible, the form of the original entry was preserved. Additional fields were then added for coding and standardisation of some variables in order to facilitate the linkage process. A series of algorithms were also devised which formed the basis for the queries that were run to link

the individuals in the various tables. The database is quite complex and it was rather time-consuming to set up and get working satisfactorily. However, once up and running it worked very well, producing a substantial number of potential links. The linkage process is not a fully automated one. From the outset it was felt that the vagaries of nineteenth century spellings and so on were such that it would not be possible to be confident in the accuracy and number of links generated by a fully automated matching process. The links generated by the algorithm queries are therefore subjected to manual review on screen, using forms designed for the purpose. This manual review procedure is accomplished quite quickly and did in fact find that that a large number of false matches had been made during the automated linkage phase. Notwithstanding these false matches, the automated linkage routines did produce a substantial core of valid matches. These were supplemented by manual matching using the on-screen forms designed for the review process, as these display details of all the persons living in the same household as each potential match. Further variations of the algorithms can also be run to find additional matches. Overall, this combination of computer and manual review works very well and is, I feel confident, more effective and produced a better linkage than either process would have done on its own. The database is a little crude and probably too complex in its present form and would benefit from further development and refinement. Nor is it necessarily suitable for small single parish studies as the time and effort necessary to set it all up might be prohibitive. It does offer more possibilities for groups of parishes and larger populations, however.

Unfortunately, for reasons largely associated with time, it was not possible to undertake as full a demographic analysis of the three stone working parishes as was originally intended. Fertility and nuptiality are consequently sadly missing from the analysis, but migration and mortality are investigated in some detail. The analysis of migration is not a comprehensive examination of all aspects of population mobility in the three parishes. Instead, it concentrates mainly on occupationally-based variations in migration patterns using data from Langton Matravers. It is immediately clear, however, looking at the birthplace data for the three parishes that there are major differences between the stone workers and other occupational groups. In 1851, for example, almost ninety per cent of stone workers had been born in the parish in which they were living at the time of the census, compared to fifty-three per cent of agricultural workers. These figures rise to ninety-seven and eight-five per cent respectively, when those born within five miles of their parish of residence are included. This high proportion of native-born among the stone workers is not

unexpected, and stems from two main factors. First, of course, it reflects the geographical location of the stone. Second, it bears testimony to the efficacy of the restrictions on who could work in the stone trade, and the strongly familial nature of the industry. Similarly striking differences are evident in the birthplaces in the 1881 census of members of stone workers' and agricultural workers' families in Langton Matravers who were born outside Purbeck. The latter had extensive links with the rest of Dorset, but virtually none with other counties. Of the thirty-five members of agricultural workers' families who were born outside Purbeck, thirty-three were born in Dorset. In this they resemble agricultural workers throughout most of rural England in the late nineteenth century. The stone workers, on the other hand, appear to have had rather limited links with the rest of Dorset, but quite strong links with certain other counties. Of forty-four members of stone workers' families born outside Purbeck, just eleven had been born elsewhere in Dorset. At one level this is not surprising, since skilled stone workers might be expected to move to places where their skills were in demand, and such places were relatively scarce in a rural county like Dorset. However, the list of places with which stone workers had connections is indicative of rather more than this, since most of these localities are known from other sources to have historical links with the Purbeck stone industry. These included Hampshire (seven members), Kent (five members) and the London area (five members), all of which were, or had been, major markets for Purbeck stone.

Turning to out-migration, previous studies have shown that the majority of those born in English villages during the mid-nineteenth century had left their native parish before their 25th birthday. The data for Langton Matravers confirms this trend, but again there are significant differentials between the sons of stone workers and the rest. Fewer than one in five of the sons of farm workers remained in Langton Matravers by the time they were in their twenties, but between a quarter and a half of the sons of stone workers did so. There was also a stark difference in the destinations of out-migrants from the two occupational groups. Agricultural labourers were much more limited in their horizons, mainly moving relatively short distances to parishes in east Dorset and west Hampshire. Stone workers, on the other hand, rarely moved to other parishes in Dorset. Their migration was concentrated in Hampshire, Surrey, Middlesex, Kent, and Lancashire, all places which had strong historic links with the Purbeck stone trade. When they arrived in these destinations, they would find support and assistance from Purbeckians already there. This assistance, however, probably did not arise simply because of kinship bonds and networks: it is also

likely that it was a result of shared membership of the Company of Purbeck Marblers and Stonecutters. In this respect, membership of the Company could be seen as equating to the kind of 'communication community' proposed by Simon Szreter.

With regard to mortality, it is well-established that occupation was a major determinant of death for males over 20 years of age. Those who mined coal and metallic ores such as tin experienced particularly high levels of mortality. Adult male miners were particularly prone to various lung diseases, brought on by sustained exposure to extremely dusty working environments. The stone quarriers and stone masons of the Isle of Purbeck in Dorset, on the face of it, shared many of the occupational hazards associated with miners. Their quarries were effectively stone mines, consisting of shafts and tunnels rather than the more conventional open-cast workings. It might therefore be expected that they would also exhibit mortality rates somewhat higher than those of the general population. The analysis was confined to the parishes of Langton Matravers and Swanage, as the population of Worth Matravers was too small to provide statistically viable figures. The mortality of the stone-working populations of Langton Matravers and Swanage, including wives and children, was derived from a database of individual life histories taken from a combination of census and ecclesiastical burial register data. A two-state model was then applied to this data to produce estimated age-specific death rates (ASDRs). These ASDRs were then used to construct life tables for the stone workers and other occupational groups within the two parishes.

The population of Swanage was large enough to allow the estimation of separate life tables for stone workers and others. In order that large enough numbers were available for valid statistical analysis, stone workers were compared with those engaged in other manual occupations (that is, excluding 'middle class' occupations). In terms of the expectation of life at birth, overall mortality in the two stone-working parishes does not seem to have been any higher than in the Wareham Registration District as a whole. As might be expected, the expectation of life at birth for both stone workers and those engaged in manual occupations was lower than that in the population as a whole. Stone workers also had slightly higher mortality than other manual workers. However, there was a marked differential in the experience of males and females between the stoneworkers and the other manual workers. On average, females in stone-working families could expect to live almost ten years longer than their male relatives, whereas for other manual workers the sex

differential was just 5.5 years. This difference stemmed from the higher mortality of male members of the stone-working population, whose expectation of life at birth was a little under 48 years. Initially it was thought was that this excess male mortality among the stone workers in Swanage might result from the hazardous nature of their work. Occupation-specific life tables for Swanage were therefore used to estimate the probability that a male aged 15 years would still be alive on his 50th birthday. However, adult male mortality among stone workers was found to be no higher than that of the population as a whole. It seems, therefore, that contemporary perceptions that stone working was a particularly hazardous occupation were either misplaced or over-stated.

Separate estimated infant mortality rates for the children of stone workers and 'non-stone' manual workers in Swanage were also calculated, and these figures are striking. At 129 per thousand, infant mortality amongst all children of stone workers was more than one third higher than that among the population as a whole. Moreover, this excess mortality occurred entirely among males, whose infant mortality rate was 173 per thousand. A similar pattern is apparent in the figures for child mortality. Clearly, the reason for the excess mortality of male stone workers in Swanage lies with the sons of stone workers. They have much higher mortality in infancy and childhood than do boys in the population as a whole, or, indeed, the daughters of stone workers. Unfortunately it is difficult to find any convincing explanation for this phenomenon. The high mortality of coal miners' children is generally attributed to environmental factors. However, such explanations do not seem plausible in this context, because if they were an issue one would not expect to see the large sex-differential evident in Purbeck. Nor is there any reason to suppose that the stone workers preferred daughters to sons and consequently treated them differently. Indeed, given that entry into the stone trade was hereditary through the male line and that the quarries were operated mainly with family labour, it would not be unreasonable to assume that stone-working families particularly valued their male children. In any case, there is virtually no evidence of differential treatment of male and female offspring in nineteenth-century England. At this time, the excess mortality among the male infant and young children of stone workers remains unexplained.

The Purbeck stone workers rather neatly encapsulate the difficulty of defining 'community'. The longevity of their trade, its narrow geographical focus and stability, the relative isolation of Purbeck, and the highly restrictive hereditary nature of entry into the

trade would, one might think, produce an exceptionally close-knit group and society. However, that does not appear to have been the case to any significant degree. The prime focus of any communal action appears to have been almost exclusively directed towards preserving their trade and the privileges associated with it. Individualism and independence rather than community cohesion appears to have been the dominant trait. They mixed extensively with the wider population. For example, they were just as likely to marry into an agricultural labourer's family as they were a fellow stone worker's family. Nor is there any evidence to suggest that stone workers were any more inclined towards nonconformity than those in other occupations. Indeed, there is no evidence of any social or cultural activities which were exclusive to those employed in the stone trade and their families. The one exception is, perhaps, the annual meeting of the Company of Purbeck Marblers and Stonecutters, held at Corfe Castle every Shrove Tuesday. It is likely that this had a social element to it.

The stone workers indisputably formed a distinctive and separate occupational community. They were fiercely dedicated to the common purpose of preserving the stone trade as a way of making a living. The continued existence influence of the Company illustrates this. But it seems that the function and role of communal activity was almost entirely concerned with preserving the livelihoods of those engaged in quarrying and cutting stone. Socially and culturally there seems to have been little to distinguish them from the population at large. Their demography is different in some respects to the other occupational groups in the stone working parishes. In particular, their pattern of mobility is noticeably different, displaying stronger migratory links with London and Kent than with the rest of Dorset. Overall their mortality and that of their families is not too out of the ordinary, with the very marked exception of a very high mortality rate exhibited by their male children. In these terms, then, their demography does suggest that as a community they can be differentiated from other occupational groups in Purbeck. However, the overall situation in Purbeck is clearly more complex than a straightforward reading of Newby's concept would suggest. In this it is probably typical of rural England as a whole. Indeed, I would argue that English rural society and the rural economy were much more layered and multifaceted than Newby and others have generally allowed.

It is clear that there must be substantial reservations about the usefulness of the term 'occupational community', as defined by Newby, as a way of describing a sizeable proportion of the villages in rural England in the mid-nineteenth century. Although such villages no doubt did exist, they were almost certainly far less common than he suggests, certainly at that time. The survival of large numbers of small farmers running family-based operations also undermines the notion that by the 1850s, farming in England was carried out almost entirely by large tenant farmers employing labourers. These small farmers and the trades/craftsmen with whom they were often associated would in many cases have constituted the most stable elements in a parish population. This leads inexorably to the conclusion that at the heart of the agricultural occupational community may well have been a group whom Newby and others have relegated to the margins of rural society. This illustrates the danger of generalising from one region to the whole country. Large areas of the countryside, at the registration district level, have also been shown to contain a significant percentage of non-agricultural workers. This reinforces what is already known from the various studies that have been carried out in areas such as the Derbyshire Peak district, the Pennines in Yorkshire, and my previous work on Dorset. It does seem likely that the agricultural occupational community became increasingly common towards the end of the nineteenth century, but much later than posited by Newby.

Rather than seeing rural England as one vast farm, it should be viewed as a complex mosaic of regional and local systems, each of which may have developed culturally and economically in different ways to a lesser or greater degree. Integrative local studies, in my view, are the way forward if we are to refine our knowledge of local, regional and national contexts.

Although the work presented in this thesis stands alone, there exists considerable potential to extend it. For instance, the linkage database described in Chapter Six should be fully developed. Doing so will enable a broader, more intensive analysis of the demographic characteristics of the three Purbeck parishes to be undertaken. In turn, this would facilitate the teasing out of the complexities and subtleties of demographic experience that undoubtedly existed in this small group of Dorset parishes, especially in relation to the different occupational groups therein. Among the topics that would be of particular interest in this context would be the following: marriage patterns including age at marriage, fertility behaviour, and a full analysis of migration.

Ideally, these would have formed part of the thesis. Regrettably, however, time, space and resources militated against their inclusion. It would be interesting to observe, for example, whether marriage patterns varied by occupational group, and especially if the stone workers drew their marriage partners from the wider population or if they had a tendency to marry among themselves. For, as Robert Woods has said, 'Local circumstances were especially important in conditioning and constraining the choice of marriage partners – circumstances which can only be described fully by considering the workings of the marriage market in particular places'.[532] An earlier brief analysis of the Langton Matravers marriage registers indicated that the sons of stone workers were no more likely to marry the daughters of stone workers than they were the daughters of any other occupational group. A similar pattern was observed among the offspring of non-stone workers.[533] However, with the linkage database fully operational it would be possible to look at a much wider range of marriages over all three parishes.

Nationally, there was a sustained decline in fertility from around the mid-1870s. Was this decline echoed in this small corner of rural Dorset? An analysis of the fertility behaviour of the various occupational groups in Purbeck would be of considerable interest. Did, for example, the stone workers compensate for the very high mortality affecting their male infants and young children? Given the hereditary nature of the stone trade and the fact that almost all the quarries utilised family labour, one would imagine that sons were particularly important to stone working families. Such a strategy has been proposed for to account for the high fertility of coal-mining families in County Durham (who also experienced high infant mortality rates).[534]

A comprehensive analysis of the birthplace data from the CEBs for all three places, 1851-1891, would help to fill out the demographic picture of the stone working parishes. This would build on the work presented in Chapter Seven by enabling a full examination of differences in the migration behaviour of occupational groups and how it varied over time. It would also identify other parts of Dorset and other areas of the country that had particular links with Purbeck. Chapter Seven shows that such links did exist, and that

[532] Woods, *Demography*, 95.
[533] Edgar and Hinde, 'The stone workers of Purbeck', 84-85.
[534] Hinde, *England's population*, 238.

Purbeck possessed strong connections with other parts of the country, despite ostensibly being a remote rural area.

Other research that might usefully extend the work of this thesis includes the addition to the linkage database of the 1901 CEB data for the three stone working parishes, along with the parish register data for the preceding decade. The 1890s were a period of change and decline for the Purbeck stone trade, although this was offset in Swanage, at least, by a rapid growth in tourism. It would be interesting to see how these two factors impacted on the social, economic and demographic dynamic of the study area. A further effort to establish what lay behind the high mortality among male infants and young children in stone worker families reported in Chapter Eight is also something to be considered. Initial enquiries were extensive but no resolution of the issue was forthcoming. However, the phenomenon is rather puzzling and finding a plausible explanation for it would be extremely interesting.

Turning to the wider context, a great deal more could be done with the Gatley database. A subset of the database was used in Chapter 1 in an attempt to offer a quantifiable indication of what might be characterised as a 'rural' area in mid-nineteenth-century England and Wales. However, besides data on acreage, population totals and employment, the full Gatley database provides information about marital status, age-sex totals in 15-year age-bands, the number of births, marriages and deaths for the decade preceding the 1861 census, and more. This data is compiled at the registration district level for 1861 and covers the whole of England and Wales. An in-depth analysis of this data could provide an exceptional snapshot of England and Wales in 1861, illuminating several areas of social, economic and demographic interest. It would be particularly useful if it was analysed in conjunction with a Geographical Information System (GIS) program. The data could then be mapped at a variety of levels – national, regional, county, and the individual registration district.

Appendix One

Customs and Privileges of the Town and Liberty of Corfe Castle

Such privileges illustrate the considerable extent to which the inhabitants of Corfe enjoyed the power of regulating themselves. In many ways they were administered separately from the rest of Dorset. They included the following:

> That the whole of the Isle of Purbeck is a warren of our lord the King and pertains to his said castle...
>
> That the whole town of Corfe belongs to the said castle, and the tenants of the same town are called "barons", and ought to choose amongst themselves a mayor, coroner, and bailiffs, for whom they are willing to answer, and they are as free as the barons of the Cinque Ports. But so nevertheless that they ought not to hold any pleas except of "pepoudres" [explain what these are] before the constable and his steward, to whom belong the amerciaments arising there from.
>
> That the men of Corfe ought to receive at the bridge of Wareham prisoners sent to the castle by the special mandate of the King, and to conduct them, with the aid of the constable, to the aforesaid castle, and when (such prisoners) are again delivered over to another prison (the said men of Corfe) ought to conduct them back to the before-mentioned bridge with the aid aforesaid.
>
> That when there may happen to be war in the neighbourhood of the castle, the tenants of the said town ought to be in the castle for forty days at their own charges for the defence of the same castle, and this as service for the tenure of their lands.
>
> That to the vill of Corfe belongs judgement by fire, water, and battle and all pleas belonging to the King and the dignity of his crown, so that they ought to be determined there before the King's judges.
>
> That common pastures everywhere within the liberty of Corfe, together with vacant lands, belong to the tenants of the said town for their common use, and also the tenants shall have of the constable every night four lagens of beer whilst they shall keep watch within the castle in time of war.
>
> That the mayor of the said town shall have pesage [the right of weighing goods] everywhere within and without the liberty, throughout the whole of the said warren, for which he pays annually two pounds of wax at Michaelmas.
>
> The eight barons are such as have borne the office of mayor. This title anciently belonged to the representatives of the City of London, and now to those of the Cinque Ports.

Other 'Customes of the Towne of Corfe', extracted from a book at Kingston Lacy, which formerly belonged to Sir Christopher Hatton included:

That the ffree barons and inheritours of Corffe ought to digge and have turves through the whole warren, without the denyall of any person, and that they ought to drive their cattayle to Holme Mount in the West Walk, on Whitsonday yearly, there to depasture that day and three days following.

That no ilander ought to marye his daughter oute of the ilande without licence of the lord constable or other officer.

Source: These customs and privileges, along with many others, are listed in Hutchins, *History and Antiquities*, 496-499.

Appendix Two

Articles of The Company of Purbeck Marblers and Stonecutters 1651/52

Articles which are to be performed, kept and used, by a Company of Marblers, inhabiting within the Town of Corfe Castle, (and the Parishes of Swanage, Langton and Worth) in the Isle of Purbeck, in the County of Dorset; for the good, and well ordering of the said Company; which they have generally, and with our Consent, agreed upon to fulfil, perform and keep; and now to be ordered, kept, and and [sic] governed by, under the Penalties and Forfeitures, in these Articles expressed; as they are drawn from their Petards; and the same renewed and confirmed, by them, at their accustomed day of meeting, on Shrove Tuesday yearly; this Shrove Tuesday it was done; being their Day of meeting and now the third Day of March; in the Year of our Lord, one thousand, six hundred and fifty one; as their Hands and Seals do witness.

First, That no Man of the Company shall set into his Fellow-Tradesman's Quarry to work there, without his Consent, within a Twelve-Month and a Day; or to come into any part of that Ground, within one hundred feet of his Fellow-Tradesman's Quarry, upon the Forfeiture of Five Pounds; to be paid to the Owner of the Quarry, unto whom the offence shall be done; neither shall any Man of the Company, work pastures with another, except he be a Freeman of the said Company; upon the forfeiture of Five Pounds.

Secondly, That no Man of the Company shall take any Apprentice, but, that he shall keep him in his own House, uprising and downlying, for the Term of seven Years; upon the Forfeiture of Five Pounds; to be paid to the Wardens for the Use and Benefit of the Company.

Thirdly, That no Man after his Apprenticeship, shall take any Apprentice, in the whole Term of seven Years; upon the Forfeiture of Five Pounds for every Month, for as many Months as he shall keep him; the same to be paid to the Wardens, for the Use and Benefit of the Company.

Fourthly, That no Man of this Company shall sell, or make sale, of any Stone within this Island, unto any Man, but by his own proper Name; upon the Forfeiture of Five Pounds; to be paid to the Wardens for the Use of the Company. And that no Man of our Company shall undercreep his Fellow-Tradesman, to take from him any Bargain of Work of his

Trade; upon the Forfeiture of Five Pounds; to be paid to the Wardens of the Company; for the Use and Benefit, of the whole Company.

Fifthly, That every Man in our Company, upon Notice from the Wardens of the Company, by the Stewards, to appear at any Place appointed; and do not then, and there appear, according to Order; shall pay for his Neglect, three Shillings and Four Pence to the Wardens, for the Use and Benefit of the Company, without a very lawful cause. And that no man of our Company shall take any Apprentice that is base-born, or of Parents who are of a loose life, upon the Forfeiture of Five Pounds, to be paid to the Wardens, for the Use and benefit, of the Company: or that the said Servant, or Apprentice, is or hath been, a loose liver.

Sixthly, That upon an Acceptance of any Apprentice into the Company, he shall pay unto the Wardens, for the Use of the Company; six Shillings and eight Pence, one penny loaf, and two Pots of Beer. And that no man of the said Company, shall set a Laborer to work; upon the Forfeiture of Five Pounds.

Seventhly, That every Man of our Company, the Shrove Tuesday after his Marriage, shall pay unto the Wardens, for the Use and Benefit, of the said Company; twelve Pence; and the last married Man, to bring a Foot-Ball; according to the Custom of the Company.

Eighthly, That upon any appointed Meeting, at any time, or at any other place together, there shall be any Noise, Hindrance, or Disturbance to the Company; upon the Command of Silence from the Warden, and not observed; the Man in default, shall pay twelve Pence to the Wardens, for the Use and Benefit, of the Company.

Ninthly, That the Warden of the Country, shall have the Company's Stock always, provided that the Warden of the Town, shall have Security for the Use and Benefit, of the Company.

Tenthly, That if any one of our Company shall at any time reveal, or make known the Secrets of the Company, or any part thereof; upon Notice given, and if Proof be made, he shall pay for his Default to the Wardens, for the Use and Benefit, of the Company; Five Pound

Source: DRO, Articles of agreement and rules of the Company of Marblers, 3 March 1651/2, D/619.

Appendix Three

Coding Schemes

When designing coding schemes it would be useful to be able to refer to similar work previously undertaken. If a researcher wishes to compare results with previously published work, then he or she needs to ensure that the two classification schemes are the same. Indeed, if the results are to be strictly comparable, one needs to know that each separate entry has been allocated to exactly the same categories. Unfortunately, many researchers fail to provide this level of information and it is often impossible to know with any degree of certainty that entries have been assigned to the "correct" categories. Descriptions of the various coding schemes used and the relevant attribution lists are given below.

Age - Band Code

This assigns each individual's age to a five-year age-band, i.e.. 0-4, 5-9, 10-14, etc., up to 65+.

County Name Code

County names were coded to simplify interrogation and manipulation of the data - the coding standardises any abbreviations and misspellings that might occur. Every county in England and Wales was assigned a number, with other numbers for the Channel Islands, Scotland, Ireland, Born Overseas, and No Entry (or illegible).

Parish Code

The nine Purbeck parishes were assigned a single number code. This allows a standardised record as the householders, enumerators and parish priests all used various abbreviations for parish names. It also caters for those who wrote down the name of a village, hamlet or farm within a parish. This occurs quite frequently in the Purbeck data. The codes mean that anyone born within the Purbeck parishes can be identified whatever may have been entered as their birthplace.

Household Type Code

This shows what sort of household an individual belongs to, as defined by the occupation of the household head. It consists of the head's occupational classification being attached to all the other members of that household.

Relation to Household Head Code

This classification scheme is divided between two fields. Firstly, each individual in each household is assigned to one of four categories: Conjugal Family, Close Relative, Distant Relative, Non-Relative. Each individual is then assigned to one of a number of sub-categories within the category listed in the first field. This facilitates the analysis of household composition and family structure.

	1. Conjugal Family	2. Close Relative	3. Distant Relative	4. Non-Relative
1	Head	Parent	Grandchild	Domestic Servant
2	Spouse	Parent-in-law	Nephew/Niece	Occupational Servant
3	Child/Stepchild	Sibling	Aunt/Uncle	Boarder/Lodger
4		Son/Daughter-in-law	Cousin	Other
5		Brother/Sister-in-law	Great Grandchild,	Visitor
6			Grandparent	

Record ID

Each record in every table is given a unique identifying number within that table.

Table ID

Each table has a unique code identifying that table. This is entered against every record in that table.

Occupational Groups

Entries in the occupation column of the CEBs have been classified into broad groupings of like or similar kind. The range of occupations, even in rural southern and eastern England, was extensive and became even more so when spelling and terminological variations are included as has been done here. Given the wide variety of occupations that existed, the

need for some kind of classification scheme becomes self-evident if any meaningful analysis of occupation is to be undertaken. Occupational groups also provide an ideal framework for studies of other topics. Thus, for example, do occupational groups vary in their age composition and their migratory tendencies? Details of the classification scheme and the attributions used are given below.

The scheme used is that designed by Dennis Mills, which is based on an original classification devised by Peter Tillott.[535] This was preferred to the other main scheme in widespread use - the Booth-Armstrong scheme - because the Mills scheme is considered to be much better suited to work on rural areas.[536] There are too many categories and sub-categories in the Booth-Armstrong scheme for it to be useful in rural areas. This makes the whole exercise rather complex and in many instances will not provide statistically viable numbers for analysis. Although extensive by modern standards, the range of occupations found in the countryside in the nineteenth century was much more limited than in towns and cities, and the categories of the Mills scheme reflect this. The Booth-Armstrong scheme is not designed for the relatively simple rural occupational environment and its continued use for studies of such areas is disappointing and somewhat puzzling. The limited number of categories in the Mills scheme means that there is an inevitable conflation of some occupations within occupational groups. However, it does provide (on the whole) statistically viable numbers for analysis. At the same time it remains flexible enough to reflect the particular occupational characteristics of a particular study area.

The attribution list was produced by creating a database table containing all the entries from the occupational and occupational grouping fields for all six censuses, plus the baptism, marriage and trade directory tables. All duplicated entries were then deleted from this table. Any entries that were differentiated solely in terms of their punctuation were also deleted. The resulting list of occupations was then sorted alphabetically within each occupational group of the Mills classification. Variations in spelling were allowed to remain as they illustrate the quality of the sources in terms of consistency of entry.

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[535] More details about the scheme can be found in Dennis and Joan Mills, 'Rural mobility in the Victorian censuses: experience with a micro-computer program', *Local Historian*, XVIII (1988), 69-75; Dennis and Joan Mills, 'Occupation and social stratification revisited: the census enumerators' books of Victorian Britain', *Urban History Yearbook*, (1989), 63-77.

[536] Details of the Booth-Armstrong scheme can be found in W.A. Armstrong in Wrigley, *Nineteenth-century society*, 255-281.

Attributing occupations to categories within a classification scheme is something of a 'black art' and, ultimately, a rather subjective exercise. Having said that, assigning occupations to a particular occupational category was generally a straightforward matter. In a number of cases, however, classifying an occupational description rested on the judgement of the researcher. This stemmed from the poor quality of some of the occupational descriptions, rather than any deficiency of the scheme. In such instances the context of an occupational description was frequently used as a factor in deciding its attribution. It is vital that consistency be maintained in a coding exercise of this kind, although absolute consistency is probably impossible to achieve given the vagaries of the source material. The present study has, on the whole, followed the rules set out by Mills for assigning occupational descriptions to categories within his scheme. In some instances, however, these have been amended to take into account the particular characteristics of the study area.

Poor recording of women's work complicates the task of attributing their occupations, particularly where wives assisted their husband in his work as well as doing their domestic work within the home. This problem is common in home-based occupations such as inn-keeping and shoe-making, where the wife is frequently described simply as 'Innkeeper's Wife' or Shoemaker's Wife'. In these cases the women so described have generally been placed in the TCJ category and assumed to have assisted their husband in his trade. The only exceptions may have been where a female had an infant or several very young children in the household, which, it could be argued, would inevitably have impacted on her capacity to assist her husband with his work.

Some occupational descriptions are found in more than one occupational grouping. This results from the vagueness of many entries, e.g. 'Servant' or 'Labourer'. There are many different types of servant and labourer, who could therefore belong to different occupational groups. Here the researcher is thrown back on his or her judgement in assigning the relevant description to the most likely category. These decisions are frequently based on the context of the entire household group of which a person is a member. For example, if a farmer of 50 acres had a female 'Servant' living in his household, she is likely to have worked on the farm in some capacity, or combined elements of domestic and agricultural work. Such a servant may well be placed in the FW category as an agricultural worker. A 'Servant' in the household of someone farming 500

acres, however, is much more likely to be a full time domestic servant and classified accordingly. Another example is the children of farmers, who were often described simply as 'Farmer's Son' or 'Farmer's Daur'. All those so described who were aged 15 years and above have been assigned to the FW category on the grounds that they would almost always have been working on the farm in some capacity or other. Below are some brief notes on the individual occupational groupings employed by the Mills scheme.

FAC – All occupations relating to the sea

In Mills' original typology the FAC category is used to denote those working in rural factories or workshops. These were not a factor in the present study area but there are a considerable number of men who depended on the sea for their livelihood. As the category would otherwise have remained unused, it was decided to distinguish this numerically significant group by conflating all the sea-related occupations under the FAC heading. The great majority of entries were unproblematic, as they mostly referred to seamen and to members of the coast guard service.

FM – All those described as farmers or who were considered to be running an agricultural enterprise, including bailiffs

Although this is the smallest grouping, with the fewest occupational descriptions contained within it, the FM category did pose some problems. For example, in Dorset it was common for farmers not to operate their own dairies. Instead they were rented out at a fixed price per head of cattle per annum. Where these self-employed dairymen and dairywomen have been identified they have been included in the FM category along with farmers, bailiffs and market gardeners. They must have been possessed of relatively large sums of capital – to rent a small herd of, say, 25 cows at £8 per head per year required working capital of £200. This was far in excess of anything a farm labourer or even many small tradesmen or craftsmen could muster or were worth and the system appears to have operated as a kind of halfway house route towards becoming a proper farmer.

FW – All those employed as agricultural workers

This was one of the groupings where judgement frequently came into play. Enumerators, for example, did not always distinguish the following occupations:

- Gardeners - market or domestic?
- Carters - farm or general transport?
- Labourers - farm or general?
- Servant - farm or domestic?

Where ambiguities such as these occur, the researcher has to use his or her judgement, based on a combination of experience, intuition and the context of the entry. In most cases, however, it is clear that a person was employed in some form of agricultural enterprise.

PEG – Professional, educated and gentry

This category can be somewhat problematic as it is partly based on social status. The entries that pose the most problems are those like 'Annuitant' and 'Lives on own means', which could mean someone quite wealthy or someone eking out a living on a small pension. Consequently these are assigned to the PEG category only if there is other evidence, such as servants in the household that supports their inclusion in this higher status category. Otherwise they are placed in the RES category which specifically includes this sort of indeterminate entry. The PEG grouping also contains entrepreneurs employing more than 10 workers, although such individuals are rare in rural areas.

RES – the residual (in occupational terms) population

This does not include anyone who can be positively identified as being in paid employment. Its main purpose is as a catch-all category for paupers, the retired or unemployed, scholars, wives and children. It also includes those said to be of independent means but for whom there is no evidence to suggest anything other than a very basic private income. Entries for specific occupations do appear in this category but they generally stem from a mistake by the enumerator, for example, a seven-year old 'Lace Dealer'. Other examples might be where the individual concerned was considered too old to still be working, or daughters helping their mother in the home, whose occupation is given as 'Domestic Duties' or something similar.

SER – Domestic Servants

Most of the entries in this category are straightforward. Problems arise, however, when someone is described as simply 'Servant' or 'General Servant'. It is not clear in some households whether this refers to general domestic work or to occupational service or a combination of both. Another problem is when a daughter living with her parents is described as 'Servant'. Does this mean she is an out-servant or does it refer to her helping her mother in the home? Here, again, the researcher has to make a decision based on experience, intuition and the general context. In a few instances a female described as 'Farm Servant' has been assigned to this category because the context suggests that she was more likely to have been engaged in domestic than agricultural work. There can also be problem with nurses, who may be either domestic (a child's nurse) or medical.

TC – All those described as dressmakers, seamstresses and similar

In Mills' classification this category is used for those tradesmen and craftsmen who cannot be positively identified as a master, journeyman, assistant, apprentice and so on. However, the strategy employed to classify tradesmen and craftsmen in this study means that the only occupations the TC category contains are the many females described as 'Dressmaker' or similar. In the vast majority of cases it is impossible to know what this designation represented in terms of employment. It is probable that in very few instances did it constitute what could be termed a business or career. There were simply too many of these women and girls for this to be so.

TCJ – Trades and crafts (all those who were described as apprentice, assistant or journeyman, and those who could not be identified as a master or self-employed tradesman or craftsman)

This category includes everyone described as an apprentice, journeyman or assistant in a trade or craft. It also includes those whom their context suggests worked in a trade or craft although this is not explicitly stated in the CEB. Such persons include the wives of innkeepers and shoemakers who almost certainly assisted their husbands in their enterprise. The category also contains a number of (mostly) female workers whose occupational description on its own would place them in a different grouping, except that the context is significant and alters their designation. For example, the 'House Maid' who is actually

employed in a hotel. Even though this woman did the same type of work as a housemaid in domestic service, the commercial context places her in the TCJ category rather than the SER grouping. Also included are a number of people whose occupation is entered as '----- 's Son'. Where they are of working age, these have been assumed to be working with their father. The category also includes all those working in trades and crafts that could not be identified from any source as working on their own account.

TCM – Trades and crafts (all those who can be identified as masters, self-employed, working on their own account and/or employers of labour, including dealers)

Respondents were supposed to identify themselves as masters where appropriate and note how many people they employed, but frequently this information is missing. Where the status of someone in a trade or craft occupation is not made explicit in the CEBs, other evidence was looked at to resolve the issue. In order to be assigned to the TCM category one or more of the following conditions had to apply:

- A person is explicitly stated to be a master craftsman, shopkeeper, dealer, merchant, or similar.
- The person has someone in his or her household whose occupation is given as apprentice, assistant or similar.
- The person employs domestic servants.
- The person is listed in one of the trade directories utilised in this study.

Anyone who did not meet at least one of these criteria was assigned to the TCJ category. While this system may not be perfect, it has the virtue of consistency and is unlikely to result in many inaccurate categorisations. The only exception was stone merchants, who were assigned to the X category (see below).

X – All occupations relating to the quarrying of stone

This category comprises all those involved in the quarrying of stone, including stone merchants. Most of the entries are quite explicit in describing a person's occupation and therefore easy to assign. In one or two instances, however, people with vague occupational

descriptions such as 'Son' or 'Apprentice' or 'Labourer' have been assigned to this category because of their context, or because some other evidence suggests that they should be so included.

Z – General unskilled and labouring jobs, and including service *occupations*

This is something of a mixed category. It includes all the labouring jobs (excluding farm labourers), unskilled and menial work, and service occupations such as postman, policeman, army personnel below the rank of officer, grooms, teachers aged under 21 years, railway workers and so on.

There now follows the attribution list for each occupational grouping.

FAC – All occupations relating to the sea

[Barge] Boatman
Able Seaman
Boatman
Boatman C. Guard
Boatman C. Guard R.N.
Boatman HM Coast Guard
Boatman, C.G. Service
C.G. Service
Carpenter C.G. Service
Chief Boatman C. Guard
Chief Boatman C.G. Service
Chief Boatman Coast Guard
Chief Boatman in C. Guard
Chief Boatman in Charge
Chief Officer HM Coast Guard
Chief Officer R.N.
Coast Gard
Coast Guard
Coast Guard Boatman
Coast Guard Service
Coast Guardsman
Coastguard
Com'd Boatman HM Coast Guard
Com. Coast Guard Service
Comm. Boatman C. Guard
Commisnd. Boatman Coastguard
Commissioned Boatman C. Guard
Commsd. Boatman, C.G. Service
Comssd. Boatman C.G. Service
Extra Coast guard
Fisher Boy
Fisher Man
Fisherman
Fisherman & Pensioner R.N.
Fisherman (Assistant)
Fisherman's Helper
Leading Stoker R.N.
Mariner
Mariner, Seas
Marriner
Marriner R.N.
Mast. Mariner
Master Mariner
Master Marriner
Mate of Clay Barge
Merchant Seaman
Navy
Pilot
Pilot for Poole
Pilot's Boy
Royal Navey
Royal Navy Coast Guard
Sailor
Sailor R.N.
Sailor, Merchant
Seaman
Seaman (R.N.)
Seaman Apprentice
Seas Mariner, M.
Seas Seaman
Sergeant of Mtd. Coast Guard
Signalman R.N.
Waterman

FM – Farmers and similar

Agriculturist
Bailiff
Bailiff to Farmer
Dairy Farmer
Dairy Man
Dairyman
Dairyman & Woodman
Dairyman (Grazier)
Dairyman [Graz.]
Dairywoman not of employ
Farm Bailiff
Farmer
Farmers W. of 130a,2 Men,1 Boy
Farms 12 acres of land
Gentleman's Bailif
Maltster, Brewer & Farmer
Market Gardener
Occupier of a Dairy
Working Bailiff
Yeoman

FW – All those employed as agricultural workers

Ag Carter
Ag Lab
Ag Lab (Drainer)
Ag Lab (indoor)
Ag Labourer
Ag Plough Boy
Ag Work
Agr'l Labourer
Agr. Labourer
Agri. Labourer
Agric'l Labourer
Agric. Labourer
Agricultural
Agricultural Carter
Agricultural Carter Boy
Agricultural Labourer
Agricultural Plough Boy
Agricultural Shepherd
Agricultural Wife
Agriculture
Agriculture Carter
Agriculture Carter Boy
Agriculture Labourer
Agriculture Plough Boy
Agriculture Servant
Agriculture Shepherd
Agril. Labourer
Agrl. Labourer
Assistant Dairyman
Asst.
Cart Driver
Carter
Carter Ag
Carter Boy
Carter on a Farm
Carter's Boy
Carter, Agricultural
Carter/Ag lab
Cow Boy
Cowman
Dairy Boy
Dairy Lad
Dairy Man
Dairy Woman
Dairyboy
Dairymaid
Dairyman
Servt.
Dairyman & Woodman
Dairyman's Assistant
Dairyman's Daughter
Dairyman's Helper
Dairyman's Son
Dairywoman
F.S.
Farm Boy
Farm Carter
Farm Labourer
Farm Servant
Farm Servant, Indoor
Farmer's Boy
Farmer's Daughter
Farmer's Daur
Farmer's Son
Farmer's Wife
Farmers Boy
Garden Lab
Gardener
Gardener Lab
Gardner
General Serv
General Servant
Groom
Helper Domestic
Home Help
Home Helper
Housemaid
Indoor (Ag Lab)
Lab
Lab Ag
Laborer
Laborer (Ag)
Laborer (Farm)
Labourer
Labourer Ag
Labourer on Farm
M.S.
Milk Boy
Milk Seller
Out of doors Work Woman
Outdoor Work
Plough Boy
Ploughboy
Servant
Servant, Domestic

Shepherd
Shepherd Boy
Son
Son on Farm
Under Carter
Waggoner
Work on a Farm
Work Woman
Working on Farm
Works on a Farm
Works on Farm
Yeoman's Son

PEG – Professional, educated and gentry

Accountant's Clerk
Agent
Almoner of Lathom Etc
Annuitant
Annuitant's Daur
Annuitant's Son
Annuitant's Wife
Architect
Architect & Surveyor
Army
Army Tutor
Artist
Artist (Painter) Sculptor
Artist in ???Col.
Artist, Landscape Painter
Artist, Painting
Ass't Schoolmistress, Certif'd
Assist. Sch'r
Assist. Sch. Mistress
Assistant Sch. Master
Assurance Agent
Authoress
Bank Clerk
Bank Manager
Bank Manager – Magistrate
Banker
Barrister in actual Practice
Bk Keeper
Book Keeper
Builder & Ironmong. emp 10M 3B
Cerif'd Sch'r
Certif'd Teacher Inf. Sch.
Certificated Schoolmistress
Certificated Teacher
Clergyman
Clergyman w/out cure of souls
Clerk
Clerk [Clergyman]
Clerk in H. Orders
Clerk in Holy Orders
Clerk of Clay Works
Clerk of the House of Commons
Clerk to Stone Firm
Clerk, H. Master. Sch. Master
Coast Guard Officer
Commander of Coastguard
Commander R.N.
Commander R.N., H.P.
Commission Agent
Comr. R. Navy H. P.
Comr. R. Navy H. P.'s Wife
Congregational Minister
Congregational Minister Ret.
Contractor
Curate
Curate of Swanage
Daughter of Officer
Decorative Artist
Dep'y Prin'l War Office
Doctor of Medicine...
Engaged in a Geological Survey
F.R.C.S.T. - M.D. Glasgow
Farmer's Widow
Fellow & Tutor Clare Coll Camb
Fund Holder
Fundholder
G.P. (Surgeon)
Gen'l Practitioner. Registrar
General Practitioner M.D.
Governess
Hist.y Student
Home Missionary
House Dividends
Ind
Independent
Independent Minister
Infant School Mistress
J.P. - D.L., Retired Merchant
J.P. Contractor
Lady
Land Holder
Land-holder
Landed Proprietor
Landowner
late Lieu. 81st Regt.
Law Student
Lecturer on Geology
Librarian
Lietenant 4th Durham L. I.
Lieut Coast Guard
Lieut R.N.
Lieut. R. Navy
Lieut. R.N., Ct. Gd.
Lieutenant 3rd Wilts Regt.
Lieutenant In Navy

Lieutenant R.N.
Lieutenant RN (Coast Guard)
Living on her own means
Living on his own means
Living on own means
Living on Private Property
M.A. Bar'r Law
M.A. barrister in practice
M.R.C.S. Gen. Practitioner
Magistrate & Landholder
Magistrate, Retired Navy Agent
Manager of Gas Works
Maths Student
Medical Practitioner MRCS
Medical Pupil
Merchant
Midshipman R.N.
Minister
Minister of Independent Chapel
Missionary
Missionary. Latter Day Saints
National Mistress
National Schoolmaster
Naval Officer's Wife
Navy
No Occupation
Officer of Customs
Physician & Surgeon
Pri. Metho. Minister
Private school Mistress
Professor of Music
Proprietor of Houses
Rector
Rector of Langton
Rector of Langton Matravers
Rector of Peathing Parva,Leics
Rector of Peathing, Lincs.
Rector of Swanage
Registrar...Court of Chancery
Retd. Congregational Minister
Retired from the Army
Riding Officer
Rural Dean of Ealing,Middlesex
S.W. Railway Clerk
Sch. Master
Sch. Master, Music
School Governess
School Manager
School Master
School Mistress
School Teacher
Schoolmaster
Schoolmaster & Organist
Schoolmistress
Solicitor
Solicitor, B.A. Cantab.
Station Officer H.M. Coast G.
Stock Holder
Stone Merchant's Clerk
Student
Student of Natl. Sci.
Student, Jesus College, Cambs.
Surgeon
Surgeon M.R.C.S.
Surgeon,Gen. Practice M.R.C.P.
Surgeons W.
Surveyor to Local Bd.
Teacher
Teacher (Nat. School)
Teacher in a School
Teacher of Languages
Teacher of Music
Teacher, Landowner Etc.
U.K.
Undergraduate at Oxford
Vicar
Vicar of Worth Matravers
Wesleyan Home Missionary
Wesleyan Minister

RES – the residual (in occupational terms) population

(Home) Domestic
(N.S.O.)
(Pensioner)
[illegible]
Ag Lab W
Ag Lab Widow
Ag Lab Wife
Ag Lab's Daughter
Ag Lab's Wife
Agr Labourer's Daur
Agr Labourer's Daur in Law
Agr Labourer's Son
Agr Labourer's Wife
Annuitant
Annuitant (Wife of Lt. R.N.)
Annuitant (Wife of Mate R.N.)
Annuitant's Daur
Annuitant's Son
Architect & Builder. Retired.
Assistant Commissary (Retired)
Attorney's Wife
Bakers Daur
Bakers Son
Bakers Widow
Boatman's Wife
Boatman's Wife C.B. HMS E??
Bricklayer's Wife
Bus Driver's Wife
Butler's Wife
Carpenter
Carpenter's Daur
Carpenter's Son
Carpenter's Widow (Pauper)
Carpenter's Wife
Carpenters W
Carter
Carter's Wife
Carters W
Carters Widow
Char Woman
Chelsea Out Pensioner
Chelsea Pensioner
Civil Pensioner, Coast Guard
Civil Service Pensioner
Clerk [Parish]
Coachman's Wife
Coast Guard (Pensioner)
Coast Guard (Superantd.)
Coast guard P.
Coast Guard Pension
Coast Guard Pensioner
Coast Guard's Daughter
Coast Guard's Daur
Coast Guard's Son
Coast Guard's Wife
Coastguard Pensioner
Cook
Daughter of the Vicar of Worth
Daur of the Vicar of Worth
Dependant
Disabled Servant
Doctors W
Domestic
Domestic Cook
Domestic Duties
Domestic Duty
Domestic Helper
Domestic Nurse
Domestic Servant
Domestic Work
Duties of a Wife
Family Cook
Family Cook, Domestic
Farm Servant
Farmer's Daughter
Farmer's Daur
Farmer's Son
Farmer's Wife
Farmers Wife,1000acres,20 Labs
Fisherman's Wife
Foreman's Wife (A Brick Maker)
Formerly a Laundress
Formerly a Solicitor
Formerly a Tailor
Formerly Butler
Formerly Charwoman
Formerly Cook
Formerly Domestic Servant
Formerly Draper's Assistant
Formerly Farmer
Formerly Farmer's Wife
Formerly General Servant
Formerly Innkeeper
Formerly Laundress
Formerly Mariner

Formerly Postillion
Formerly Servant
Formerly Ship's Carpenter
Formerly Stone Mason
Formerly Tailoress
Formerly Washerwoman
Gardener's Widow
Gardener's Wife
Greenwich Pensioner
Groom's Wife
Gunner's Wife
H. Keeper
Help. Domestic
Helper Home
Helper Home Domestic
Helper, Dom.
Helper, Domestic
Helps at Home
Home Domestic
Home Duties
Home Help
Home Helper
Homehelp
Homehelper
House Keeper
House Keeper, Dom.
House Keeper, Domestic
House Proprietor
House Wife
Household Duties
Housekeeper
Housemaid
Housemaid Servant
Housemaid, Domestic
Housewife
In Receipt of Parish Relief
Ind
Independant Means
Independent
Inn Keeper's Wife
Innkeeper's W
Innkeeper's Wife
Invalid
Keeper of a Mission Room
Kept by Parish
Kept by S. in Law
L's On Private Means
Laborer's Wife
Labourer's Daur
Labourer's Wife
Lace Dealer
Land Holder
Land Holder's Daur
Land Holder's Son
Landed Proprietor
Lapidary
Late Cook (Domestic Servant)
Late Farm Labourer
Late Inn Keeper
Late Stone Mason
Lives on own means
Living on Charity
Living on her means
Living on her own means
Living on own means
Living on Private Property
Lodger
Machinist's Wife
Mail Man's Daur
Mail Man's Wife
Mariner (Retired)
Mariner's Wife
Marriners Widow
Mason
Mason's Wife
Master Mariner's Wife
Medical Pupil
Miller's Daur
Miller's Wife
Minister's Wife
Mother's Help (Dom.)
Mother's Helper
Mounted Guard Superannuated
N.K.
N.S.O.
Naval Officer's Wife
Naval Pensioner
Naval Pensioner Ct. Gd.
Navy
Navy P
Navy Pensioner
No present occupation
No Profession
Nurse
Nurse Maid
Nursemaid
Occupier of 720 acres, 9M, 3B
Of. Retired Com. R.N.
On Parish Relief
Out Pensioner of Greenwich

Out Servant's Wife
Parish Clerk
Parish Relief
Pauper
Pauper (formerly Servant)
Pauper Ag Lab W
Pauper formerly Laundress
Pauper Stone Masons W
Pauper, Ag Lab
Pauper, Ag Lab W
Pauper, Ag Lab's Widow
Pauper, Bricklayers W.
Pauper, formerly Brewery
Pauper, formerly Stone Mason
Pauper, Quarrier's Widow
Pauper, Quarryman
Pauper, Stone Mason
Pauper, Stone Mason's Widow
Pensioner
Pensioner (C.G.)
Pensioner (Coast Guard)
Pensioner Coast Guard
Pensioner Coast Guard's Wife
Pensioner Customs
Pensioner of Customs
Pensioner R.N.
Pensioner Ret.
Pilot's Widow
Private Means
Proprietor of Houses
Quarrier
Quarrier's Wife
Quarryman's Daughter
Quarryman's Daur.
Quarryman's Widow
Quarryman's Wife
Retd. Chief Petty Officer Navy
Retd. Sergt. Army
Retired
Retired Boatman
Retired Book Printer
Retired Bookseller
Retired Bricklayer
Retired Builder
Retired Carrier & Fly Propr.
Retired Coast Gu. Officer
Retired Coast Guard
Retired Coastguard
Retired Dealer in Shoes
Retired Domestic Servant
Retired Draper & Grocer
Retired Elemy. Sch. Master
Retired Farm Servant
Retired Farmer
Retired Fisherman
Retired from Sea
Retired Gov'ss Living on Mean
Retired Greengrocer
Retired Grocer
Retired Grocer & Draper
Retired Hotel Keeper
Retired Housekeeper
Retired Labourer
Retired Laundress
Retired Mariner
Retired Mason
Retired Master Mariner
Retired old "Tar"
Retired Pensioner
Retired Quarrier
Retired Quarryman
Retired School Mistress
Retired Schoolmaster
Retired Seamstress
Retired Sen. Mate R.N.
Retired Servant
Retired Ship Smith
Retired Ship's Carpenter
Retired Shipwright
Retired Shirtmaker
Retired Shoemaker
Retired St. Mason
Retired Stone Mason
Retired Stone Merch't
Retired Straw Bonnet Maker
Retired. Living on means.
Sch'r
Sch.
Scholar
Scholar (at home)
Scholar and Domestic Work
Scholar at Home
School Boy
School Girl
Seaman Pensioner R.N.
Seaman's wife
Serv
Serv. Dom.
Servant
Servant (unemployed)

Servant unemployed
Servt, Domestic
Servt. at Home
Sexton
Shipwright (Superannuated)
Shoe Maker's Daughter
Shoe Maker's Wife
Shoemaker Pauper
Shoemaker Retired
Shoemaker's Wife
Small Income from her Son
Son
Stone Cutter's Wife
Stone Mason Retired
Stone Mason W
Stone Mason's Daughter
Stone Mason's Daur
Stone Mason's Son
Stone Mason's Widow
Stone Mason's Wife
Stone Mason, retired
Stone Masons W
Stone Quarrier's Wife
Student
Superannd.
Superannuated Coast Guard
Surgeon's Daur
Surgeon's Son
Surgeon's Widow
Surgeons W.
Tailor
Tailor's Wife
Thatcher's Daur
Thatcher's Son
Thatcher's Wife
Tinman's Wife
Wesleyan Min's Wife
Widow of Builder
Wife
Wife (Press Representative)
Wife of a Colonel
Wife of Coast Gd. Pensioner
Wife of Cong'l Minister
Wife of the Vicar of Worth
Wife to Thomas Masters,Mariner
Woodsmans Daur
Woodsmans Son

SER – Domestic service

A servant
Assist. Housemaid
Assist. Servt.
Butler
Caretaker
Coachman
Coachman (to above)
Coachman - Domestic Servant
Coachman. Dom. Serv.
Companion
Cook
Cook & Dairymaid
Cook - Domestic Serv.
Cook - Domestic Servant
Cook Domestic
Cook Domestic Servant
Cook Etc.
Cook, Dom. Serv't
Cook, Dom. Serv.
Cook, Domestic
Cook, Domestic Servant
Cook, Serv't Domestic
Cooke
Day Servt.
Dom Servant
Dom.
Dom. Ser.
Dom. Serv.
Domestic
Domestic Cook
Domestic General Servant
Domestic Nurse
Domestic Ser
Domestic Serv
Domestic Servant
Domestic Servant Cook
Domestic Servant House Maid
Domestic Servant Nurse
Domestic Servant Nurse Maid
Domestic Servant Parlour Maid
Domestic Servt
Domestic, Cook
Domestic, Nurse
Domestic, Parlour Maid
F.S.
Farm Servant
Footman
Game Keeper
Gamekeeper
Garden Labourer
Gardener
Gardener (Assistant)
Gardener (to above)
Gardener - Domestic
Gardener - Domestic Serv
Gardener - Domestic Servant
Gardiner
Gardner
Gen Serv
Gen Servant
Gen Servt
Gen'l Domestic
Gen'l Labourer. Dom.
Gen'l Serv't
Gen'l Serv't (Out) Domestic
Gen'l Serv't Domestic
Gen'l Serv, Domestic
Gen'l Serv.
Gen'l Serv. Dom.
Gen'l Servant
Gen'l Servant, Dom.
Gen'l Servt, Domestic
Gen. Domestic
Gen. Serv't, Domestic
Gen. Servt., Dom.
Gen. Servt., Domestic
General
General Serv
General Serv (Domestic)
General Serv Domestic
General Serv, Dom.
General Servant
General Servant (Domestic)
General Servant, Domestic
General Servt
Genl. Domestic
Genl. Servt.
Genl. Servt., Domestic
Groom
H. Keeper
Helper, Dom.
Helper, Domestic
Homehelper
House & Par. Maid. Dom. Serv.
House Boy

House Keeper
House Keeper - Domestic Serv.
House Keeper - Domestic Servt.
House Keeper, Dom.
House Keeper, Dom. Serv.
House Maid
House Maid, Domestic
House Maid. Dom. Serv.
House Md., Domestic
House Serv.
House Servant
Housekeeper
Housekeeper, Dom. Serv.
Housekeeper, Dom. Servant
Housekeeper. Dom. S.
Housekeeping
Housemaid
Housemaid & Nurse
Housemaid - Domestic Serv.
Housemaid - Domestic Servant
Housemaid, Dom. Serv't
Housemaid, Dom. Serv.
Housemaid, Domestic
Houuse Keeper
Indoor Servant
Keeper
Kitchen Maid
Kitchenmaid
Kitchenmaid, Domestic
Labourer
Ladies Maid, Dom. Serv.
Lady's Maid
Lady's Maid (Domestic)
Laundry Maid
Laundry Maid (Dom. Servant)
M.S.
Maid
Maid of all Work
Man Servant
Nurse
Nurse - Domestic Servant
Nurse maid
Nurse Maid (Domestic)
Nurse, Dom. Serv.
Nurse, Domestic
Nurse. Dom. Serv.
Nursemaid
Out Servant
P. Maid, Domestic
Page Boy
Pantrymaid
Par. Maid, Domestic
Parl. Maid, Domestic
Parlour Maid
Parlour Maid. Dom. Serv.
Parlour Servant
Parlourmaid
Scullerymaid
Seamstress
Serv't Domestic
Serv't.
Serv, Dom.
Serv. Domestic
Servant
Servant (Domestic)
Servant - Domestic
Servant, Cook
Servant, Domestic
Servant, Gen'l.
Servant, Housemaid
Servant, Nurse
Servant, Nurse Maid
Servt, Domestic
Servt.
Servt. Gen., Domestic
Servt. M
Servt., Genl. Domestic
Srv't, Domestic
Under Gardener
Under House Maid
Under Nurse
Under Nurse. Dom. Serv.
Under-Coachman
Valet, Domestic S't.

TC – All those described as dressmakers, seamstresses and similar

Dress Maker
Dress Maker (Apprentice)
Dress Maker, Apprentice
Dressmaker
Dressmaker (Apprentice)
Dressmaker Appr'ce
Dressmaker's Apprentice
Gen'l Needlewoman
Needle Woman
Needlewoman
Plain Needle Work
Seamstress
Tailoress
Tayloress

TCJ – Trades and crafts (all those who were described as apprentice, assistant or journeyman, and those who could not be identified as a master or self-employed tradesman or craftsman)

Ap
Ap Cordwinder
Ap. Car.
App.
App. Bricklayer
App. Carpenter
App. Tailor
App. to Painter Etc.
Apprentice
Apprentice (Builder)
Apprentice Blacksmith
Apprentice Builder
Apprentice Carpenter
Apprentice Cordwainer
Apprentice Draper
Apprentice to a Draper
Apprentice to Bootmaker
Apprentice to Carpenter
Apprentice to Mason
Assist in House
Assist. Dress Maker
Assist. in Shop
Assistant
Assistant in Shop
Assistant to above
Baker
Baker & Confectioner
Baker J
Baker's Apprentice
Baker's Assist.
Baker's Assistant
Baker, Journeyman
Bar Maid
Barge Builder
Barmaid
Basket Maker
Beer Retailer
Black Smith
Blacksmith
Blacksmith (Apprentice)
Boatbuilder
Bonnet Maker
Bonnet Maker Etc.
Boot Binder
Boot Maker
Bootmaker
Boots
Boots, Domestic
Brewer
Brewers Assistant
Brewery Servant
Brick Burner
Brick Layer
Brick Maker
Bricklayer
Bricklayer (Apprentice)
Bricklayers Apprentice
Brickmaker
Builder
Builder Apprentice
Builder Assistant
Builders Ap
Butcher
Butcher & Farmer
Butcher's Assist.
Butcher's assistant
Butcher's Son
Buttoner
Cabinet Maker
Cardwinder
Carp'rs Appren'ce
Carpenter
Carpenter & Fly Driver
Carpenter & Joiner
Carpenter & Joiner Ap
Carpenter & Joiner J
Carpenter (apprentice)
Carpenter Ap
Carpenter Etc.
Carpenter J
Carpenter Unemployed
Carpenter's Apprentice
Carpenter, Apprentice
Carpenters Ap
Chair Mender
Chimney Sweep & Beer Retailer
Commercial Traveller
Confectioner
Cook
Cook - Domestic Servant
Cord Winder

Cordwainder
Cordwainer
Cordwinder
Corset Maker
Divis'l Carpenter HM C. Guard
Divisional Carpenter C. Guard
Draper
Draper & Grocer
Draper Outfitter
Draper's Assist't
Draper's Assist.
Draper's Assistant
Draper's Daur
Driver
Ecclesiastical Embroideress
Employed in Bakehouse
Errand Boy & Baker
Fancy Basket Maker
Fancy Knitter
Fancy Shop Assistant
Fancy Straw Worker
Farm Carpenter
Fishmonger
Foreman Builder
Gas Fitter
Gen Serv
Gen'l Domestic
Gen'l Servant
Gen. Servt., Dom.
General
General Servant
Glazier
Glazier (Apprentice)
Green Grocer's Assist.
Grocer
Grocer & Draper's Assist.
Grocer Etc.
Grocer's Apprentice
Grocer's Assist.
Grocer's Assistant
Hair Dresser
Helper
Helper to above
Helper, Domestic
Home Domestic
Home Helper
Hotel Sub Manager
House Carpenter
House Decorator Etc.
Housemaid
Inn Keeper
Inn Keeper's Wife
Innkeeper's Wife
Ironmonger
Ironmonger's Apprentice
Ironmonger's Assistant
Jobbing Mason
Joiner
Journeyman Baker
Journeyman Butcher
Kitchen Maid
Labourer
Lace Dealer
Learning Decorating
Lodging Ho Keeper
Lodging Ho. Keeper
Lodging House Keeper
Malter's Man
Mason
Mason J
Mason's App.
Mason's Apprentice
Miller
Miller's Boy
Miller's Man
Milliner
Milliner & Dressmaker
Milliner Etc.
Milliner's Assistant
Net Maker
Painter
Painter & Glazier Etc.
Painter & Plumber
Painter (Apprentice)
Painter etc.
Painter Plumber Etc.
Painter, Plumber & Glazier
Painter, Plumber, Glazier
Pantrymaid
Pastry Cook
Photographer
Plasterer
Plumber
Plumber & Gasfitter
Plumber & Glazier
Post Office Clerk
Postal Clerk
Postmaster's Assistant
Printer
Printer's Apprentice

Pub
Saddler
Saddler & Harnessmaker
Saddler (Apprentice)
Sadler
Sawyer
Scullerymaid
Servant
Servant, Inn
Shades Alten dant
Ship Carpenter
Ships Carpenter
Shipwright
Shoe Apprentice
Shoe Binder
Shoe M.
Shoe Maker
Shoe Maker's Wife
Shoebinder
Shoem. App.
Shoemaker
Shoemaker's Son
Shoemaker's Wife
Shop Assist.
Shop Assist. Confect'r
Shop Assist. to Father
Shop Assistant
Shop Draper's Assist.
Shop Keeper
Shop Maid
Sieve Maker
Smith
Stableman
Stay & Dress Maker
Stay Maker
Staymaker
Stocking Knitter
Straw Basket Maker
Straw Bonnet Maker
Straw Hat Maker
Straw Milliner
Straw Plait Maker
Straw Plait Worker
Straw Plaiter
Sweep
Tailor
Tailor App
Tailor J
Tailor's Improver
Tailor's Wife
Tailoress
Thatcher
Thatcher's Son
Under Maltster
Upholsterer
Upholsteress
Waitress
Wall Mason
Walling Mason
Watch M
Watch Maker
Watch-Maker
Watchmaker & Jeweller
Wheel Wright
Wheelwright
White Smith
Whitesmith
Wife Helper
Wife, Helper
Wooder (Woodman)
Woodman

TCM – Trades and crafts (all those who can be identified as masters, self-employed, working on their own account and/or employers of labour, including dealers)

A Miller
Agent To S.W.R. (Carrier)
Artif'l Flower Maker
Baker
Baker & Confect'r
Baker & Confectioner
Baker & Farmer of 90 acres
Baker & Grocer
Barber
Barge Builder
Basket Maker
Basketmaker
Bathing Machine Proprietor
Bill Poster & Newsagent
Blacksmith
Blacksmith & Toy Dealer
Boat Builder
Boatbuilder
Bonnet Maker
Book Seller, Rate Collector
Bookseller, Stationer
Bookseller, Stationer etc.
Boot & Shoe Maker
Boot Maker
Bootmaker
Brewer
Brewer (Manager)
Brewer's Manager
Brewer, Inn Keeper, New Inn
Bricklayer
Builder
Builder & Bricklayer
Builder & Contractor
Builder & Furniture Dealer
Builder & Mason
Builder Etc.
Butcher
Butcher & Farmer
Butchers Shop
Cab Propr. & Petroleum Dealer
Cab Proprietor
Cabinet M
Cabinet Maker
Carpenter
Carpenter & Builder
Carpenter & Inn Keeper
Carpenter & Joiner
Carpenter & Parish Clerk
Carpenter Etc.
Carrier
Carter
Cattle Dealer
Chemist
Chemist & Druggist
Chemist & Stat'r
Chemist & Stationer
Chemist, Stationer, Post Mast.
Chimney Sweep
Chimney Sweep & Beer Retailer
Chimney Sweeper
Coal Mercht.
Coffee Tavern Proprietor
Collector of Rates & Grocer
Common Carrier
Confectioner
Confectioner Etc.
Cooper
Cordwainer
Cordwinder
Distiller & Vinegar Maker
Draper
Draper & Grocer
Draper (Master)
Draperey & Berlin Wool Shop
Dress Maker
Dressmaker
Engraver
Fancy Business
Fancy Shop
Fish Monger & Gardener
Fishmonger
Fly Proprietor
Fruiterer & Green Grocer
Gas Manufactory Works Manager
General Dealer
General Grocer Employing 1 Boy
General Smith
Glazier
Green Grocer
Green Grocer & Publican
Green Grocer Etc.

Greengrocer
Grocer
Grocer & Baker
Grocer & Brewer
Grocer & Draper
Grocer & Stone Mason
Grocer (Shoemaker's Wife)
Grocer and Draper
Grocer Draper Etc.
Grocer Etc.
Grocers Shop
Hair Dresser
Hairdresser
Harness Maker
Hawker
Horse & Car Propriter
Hotel Keeper
Hotel Manager
Hotel Proprietor
House Decorator
Inn Keeper
Inn Keeper & Brewer
Inn Keeper & Corn Factor
Inn Keeper & Farmer
Inn Keeper & Fly Proprietor
Innkeeper
Innkeeper & Builder
Innkeeper & Mason
Innkeeper & Mast. Mariner
Ironmonger
Jobbing Gardener
Jobbing Mason
L'g Ho. Keeper
Lace Dealer
Landlord & Stone Mason
Laundress
Laundress Etc.
Licensed Publican
Lime Burner
Linen Draper
Linen Draper & Silk Mercer
Living on own means
Lodging H. Keeper
Lodging Ho Keeper & Dressmaker
Lodging Ho. Keeper
Lodging House Agent
Lodging House Keeper
Lodging hse Keeper
Maltster & Brewer
Manager of a Hotel
Manager of Gas Works
Manager, Gas & Water Works
Manager, Wine Merchant
Marine Store Etc.
Mason
Mason & Builder
Master Baker
Master Carpenter
Master Cooper
Master Mason
Miller
Milliner
Milliner & Dressmaker
Milliner Etc.
Min Water Manfr.
Min'l Water Manuf'r
Moss Vendor
Owner of Bathing Machine
Painter
Painter & Glazier Etc.
Painter & Plumber
Painter Plumber Etc.
Painter, Glazier Etc.
Painter, Plumber & Glazier
Painter, Plumber, Glazier
Pig Dealer
Plumber
Plumber & Gasfitter
Plumber & Glazier
Post Master
Postmaster
Postmaster & Parish Clerk
Poulterer
Proprietor of Hotel
Publican
Refreshment Room Keeper
Saddler
Saddler & Innkeeper
Seedsman
Ship Carpenter
Ship Owner & General Agent
Shirt Maker
Shoe M.
Shoe Maker
Shoemaker
Shop Keeper
Shop Manageress
Shopkeeper
Sieve Maker
Smith

Stationer
Stay Maker
Stone Mason & Publican
Stone Mason and Publican
Store Keeper
Straw Basket Maker
Straw Bonnet Maker
Straw Manufacturer
Straw Plait Worker
Straw Plaiter
Sub Post Master
Sub Post Master & Grocer
Sweep
Tailor
Taylor
Temperance Hotel Keeper
Thatcher
Thatcher & Gardener
Tinman
Tinplate Worker
Toy Shop Keeper
Vegetable Dealer
Watch Maker
Watchmaker
Watchmaker & Jeweller
Watchmaker etc. & Tobacconist
Wheel Wright
Wheelwright
Woodman
Woodsman

X – All occupations relating to the quarrying of stone

Ap
App.
App. Stone Mason
Apprentice
Apprentice [Mason]
Apprentice to Quarryman
Apprentice to Stone Mason
Apprenticed to Quarryman
Farmer & Stone Merch't
Foreman of Stone Masons
Foreman Stone Mason
Foreman Stonemason
Lab
Labourer
Marbeler
Mason
Mason (Stone)
Mason's Apprentice
Master Quarryman
Merchant
Quarrier
Quarrier & Stone Mason
Quarrier of Stone
Quarry Boy
Quarry Man
Quarryer
Quarryman
Quarryman & Baker
Quarryman & Grocer
Quarryman of Stone
Quarryman's Son
Scholar
Servant (Mason)
Son
Stone Agent
Stone Breaker, Quarry
Stone Cutter
Stone Cutter & Quarry'n
Stone mason
Stone Mason & Grocer
Stone Mason & Keeper of Post H
Stone Mason & Lodging H. Keep.
Stone Mason & Publican
Stone Mason & Quarryman
Stone Mason (App)
Stone Mason (Apprent.)
Stone Mason (Apprentice)
Stone Mason Ap
Stone Mason Apprentice
Stone Mason's Apprentice
Stone Mason's Son
Stone Mason's Wife
Stone Mason, Grocer, Etc.
Stone Merchant
Stone Mercht. Etc.
Stone Miner
Stone Quar
Stone quarrier
Stone Quarrier, Pauper
Stone Quarry'n
Stone Quarryer
Stone Quarryman
Stonemason
Stonemason Ap
Stoneminer

Z – General unskilled and labouring jobs, and including service occupations

2 Com. Dorset Militia
2d. Ostler
a Monthly Nurse
Acting Bombardier Royal Artil.
Agent
Army
Army P
Assist. Clerk L. Board
Assistant Teacher
Assurance Agent
Baker Boy
Baker's Boy
Bithring Woman
Brewer's Labourer
Brickbearer
Bricklayer's Lab.
Bricklayer's Laborer
Bricklayer's Labourer
Builders Labourer
Bus Driver
Butcher's Labourer
Cab Driver
Cab Driver [Groom]
Cabman
Cap'n Salv. Army
Caretaker
Carman
Carry Mortar
Cart Driver
Carter
Carter Boy
Carter, Clay Works
Casual Labourer
CC Secretary's Clerk
Certificated A.T. Nurse
Char Woman
Chare Woman
Charwoman
Clay Cutter
Clay Lab.
Clay Labourer
Clay Pit Labourer
Clay Pits Labourer
Clerk
Clerk in Coal Yard
Coach Porter
Coachman
Coal Porter
Coast Guard Pensioner & Lab.
Collector of Rates & Taxes
Commercial Traveller
County Police Constable
County Police Sergeant
Domestic
Draper's Porter
Driver
Engine Driver
Errand Boy
Errand Girl
Errand Lad
Evangelist
Foreman Labourer
Foreman Leather Glove Factory
Foreman of Clay Pits
Foreman of Labourers
Foreman Platelayer
Garden Lab
Gardener Lab
Gas & Water Fitter's Assist.
Gas Collector
Gas Works Stoker
Gen Serv
Gen Servant
Gen'l Labourer
Gen. Labourer
General Labour
General Labourer
General Midwife
General Serv
General Servant
Genl. Carter
Genl. Servt.
Grave Digger
Grocers Porter
Groom
Groom Etc.
Helper
Hostler
House Cleaning
House Work (Charwoman)
Ironmonger's Porter
Knitter
Knitter of Stockings
Knitting Woman
Lab
Laborer

Laborer in a Brewery
Labourer
Labourer (General)
Labourer (Unemployed)
Labourer at a Mill
Labourer General
Labourer, Carter
Labr.
Landress
Laundress
Laundress Etc.
Letter Carrier
Letter Sorter
Lieut. Salv. Army
Light Ho. Keeper
Local Bd. Labourer
Maid of all Work
Mail Man
Mason's Boy
Mason's Labourer
Masons Lab
Masons Laborer
Midwife
Monitor, Nat. School
Monitoress
Monitress in School
Monthly Nurse
Mother's Helper
Naval Pensioner & Labourer
Nurse
Nurse Girl
Nurse Maid
Nurse, Gen'l.
Nurse, Medical & Surgical
Occasional Nurse
Ostler
Parlour Maid
Pastry Cook
Plaster's Labourer
Plate Layer
Police Constable
Police Officer
Policeman
Poor Rate Collector
Porter
Porter with a Cart [Groom]
Post Boy
Postman
Postman Mess
Prudential Assurance Agent
Pupil Teacher
Pupil Tr.
Rail (SWR) Porter (Goods)
Railway Guard, S.W.R.
Railway Labourer
Railway Porter
Railway Station Master
Rd Lab
Retd. Mas. Mar. now Caretaker
Road Labourer
Roadman
Rural Postman
S.W. Rail'y Porter
S.W. Rail'y. Bk. Stall Keeper
S.W. Railway, Engine Driver
S.W. Railway, Shunter
S.W.R. Engine Driver
School Pupil Teacher
School Teacher
Scots Guards
Sergeant, Royal Artillery
Serv.
Servant
Servant Boy
Servant, Ostler
Sewing Mistress (Nat. School)
Shop Boy
Slaughter Man
Stableman
Steward
Strolling Artist
Student
Superintend. of M? Light House
SW Rail'y Signalman
SW Railwayman Signal'n
Teacher
Teacher in a School
Teacher in the Natl. School
Teachers Assistant
Telegraph Clerk
Toll Collector
Toll Pier Collector
Trained Sick Nurse
Verger of Parish Church
Waggoner
Washer
Washer Woman
Washerwoman
Working on the Road

Appendix Four

The two-state model estimator of mortality rates.

Assume that we observe a sample of N lives between exact ages x and $x+n$, during a defined period of calendar time. Assume further that all N lives are identical and statistically independent. The model does not require us to observe any of the lives for the complete age range between x and $x+n$: we can include in the analysis any life that is observed for at least part of the relevant age range during the period. This feature of the two-state model makes it appropriate for many investigations in historical demography using data created through nominal record linkage.

For $i = 1, \ldots, N$ define $x + a_i$ to be the age at which observation of the ith life starts, $x + b_i$ to be the age at which observation of the ith life must end if the life does not die, d_i to be an indicator variable such that $d_i = 1$ if the ith life is observed to die and $d_i = 0$ otherwise, and t_i to be a random variable such that $x+t_i$ is the age at which the ith life dies, if it is observed to die.

The model is formulated in terms of the *force of mortality* or the *intensity of the transition between the state 'alive' and the state 'dead'*. We assume that this force of mortality is constant between exact ages x and $x+n$ and denote it as μ.

If $d_i = 0$, then we observe ${}_{b_i-a_i}p_{x+a_i}$, the probability of surviving from age $x + a_i$ until age $x + b_i$. If $d_i = 1$ then we observe ${}_{t_i-a_i}p_{x+a_i}\mu$, the probability that the life survived from age $x + a_i$ for a period $t_i - a_i$ then died at exact age $x + t_i$. These probabilities can be expressed in terms of the transition intensity as follows:

$$ {}_{b_i-a_i}p_{x+a_i} = \exp\left(-\int_0^{b_i-a_i} \mu \, ds \right) $$

and

$$ {}_{t_i-a_i}p_{x+a_i}\mu = \exp\left(-\int_0^{t_i-a_i} \mu \, ds \right)\mu . $$

Now, define the *waiting time* for observation i, v_i such that

$$v_i = x + t_i - (x + a_i) = t_i - a_i$$

for lives who die and

$$v_i = x + b_i - (x + a_i) = b_i - a_i$$

for lives who do not die.

The outcome of the observation may then be re-written as

$$\exp\left(-\int_0^{v_i} \mu \, ds\right) \mu^{d_i} = \exp(-\mu v_i)\mu^{d_i}.$$

Now consider all N observations. The outcome of all N observations is

$$\prod_{i=1}^{N} \exp(-\mu v_i)\mu^{d_i} = \exp\left[-\mu(v_1 + \ldots + v_N)\right]\mu^{d_1+\ldots+d_N} = \exp(-\mu \sum_{i=1}^{N} v_i)\mu^{\sum_{i=1}^{N} d_i}.$$

This is the *likelihood* of all the observations.

To estimate μ, we maximise this likelihood with respect to μ by taking logarithms, differentiating, setting the derivative equal to zero and solving the resulting equation. Taking logarithms of the likelihood above produces

$$\log L = -\mu \sum_{i=1}^{N} v_i + \sum_{i=1}^{N} d_i \log \mu,$$

and differentiating with respect to μ gives

$$\frac{d \log L}{d\mu} = \sum_{i=1}^{N} v_i + \frac{\sum_{i=1}^{N} d_i}{\mu}.$$

Setting this to zero and solving for μ produces the maximum likelihood estimate

$$\hat{\mu} = \frac{\sum_{i=1}^{N} d_i}{\sum_{i=1}^{N} v_i}$$

which is simply the total number of deaths divided by the total waiting time.

To obtain the estimated value of ${}_n\hat{q}_x$ from $\hat{\mu}$, note that

$${}_n\hat{p}_x = \exp\left(-\int_x^{x+n} \hat{\mu}\, ds\right)$$

and

${}_n\hat{q}_x = 1 - {}_n\hat{p}_x$.

The standard error of the estimate, SE($\hat{\mu}$) is, approximately, given by $\sqrt{\frac{\hat{\mu}}{\sum_{i=1}^{N} v_i}}$, and so 95 per cent confidence intervals around the estimate can be constructed as $\hat{\mu} \pm 1.96\sqrt{\frac{\hat{\mu}}{\sum_{i=1}^{N} v_i}}$.

By evaluating ${}_n\hat{q}_x$ using both the lower and upper 95 per cent confidence bounds for $\hat{\mu}$, a corresponding 95 per cent confidence interval for ${}_n\hat{q}_x$ is produced.

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