

**FAMILY and COMMUNITY in a  
SMALL INDUSTRIAL TOWN:  
HATHERSAGE in the  
NINETEENTH-CENTURY**

Thesis submitted for the degree of  
Doctor of Philosophy  
at the University of Leicester

by

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(January 2018)

# Abstract

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## **Family and Community in a Small Industrial Town: Hathersage in the Nineteenth-century**

**by Christopher Douglas Side**

This thesis focuses on one north Derbyshire township and its response to industrialization. Wire-drawing was just one of the crafts practiced in the Hope valley but chance played a part in the development of needle-making factories and workshops in the village of Hathersage. The role of chance in the conduct of the business and particularly in its total collapse by the end of the century is discussed. The relationship with the Arrow Valley where needle-making was more enduring and the development of needle-making in England is documented.

The effects of transient industrialization on a relatively stable land based economy were investigated but in general, changes in demographic parameters followed national trends. For example, mean household size declined with a decrease in fertility. Changes in co-resident kin suggested more local influences. Potential care pathways for the elderly were examined in detail suggesting low levels of isolation. Women and children employed in the metal trades providing labour elasticity and occupational health risks are examined revealing a real improvement of life expectancy in needle-grinders. Migrational behaviour changed little throughout the nineteenth century; the exception being the accelerated migration of metal workers northwards as the local industry declined. Transport links between Hathersage and larger towns such as Manchester and Sheffield remained primitive until the railway was opened in 1894. This late appearance importantly contributed to the needle industry's decline. The two events

were pivotal in demographic changes and alterations in social mix which occurred in Hathersage as the twentieth century dawned. Hathersage became less self-contained.

The detailed account of the metal industry in Hathersage during the nineteenth century is important and timely as there is a risk that its existence might otherwise fade into obscurity.

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# Acknowledgements

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My greatest debt is to the unfailing support of my supervisor, Professor Keith Snell. His kind interest in my subject, attention to detail and willingness to let me pursue the project without unnecessary interference has been invaluable. I am also grateful for the encouragement and advice of the late Professor David Hey at the beginning of the project and Dr Bernard Attard towards the end, also to Professor Steve King for his role of caretaker supervisor.

I am indebted to the many helpful librarians and archivists in all the libraries and record offices that I have visited, in particular to the staff of the Derbyshire Record Office at Matlock where I spent many days. Also to Stella McGuire who most generously granted me access to her personal collection of material relating to Hathersage and who sadly died in September 2017.

My lasting gratitude and love to my wife, Sarah, who has allowed me time to pursue my studies, dispensed endless encouragement and patience and has tolerated the proliferating volume of books and papers which have long escaped from my study.

# Abbreviations and Conventions

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*Censuses*: Unless otherwise stated, references to *the censuses* should be taken as referring to the CEBs for Hathersage and Outseats for the years 1841 to 1911 inclusive.

*Dependant/child*: An individual living in a household with at least one parent. No distinction is made on the basis of age or earning status.

*Hathersage*: Unless specifically stated, 'Hathersage' should be taken to include the adjoining township of Outseats.

b.	Date of birth (or baptism)
b.a.	Approximate date of birth
B.M.J.	British Medical Journal
CEBs	Census enumerators' books
DRO	Derbyshire Record Office
GD	Grinders' Disease (silicosis)
IGI	International Genealogical Index
LPS	Local Populations Studies
LRO	Lichfield Record Office
MHS	Mean household size
SA	Sheffield Archives
SARI	Sheffield and Rotherham Independent (Newspaper)
SIYDA	The Sheffield Independent and Yorkshire and Derbyshire Advertiser (Newspaper)
TB	Tuberculosis
TMP	The Morning Post (London Newspaper)
WYA	West Yorkshire Archive Service, Leeds

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# Chapter 1. Introduction.

William Ibbotson and his wife Hannah lived at Moscar Farm, Hathersage in northern Derbyshire at the end of the eighteenth century. William was a carrier, carting millstones to Sheffield and bringing supplies from that town to the Hope Valley. Perhaps over a glass of ale with men he knew in Sheffield he was encouraged to try wire-drawing, ‘there being money in it’. He set up in an underused barn on his farm, possibly with the help of Thomas Cocker who was a tenant on the same estate. Thomas had married William’s sister, Ann, and his grandfather had once been apprenticed as a wire-drawer in neighbouring Bamford. Later, William moved to Sheffield founding the Globe (steel) Works which still stands today. This tale appears in an anonymous account of the Ibbotson family lodged in Sheffield Public Library. Could it be how the wire-drawing and needle-making industry in Hathersage started?<sup>1</sup>

Looking at Hathersage today from Stanage Edge or Surprise View on the A6187 reveals a village of some 2000 souls living peaceably beneath clear air surrounded by protective high moorland with the Derwent River quietly skirting the south of the village on its way southwards to join the River Trent. Figure 1.1 shows a modern view of Hathersage. Two hundred years ago, though somewhat smaller, the impression would have been the same, but for a hundred years in between the inhabitants were overtaken by an industry based on turning steel wire into hackle-pins and needles of different lengths and diameters. For the second part of the nineteenth century the valley would have been blanketed by a cloud of smoke and the noise of steam engines and grinding wheels would have been audible near the brooks. Transient industrialisation in itself is perhaps not an uncommon phenomenon. Since the Second World War, Britain has experienced de-industrialisation on a massive scale and many textile mills, heavy manufacturing plants and coal mines have vanished from the landscape. A significant number remain as half hidden relics for industrial archaeologists to seek out or have been converted to other uses such as dwellings or retail outlets. A search of the streets

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<sup>1</sup> This story bears an uncanny resemblance to one told by Rosamond Meredith, but the subject of her tale is William Ibbotson two generations earlier at Netherhurst, though there is a possibility that both William and his grandson were part-time carriers. Meredith, R., *Farms and Families of Hathersage Outseats, Derbyshire from the 13th to the 19th Century* (Sheffield, 1981), p. 55.

and lanes of Hathersage will reveal something of all but one of the nineteenth-century needle factories.



**Figure 1.1.** Hathersage looking south-west from SK 242 824. (Photographed by CS, May 2015.)

What went on here? Early enquiry was unrewarding, there is no mention of wire-drawing in the standard texts relating to the industrial revolution and needle-making appeared to be confined to the Redditch area where it continued into the twentieth century.<sup>2</sup> These questions were intriguing and became more so when it was appreciated that, almost certainly, there was no extant account of the history of the Hathersage factories. What could be discovered and construed from largely demographic records and could such investigations result in a worthwhile research project? Hathersage was judged to present a worthy research opportunity because it was a relatively self-contained community and the manufactured product type was unique in the region.

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<sup>2</sup> See footnote 22.

Joan Thirsk remarked upon the diversity of economic and social change in the countryside during the sixteenth and seventeenth centuries and how communities became increasingly interactive and reliant on neighbouring townships or regions.<sup>3</sup> In so doing, some uniformities developed, which have perhaps extended into much more modern times. The rise of industry in the countryside transformed English society.<sup>4</sup> But this process was slow and patchy. Indeed, the industrial revolution cannot be viewed as a distinct episode in history with a defined beginning and end. Upon close enquiry the extent of uniformity, or the degree of diversity, existing in the eighteenth and nineteenth centuries appears to be more assumed than proven; there have been only a small number of in-depth micro-historical studies of communities.<sup>5</sup> Brad Gregory rightly cautions against the practice of declaring a locality as typical or representative of a region or state.<sup>6</sup> On two counts, therefore, more studies are needed; not to confirm a consensus but to assess the degree of diversity. Such a need demands an open approach to investigation perhaps less fashionable than hitherto.

But what is micro-history? Carlo Ginzburg discusses the history and varying nuances derived from the minutely detailed study of the final charge at Gettysburg, an event lasting 20 minutes, to a more modern interpretation approximating to local history but reliant on qualitative material rather than quantitative data.<sup>7</sup> The importance of micro-history, suggests Gregory, is twofold; to highlight the importance of ordinary people

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<sup>3</sup> Thirsk, J., *The Rural Economy of England* (London, 1984), pp. ix-x.

<sup>4</sup> Rollison, D., *The Local Origins of Modern Society: Gloucestershire 1500-1800* (London, 1992), p. 1.

<sup>5</sup> Spufford, M., *Contrasting Communities: English Villages in the Sixteenth and Seventeenth Centuries* (Cambridge, 1974), Reay, B., *Microhistories: Demography, Society and Culture in Rural England 1800-1930* (1996, Cambridge, 2002), Anderson, M., *Family Structure in Nineteenth-century Lancashire* (Cambridge, 1971), Levine, D., *Family Formation in an Age of Nascent Capitalism* (London, 1977), Robin, J., *Elmdon: Continuity and Change in a North-west Essex Village, 1861-1964* (Cambridge, 1980), Sharpe, P., *Population and Society in an East Devon Parish: Reproducing Colyton, 1540 -1840* (Exeter, 2002).

<sup>6</sup> Gregory, B., 'Is small beautiful? Micro-history and the history of everyday life', *History and Theory*, 38 (1999), p. 108.

<sup>7</sup> Ginzburg, C., 'Micro-history: two or three things that I know about it', *Critical Inquiry*, 20, (1993), pp. 10-35.

and to emphasise the uneven nature of such processes as industrialization.<sup>8</sup> Micro-history acknowledges the contribution of common people to the development of processes rather than the processes being orchestrated by abstract concepts such as the state or markets. There is a freedom in micro-history in two respects. First, it permits economic, social and demographic aspects of a community to be studied simultaneously, and secondly it allows a variety of methodological approaches, both qualitative and quantitative, to be used. However, this freedom places a heavy burden upon the investigator in that mastery of several disciplines is necessary and considerable care in interpretation is required. While to the local historian the individual rather than society is the focus of attention, the ultimate aim for many historians is to bring local history back to the macro level through the generalization of many related events. A further variation of micro-history is where historians seek to recapture the experiences of the ordinary man and woman ('everyday life') as opposed to systemic micro-historians who 'strive to reconstruct social relationships as a basis of explaining historical change'.<sup>9</sup> The former is more applicable to oral history and investigations involving personal letters and diaries which is not the case in the current investigation which relies predominantly on demographic data. Gregory rightly warns of the dangers of construing experience from demographic and familiar records.<sup>10</sup> Everyday life is the minutiae of an individual's interaction with the landscape and everything contained within it of which the individual is a part, and this includes many other people.

So, this research can be described as micro-historical in that an individual locality is studied, using principally demographic and familial records in an attempt to understand the relationship between individuals, one with another, and their relationship with the process of industrialization and de-industrialization and with the wider world. On occasions it also seeks to compare the characteristics with other communities at a similar time, though of differing characteristics, for example, predominantly agricultural or predominantly textile manufacturing communities.

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<sup>8</sup> Gregory, 'Is small beautiful?', pp. 100-110.

<sup>9</sup> *Ibid.*, p.104.

<sup>10</sup> *Ibid.*, 'Is small beautiful?', p.107.

Richard Jones has argued that even such a widespread phenomenon as the formation of nucleated villages might have begun, at an individual level, as a minor event so inconsequential as to leave no written or archaeological trace.<sup>11</sup> Enid Hunt in her description of household size and structure in Bassingham describes several similar communities used for comparison, yet each is slightly different in one or more characteristics.<sup>12</sup> Similarly Pat Hudson and Steven King found marked differences in the demographic characteristics of two Yorkshire townships.<sup>13</sup> The exact circumstances at any time in the two communities were different. The organic mix of influential vectors for change in each place was unique and we must expect the reaction to that stimulus, the process of change and the resultant new mix to be unique also. Peter Ashdown suggests that chance operates as a contributor to historical events and provides six twentieth-century examples where chance was a major if not the major factor in the eventual outcome.<sup>14</sup> Historians should be aware that observed differences may be the result of chance events or occurrences rather than the ordered, logical or inevitable sequences. Indeed one might go so far as to suggest that most historical events occurred by chance, the unique combination of circumstances and emotions in the minds of a chance assemblage of people at a unique instant in time.<sup>15</sup> So it is that we might accept the suggestion that the history of the Hathersage community in the long nineteenth century largely depended upon the chance arrival in Hathersage of Samuel Cocker in the early eighteenth century, or the possible discussions over a beer in Sheffield after William Ibbotson had brought millstones from a Hathersage quarry which led him to attempt wire-drawing in an under-used barn. Or, if the Cook brothers

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<sup>11</sup> Jones, R., 'The village and the butterfly: nucleation out of chaos and complexity', *Landscapes*, 1 (2010), pp. 25-46.

<sup>12</sup> Hunt, E., 'Household size and structure in Bassingham, Lincolnshire, 1851-1901', *LPS*, 75 (2005), pp. 56-60.

<sup>13</sup> Hudson, P and King, S., 'Two textile townships, c.1660-1820: A comparative demographic analysis', *Economic History Review*, 53 (2000), pp. 706-41.

<sup>14</sup> Ashdown, P., *Fate, Chance and Desperate Men* (Brighton, 2009).

<sup>15</sup> A more detailed discussion of the relative merits and implications of determinism and the accidental view of history is inappropriate here. Carr's lecture provides a balanced account. Carr, E., *What is History?* (1961, Harmondsworth, 1965), pp. 87-108.

had not pitched-up in the early nineteenth century needle-making might have remained a minor part of the village economy.

Having made a decision concerning the type of study it is necessary to state the main questions which might be answered during the course of the research. The most obvious are how and why did wire-drawing and needle-making start up in Hathersage? Why did they fail? Was this a matter of bad luck, incompetence or inevitable economic pressures? What factors were prominent? This line of questioning immediately raises the fundamental philosophical question in history: is the path of history inevitable, largely or entirely dependent upon what has gone before or is it predominantly determined by chance encounters and random events? This debate was conducted in the 1990s between E.H. Carr and Isaiah Berlin.<sup>16</sup> Berlin took the view that chance dominated in the creation of history which craves consideration of possible alternative courses.<sup>17</sup> Carr, on the other hand, held the position that it was inappropriate for historians to speculate on *what might have happened if...* and felt they should restrict themselves to reporting what actually happened. Further, that the historian is duty-bound to bring all 'knowable facts relevant to his/her theme and to ensure that they are accurate'.<sup>18</sup> He also argued that everything that happens has a cause or causes and could not have happened differently.<sup>19</sup> The difficulty is that the causes are not always now obvious. The historian may mistakenly associate a particular cause with a particular effect. What might seem a valid connection looking back from 2017 may not have been at all visible or connected to the players at the time, or there may have been some other factors, hidden from us now, but far more pressing in the contemporary milieu. The history of Hathersage during the nineteenth century seems to have evolved through a series of chance happenings; while in hindsight some episodes might appear to have been predictable or even inevitable. It is unlikely that the experience and the

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<sup>16</sup> Talbot, A., 'Chance and necessity: E.H. Carr and Leon Trotsky compared', *Historical Social Research*, 34 (2009), pp. 88-96.

<sup>17</sup> Berlin, I., 'Historical inevitability' in *The Proper Study of Mankind, an Anthology of Essays* (1997, New York, 2000), pp. 119-190.

<sup>18</sup> Carr, E., *What is History?* p. 28. The debate is perhaps not as clear cut as Talbot might suggest. 'What is History?' is a series of lectures in which Carr discusses several approaches to history and their relative merits which became fashionable over the years.

<sup>19</sup> *Ibid.*, p. 93.

knowledge of the participants would have allowed them to make such predictions then and thus they would have been denied the opportunity to influence or change the future.

A major part of the work is directed at answering questions relating to the lives of the people living within the parish of Hathersage. How did they change, if at all, in response to the rapid industrialization and its equally rapid demise? Because of the nature of the records available this is predominantly confined to demographic indicators. More interesting would be to be able to determine the extent to which the villagers colluded with industrialization or whether they felt it was something 'done to them'. Personal diaries, oral history and fictional writing are the usual sources which allow the historian access to such nuances. For Hathersage in the nineteenth century no such material has been identified.

Did the genesis of the relatively small Hathersage needle-making industry, and later its demise, fit with the established view of the industrial revolution and were the mill owners just lesser images of better known figures such as Arkwright, Wedgewood, Watt and Brunel who endured in the historiography of the Industrial Revolution as entrepreneurs, men of vision or business acumen. Or, did they fundamentally differ in their aspirations and behaviour? Who were they, anyway? Did the history of Hathersage present an opportunity to study the interactions of industry and community at close quarters? Lastly, needle-making continued well into the twentieth century in Warwickshire. One has to ask the question whether advancing technology perversely contributed to the ending of needle manufacture in Hathersage? Was needle-making a process uniquely suited to pre-industrial techniques and which became increasing a niche activity during and after the Industrial Revolution?

In order to build a picture as near to the truth and in sufficient detail to ensure this was the case, as is the prime reason for engaging in academic research, no document or other evidence was excluded without due consideration.<sup>20</sup> In reality, primary sources were confined to universally available demographic documents such as parish records and the 1841-1911 censuses.

The Anglican parish records for Hathersage are available on microfilm and in original form and for the years of interest were transcribed to an Excel spreadsheet. The records

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<sup>20</sup> Hardy, G., *A Mathematician's Apology* (1940, Cambridge, 1992), p.79.



appeared to be complete and in good condition. From 1813, baptism records included the name of the mother, father including occupation and an abbreviated address; usually the village, farm or district of Hathersage. Similarly, from 1813, burial registers included an age at death and an abbreviated address though the latter was sporadic until 1837. Marriage records included address of bride and groom, groom's occupation and fathers' names and occupations from 1837. Roman Catholic baptisms were also available from 1822-1872. This also included the names of God-parents.

Unfortunately, enquiries as to the existence of earlier and later Catholic registers held locally went unheeded. Any transcription errors of these records are the responsibility of the present author. Occasionally, it was helpful to obtain details from parishes other than Hathersage and this was achieved via [www.familysearch.org](http://www.familysearch.org) which contains printed transcriptions of the records of many, but not all English parishes. These records are subject to transcriber error, early records being particularly difficult to read. However, it is understood that the transcriptions were at least checked by a panel of transcribers rather than a single person.

Considerable use was made of the Civil Registration Index of births, marriages and deaths for England and Wales, transcribed and made available at [www.freebmd.org.uk](http://www.freebmd.org.uk). This was useful in tracing individuals who had migrated from Hathersage. Early Civil registrations were known to be incomplete, especially birth registration.

Census records for Hathersage, 1841 to 1911, were transcribed to an Excel spreadsheet by the author from the images of CEBs available from [www.ancestry.co.uk](http://www.ancestry.co.uk) which enabled a high degree of accuracy. Tracing Hathersage born individuals following migration involved reliance on Ancestry.com transcribers who compiled data for their online search engine. Transcription and interpretation errors are common but familiarity with the Hathersage population accumulated during the study allowed many of these errors to be circumvented. There were small changes in the boundaries of Hathersage and Outseats during the nineteenth century but no corrections have been made for this due to the difficulties experienced in mapping one census with the next.

Nineteenth Century British Library Newspapers, available online, were used to identify reports concerning members of the community and events within Hathersage. The common man was more frequently represented in press reports printed in the local and occasionally national newspapers. The whole of the nineteenth century was searched

using the search-word 'Hathersage'. Although this produced thousands of entries, restricting the search by, for example excluding 'advertising' would have missed important events such as factory sales and auctions. Events were commonly reported in more than one publication or in several editions. These thousands of entries were reduced to 1065 potentially useful reports and some of these have been quoted in this volume. The search engine appeared to be inconsistent, however, and some relevant material might have been overlooked.

The catalogues of TNA, Matlock (Derbyshire County) Archives and Sheffield Archives were searched for potentially relevant material which included leases, personal documents, pole lists, Bakewell Petty Sessions, and various leases. There is an extensive collections of Derbyshire wills held at Matlock Archives and some of these were selected for further study. Many of these documents were photographed for future reference. Documents quoted in this study and listed in the bibliography. Documents not identified are worthy of mention because their absence has constrained the extent of this work. No church warden's records or accounts have been discovered and therefore no information relating to those in receipt of alms could be obtained. Bakewell Poor Law Union records were restricted to administrative business such as appointment of medical officers and arrangement of celebratory dinners. No registers of admissions or discharges could be found. There was a short register of parish apprentices (1800-1827) and this is referred to in chapter 5. These absences severely limited the scope of the investigation with respect to health and welfare. Similarly, school attendance and education remained obscure.

Most importantly and disappointingly, there were no accounts, order books, notebooks, or staff records relating to any of the needle-making factories during the nineteenth century. All that seems to have survived was an early twentieth-century account book relating to the Cook manufactory after it had ceased to trade, which was held by Leeds Archive, and a short list of residual tools and stock at the Barnfield works. Most the information concerning the conduct of the factories was gleaned from press reports, the accuracy of which might be questioned. The absence of such records prevents any economic history of the factories from being made; no data was available to assess markets, sales figures, number of workers or wages. Hints come from press reports and

the few published personal letters of Joseph Cocker. As a result, the study is more about the people of Hathersage during a period of transient industrialization.

Hathersage was small enough for a historian to become familiar with individual inhabitants and follow them through their lives. The importance of such familiarity in achieving accurate record linkage cannot be over-emphasised. But this very smallness can be viewed as limiting the validity that comes with large numbers and risks criticism on the grounds of being 'too small to be relevant'. Small size studies increase the chance of a false conclusion being drawn. Quantitative comparisons of small samples of a large population are characterised by a large standard error, wide 95 percent confidence limits and the inability to draw firm conclusions. They may be prone to bias. We will see in chapter 4 that one family in intermittent residence in the village of Chute (Wiltshire), with many co-resident kin and a sizeable retinue of servants distorted household size and content figures. This was not the case in Hathersage, however. The resident 'lord' was head of a small family and employed few servants. The village was remarkably homogeneous both in family structure and social class and remained so throughout the nineteenth century.

Small size studies are valuable on two counts. First, they allow a high degree of accurate detail, for example, in record linkage, and secondly many small similar studies reveal a range of alternative scenarios and provide an insight into the breadth of human behaviour at that time. Large regional or super-regional studies, rather than providing a definitive description of change or development, may result in an average or achromatic view. Is it more interesting to describe the height of a population of individuals as 'averaging 165cms' or 'ranging from 147 to 200cms'? The former is a single derived quantity which may apply to no-one. The second leads to a host of interesting possibilities for further enquiry. Local history has the power to demonstrate the diversity of the human response to natural and societal situations which is invisible in regional and national studies. There is a place for both approaches in history. The recurring dichotomy relating to the approach to history is aired by Andy Wood, though to a slightly earlier period.<sup>21</sup>

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<sup>21</sup> Wood, A., 'Small places, big questions: reintegrating social and economic history, c.1350-1750' in Bowen J. and Brown A. (eds), *Custom and Commercialisation in English Rural Society* (Hatfield, University of Hertfordshire Press, 2016), pp. 250-265.

'The Big History approach currently advocated might well illuminate the growing dominance of a capitalist world order, but it does so by crushing small places and subaltern people under its grinding wheels.'

The description and interpretation of the history of Hathersage presented in the following pages explores the people, their relationships and the events initiated from both within the community and from without which might explain how the course of that history evolved during the nineteenth century in the way it did. First, the history of wire-drawing and needle-making in England is described from various secondary sources in chapter 2. A mention of pin making is made, superficially similar to needle manufacture, but quite separate in its evolution and geographical distribution. This section concludes with an attempt to place needle-making in the context of the Industrial Revolution. An explanation is offered as to how wire working played an important role in the progress of the industrial revolution, a fact hitherto unrecognised in the literature.<sup>22</sup> In chapter 3 Hathersage is presented in its setting of the Hope valley in north Derbyshire both in geographical terms and occupational diversity. Despite the industrialization few aspects of the industrial revolution would immediately have impinged upon the community. The most obvious would have been transport, agriculture and the introduction of the factory in which metal working was carried out. The history of the needle making factories in Hathersage are described in some detail.

Chapter 4 describes some major demographic markers which might be expected to be influenced by major occupational change within a community and particularly the response to unemployment and possible increased migration from the village. Age at marriage, family size and care of the elderly are significant contributors with comparison with communities in other parts of England drawn from published material. Mortality is considered in chapter 6 together with the particular disease conditions

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<sup>22</sup> There is no mention of wire-drawing in any of the following authoritative texts on the industrial revolution: King, S and Timmins, G, *Making Sense of the Industrial Revolution* (Manchester, 2001), Griffin, E, *A Short History of the British Industrial Revolution* (Basingstoke, 2010), Mathias, P., *The First Industrial Revolution: An Economic History of Britain, 1700-1914* (1969, London, 1983), Landes, D., *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present* (Cambridge, 1969), Stobart, J. and N. Raven, *Towns, Regions and Industries: Urban and Industrial Change in the Midlands, c.1700-1840* (Manchester, 2005).

related to needle-making. The following chapter deals with migration of families into Hathersage as the manufactories grew and away from the area when the work force declined. Migratory behaviour of the factory workers is contrasted with that of agricultural workers and servants.

The concluding chapter brings the foregoing data together and provides a coherent summary of the nineteenth-century history of Hathersage in relation to the metal working industry which grew and died in its midst during that time. Major influences are highlighted and evaluated as inevitable or chance happenings. A subjective assessment of how well the project has answered the original research questions is offered and suggests areas where further work may be of value.

## Chapter 2. A Short History of Wire-drawing and Needle-Making.

This chapter describes the history of wire-drawing, needle-making and pin-making in some detail. These activities have received little attention in formative education and research in contrast to the textile industry. Similarly, the development of steel-plate production and the adoption of coal as an energy source, both vital to the progress of the industrial revolution, have overshadowed the importance of steel-wire. In terms of volume, plate-steel and cast iron outstripped wire production. Wire lacks the aesthetic appeal of fine porcelain and the fascination of mobile steam engines. Both wire-drawing and needle-making were activities which were carried out by scores of small groups of craftsmen in workshops and small factories headed by modest men. Generally unrecorded in history and very different to the flamboyant entrepreneurs who made large amounts of profit and embellished the landscape with their workplaces and grand residences. Nevertheless, wire was an important element of industrial progress and essential to advanced textile manufacture; it is these ordinary wire-workers and owners who are the subject of this work.

In the early-modern period iron wire was used for bird cages and sieves for grading various ores. Short, stiff, bent wires (hackle-pins) set in a wooden board were used widely for carding wool. As the textile industry became mechanised hackle-pins were incorporated into the machines, so that production moved from local craftsmen to factory-based workers capable of vast output. During the nineteenth century iron wire was used more widely, in ways which made it essential for economic growth. Examples are haulage and mooring cables in rail and maritime transport, in mine-head gear, and fencing and straw bale binding in agriculture. Copper and alloy wires were essential for electrical transmission and communications, including trans-Atlantic cables. Although pins were traditionally made of brass whereas needles were made of steel, the methods used in their manufacture were not dissimilar. For this reason some historical aspects of pin-making are included in this chapter, while otherwise pins remain outside the scope of this investigation.

We can conclude that wire played an important part in the industrial revolution. It was not a key component but was certainly important enough to deserve further historical research.

## Early History

An early mention of the use of wire appears in the Bible: ‘And they did beat the gold into thin plates, and cut it into wires, to work it the blue, and in the purple, and in the scarlet and in the fine linen...’.<sup>1</sup> Almost certainly this describes the cutting up of beaten gold leaf into thin strips though we do not know if the result was flat ribbons or rolled or twisted into rounded thread. Thin strips could be *rounded* by twisting into spirals, either in the form of an open tube or twisted round a thread of silk to provide strength.<sup>2</sup> Both forms were used in jewellery making. The Egyptians are thought to have rolled thin strips by drawing through a small hole. This is evidenced by microscopic longitudinal lines or scratches in gold wire used in jewellery of this period.<sup>3</sup> However, it was impossible to maintain any uniformity with these methods.

More consistent wire of round cross-section was produced by pulling metals through round holes of progressively smaller diameters in what is called a draw-plate an early example of which is shown in figure 2.1. The first written description is by Theophilus writing in 1122: ‘Two iron [plates] three fingers wide, narrow at the top and bottom, thin throughout and pierced with three or four rows of holes [of diminishing size] through which wires may be drawn’.<sup>4</sup> The lack of detail in this description compared with other processes is taken by some to suggest that wire-drawing was so commonplace at this time as not to require further comment.<sup>5</sup> Archaeological evidence

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<sup>1</sup> *The Holy Bible*. Authorised Version. Exodus, 39 v3.

<sup>2</sup> Campbell, M., ‘Gold, silver and precious stones’, in Blair, J. and N. Ramsay (eds), *English Medieval Industries* (London, 1991), p. 133.

<sup>3</sup> Newbury, B. and Notis, M., ‘The history and evolution of wiredrawing techniques’, *Journal of the Metals and Materials Society*, 56 (2004) p. 35, (figure 3).

<sup>4</sup> Hawthorne, J. and Smith, C., *Theophilus: On Divers Arts - The Foremost Medieval Treatise on Painting, Glassmaking, and Metalwork* (New York, 1979), p. 87.

<sup>5</sup> Newbury and Notis, ‘History and evolution’, p. 34.

in the form of a draw-plate 1100 to 1200 years old suggests that wire-drawing dates from at least the Viking period. The possibility of Anglo-Saxon wire-drawing was raised by the finding of a bar with graduated holes in a smith's grave at Tattershall (Lincolnshire).<sup>6</sup> The drawn wire from early periods was almost certainly non-ferrous. Another possibility is that early drawplates were in fact nail plates where hammered nails were forced through round holes to improve their uniformity.<sup>7</sup> Iron needles recovered from Coppergate in York date from the ninth or tenth centuries.<sup>8</sup> However, metallurgical analysis has found that the degree of impurity and their low carbon content would make drawing unlikely. The tensile strength of iron is 50 times that of tin, such that 23Kg of force would be required to draw a wire of 1mm<sup>2</sup> cross-section at room temperature. Further the internal slag and scale found in these specimens would have increased the likelihood of fracture on drawing.

Evidence from diverse sources suggests that wire-drawers were widespread over England in the fourteenth and early fifteenth centuries. York was known for the making of wire-cards for the carding of wool and the 1300 register of freemen of York lists 'Rad, of Nottingham', a 'wire dragher'.<sup>9</sup> Schubert found mention of a 'Robertus le Wirdrawere', assessed at 10 shillings in a Roll of Taxes for the St-Mary-le-Port district of Bristol dated 16<sup>th</sup> December 1312.<sup>10</sup>

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<sup>6</sup> Hinton, D., 'A smith's hoard from Tattershall Thorpe, Lincolnshire: a synopsis', *Anglo-Saxon England*, 22 (1993), pp. 147-66, Hinton, D., *A Smith in Lindsey: The Anglo-Saxon grave at Tattershall Thorpe, Lincolnshire*. The Society for Medieval Archaeology, 16 (London, 2000) pp. 26-31. The find was a rectangular bar, burred at one end, the other tapering to a point. There are five holes, countersunk on one side and opening into a three mm deep groove on the other side of the bar. The holes were four, one, three, four and six mm in diameter.

<sup>7</sup> Riley, D., personal communication 13/2/2012.

<sup>8</sup> Ottaway, P., 'Anglo-Scandinavian ironwork from 16-22 Coppergate' in Addyman, P. (ed.) *The Archaeology of York, 17: The Small Finds* (London, 1992), p. 693. 19 objects, both pins and needles were found; the pins were mostly non-ferrous and were thought to have been used for fixing garments. Awls were also found with a diamond shaped cross-section at the pointed end.

<sup>9</sup> In Kenworthy, J., *Wire-drawing: an ancient craft in the Thurgoland district* (n.p., n.d.), p. 4. Wartle or wortle or wirtil or wardle being local terms for drawplate.

<sup>10</sup> Schubert, H., 'The wire-drawers of Bristol, 1312-1797', *J. Iron and Steel Institute*, 159 (1948), pp. 16-22.



It has not been possible to gain permission to publish this image, but it can be viewed at: (correct on 30.5.2018).

[http://www.futuremuseum.co.uk/collections/people/lives-in-key-periods/the-medieval-period-\(1100ad-1499ad\)/life-in-the-middle-ages/drawplate-for-wire-working.aspx](http://www.futuremuseum.co.uk/collections/people/lives-in-key-periods/the-medieval-period-(1100ad-1499ad)/life-in-the-middle-ages/drawplate-for-wire-working.aspx)

**Figure 2.1.** A twelfth-century rectangular iron drawplate.

It measures 120mm by 60mm. X-radiography of the plate revealed three lines of holes ranging from 3.5 to 1.2mm on the long axis of the plate. A cut short-cross silver halfpenny of Henry II or III is trapped on the surface of the plate by corrosion. Excavated at Whithorn, Wigtownshire. Housed at Stranraer Museum.

Image source:

[http://futuremuseum.co.uk/Collection.aspx/life\\_in\\_the\\_middle\\_ages/Object/drawplate\\_for\\_wire\\_working](http://futuremuseum.co.uk/Collection.aspx/life_in_the_middle_ages/Object/drawplate_for_wire_working) (accessed 4.11. 2011)

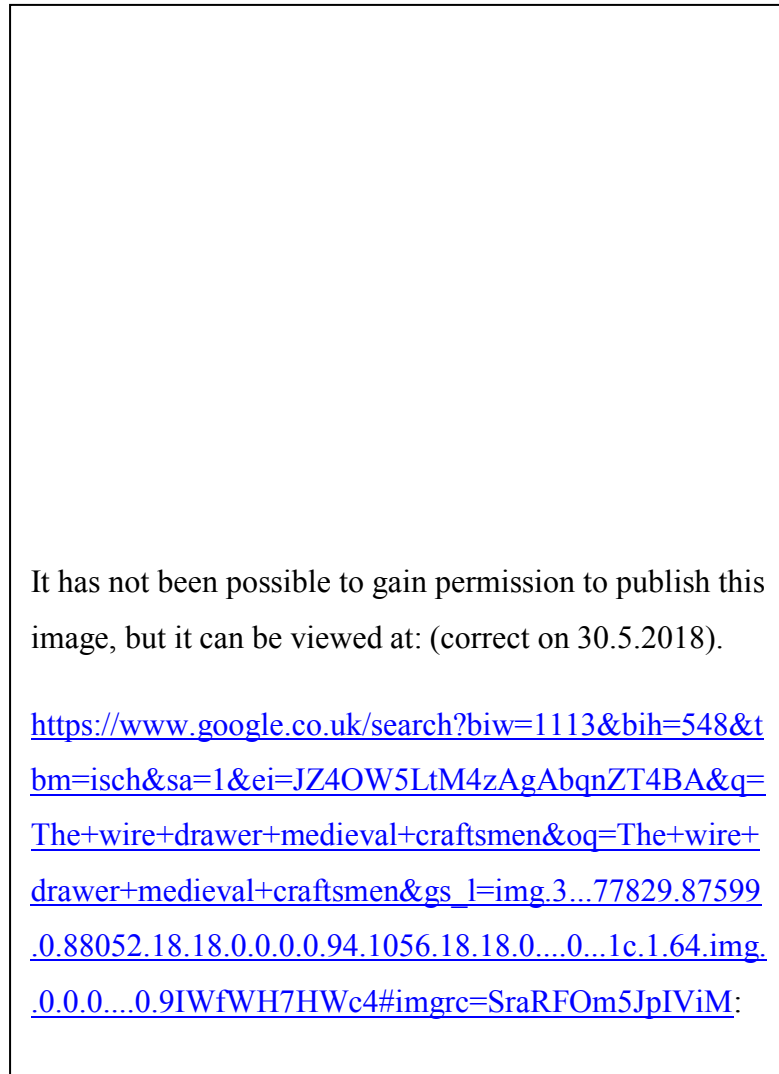
An image from the fifteenth century shows wire being drawn through a drawplate with pliers, reproduced in figure 2.2. The use of a swing suggests that the momentum of the suspended man provided the considerable force needed to draw the wire. The Coventry Leet Books refers to the ‘Wardens of the Wire Drawers’ in 1430 and the ‘Craft of Wire Drawers’ in 1435. A Royal Charter was awarded to the wire-drawers of Bristol in 1469.<sup>11</sup> Other entries refer to ‘brakemen, guidlemen and card wire-drawers’ and ‘iron’ and ‘fish-hooks’. In the sixteenth century, Francis Ellis gave evidence at the Barnsley Quarter Sessions (1598) and said there were ‘500 to 600 tradesmen in the town (Barnsley) such as wire-drawers and so on’.<sup>12</sup>

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<sup>11</sup> Schubert, ‘The wire-drawers of Bristol’, p. 142.

<sup>12</sup> Kenworthy, *Wire-drawing*, p. 5.

In 1540, Biringuccio provided illustrations of wire-drawing using both a waterwheel and a capstan to provide the pulling force. These are reprinted in figure 2.3. He also mentions the importance of annealing between stages of drawing and the use of lubricants.<sup>13</sup>



**Figure 2.2.** *The Wire Drawer*, fifteenth century.

From the Hausbuch der Mendelschen Zwölfbrüderstiftung, 1435-6.

Image Source: Pfaffenbichler, Matthias. *Medieval Craftsman Armourers* (Toronto, 1992), p 57.  
[According to Oddy, this dates from 1389]

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<sup>13</sup>Smith, C. and Gnudi, M., *The Pirotechnia of Vannocio Biringuccio* (New York, 1942), pp. 376-381.

It has not been possible to gain permission to publish this image, but it can be viewed at: (correct on 30.5.2018).

[https://www.google.co.uk/search?q=smith+and+Gnudi+wire+drawing&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjE-qylv63bAhUkDMAKHcmMBDsQ\\_AUICigB&biw=1113&bih=548#imgrc=nG8d9AVCwxhGwM:](https://www.google.co.uk/search?q=smith+and+Gnudi+wire+drawing&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjE-qylv63bAhUkDMAKHcmMBDsQ_AUICigB&biw=1113&bih=548#imgrc=nG8d9AVCwxhGwM:)

**Figure 2.3.** Sixteenth-century illustrations of wire-drawing.

(a) Water power assisted wire-drawing: the purpose of the operator on the swing is to open and close the grasping priers and possibly to act as a regulator or damper. (b) Two drawing jigs using a capstan principle and a reel-to-reel device for small reductions of wire diameter or finishing.

Source: Smith and Gnudi (1942) copied from Newbury & Notis, 'History and evolution', p. 35.

Beckmann writing in 1846 was unable to date when drawing wire through graduated holes drilled in a metal plate to obtain a wire of finer and uniform gauge began. He cites the change of occupational names of Nuremberg artists from wire-smiths to wire-drawers and wire-millers around 1360.<sup>14</sup> Wire-drawing was practised in France and Italy, but development of wire-drawing machines occurred principally in Germany, with several patents appearing at the end of the sixteenth century. Beckman asserts that all English wire was drawn by hand until 1565 and was of poor quality, practitioners predominantly relying on imported wire and finished needles. The Importation Act of 1563 was an attempt to retard needle imports and might have encouraged refinement of wire-drawing and needle manufacture in England. According to Schubert the first wire mill in England was built at Tintern Abbey, Monmouthshire, in 1566/7.<sup>15</sup> Christopher Schutz, of Annaberg in Saxony, was invited to England in 1564 to direct proceedings, but his skill was with copper, zinc and brass; there was difficulty in finding an iron of suitable ductile properties for machine drawing and no useful wire was produced in the first year. Eventually the skilled German wire-drawer Barnes Keysar was employed. He immediately modified the machinery and retrained the workers, taking two and a half years and incurring further financial losses. After some considerable delay, profits

<sup>14</sup> Beckmann, J., *A History of Inventions and Discoveries*, 2 (London, 1846), pp. 212-234.

<sup>15</sup> Schubert, H., *History of the British Iron and Steel Industry from 450 B.C. to A.D. 1775* (London, 1957), pp. 292-3.

were made and a variety of wire products were produced for markets as far away as London and Norwich. A second mill was built in 1607/8 at Whitebrook, Monmouthshire. A comprehensive account of the trials and tribulations of the Tintern works are provided by Paar and Tucker.<sup>16</sup> A monopoly of wire production at Tintern and Whitebrook was jealously guarded, but in 1581 Sir John Zouch set up a wire mill in Makeney, Derbyshire. This was successfully contested at law by William Humphry but there was a further infringement by Thomas Steere in Chilworth, Surrey in 1602. His operation lasted four years.<sup>17</sup> Henry Nicholls writing in 1866 maintains that wire was being drawn in Sowdley, Shropshire in 1588.<sup>18</sup> It is not known, however, whether mechanical or hand power was used. The proximity of the River Clun might suggest that water power was used.

The processes involved in wire-drawing is described by Schubert and summarised as follows.<sup>19</sup> Square section iron bars were heated in a forge and hammered to elongate them to thickness of a little over 1cm (straining). The bars were then annealed and placed in water for two months. Next, the bars were cut into smaller sizes and the section rounded by hammering and then passed through a coarse draw plate (ripping). This process which required a great deal of force was powered by a water wheel. Then followed a cycle of annealing and resting in water for a week. After a second cycle the wire was passed on to small wire-drawers who produced coils of wire of a range of diameters suitable for the manufacture of needles, bird cages, sieves and other products.

Despite attempts by the Tintern Wire Works to retain a monopoly, wire-drawing was even more widespread by the eighteenth century. J. Bucknall Smith suggested that the first 'wire mill proper' was erected in Sheen (near Richmond, Surrey) in 1663 and that it was from this date that the wire-working industry progressed.<sup>20</sup> In 1705, Thomas

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<sup>16</sup> Paar, H. and Tucker, D., 'The technology of wire making at Tintern, Gwent, 1566-c.1880', *Historical Metallurgy*, 11 (1977), pp. 15-24.

<sup>17</sup> Schubert, *History of British Iron*, p. 295.

<sup>18</sup> Nicholls, H., *Iron Making in the Olden Times* (1866) e-book (Kindle edition).

<sup>19</sup> Schubert, *History of British Iron*, p. 295-7.

<sup>20</sup> Smith, J., *A Treatise upon Wire, its Manufacture and Uses, etc.* (London, 1891), p. 3.

Mounshire of Frome Selwood was defined as a 'wiredrawer'.<sup>21</sup> Benjamin Marsden described Frome Selwood as having a population of 13,000 persons mostly involved in the woollen trades and that 30 years previously (i.e. 1729) more cards for carding wool were made there than the rest of England put together.<sup>22</sup> John Ryland and Nathaniel Greening set up a wire works in Warrington in 1805 which worked until 1840 from which date the partnership split and each continued separate firms with their respective sons.<sup>23</sup> Pins, files and other tools were also made in Warrington.<sup>24</sup>

The significance of Tintern lay in the use of water power for processes which had previously been accomplished by manpower alone. Only in the seventeenth century, when English fine wire was available in quantity, could needles and steel pins be manufactured in large quantities. The demand was certainly present, principally associated with the textile industry where short lengths of stiff wire were used in carding and combing.

By the nineteenth century wire-drawers were widespread. For example there were 32 wire-drawers listed in the West Riding of Yorkshire. The numbers and locations are listed in table 3.1.<sup>25</sup>

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<sup>21</sup> Somerset Archives and Records, DD\X\MRG/9 (Lease).

<sup>22</sup> Marsden, B., *The Natural History of England*. Vol. 1 (London, 1759), p. 68.

<sup>23</sup> Smith, *A Treatise*, p. 3-4.

<sup>24</sup> Farrer, W. and Brownbill, J. (eds), *The Victoria History of the County of Lancaster*, 3 (1907), p. 317.

<sup>25</sup> Kelly, E., *Kelly's Directory of the West Riding of Yorkshire, 1881* (London, 1881).

**Table 2.1.** Wire-drawers and manufacturers, West Yorkshire, 1881.

Township	Wire-drawers	Wire Manufacturers
Barnsley	2	1
Bradford		2
Brighouse	10	
Halifax	1	7
Huddersfield	1	1
Hunslet	1	
Normanton	11	2
Penistone		1
Sheffield	3	22
Stocksbridge	1	
Thurgoland	2	1
<b>TOTAL</b>	<b>32</b>	<b>37</b>

Source: *Kelly's Directory for the West Riding of Yorkshire, 1881*.<sup>24</sup>

## Needle-making in England

In medieval times it is likely that many local whitesmiths made needles on demand, though whether they practised wire-drawing is a matter of debate. There are records of pinners and wire-drawers in York from 1269 to 1762.<sup>26</sup> 12 pinners are listed in the 1381 Lay Poll Tax Records of York.<sup>27</sup> In more recent times needle-making occurred in diverse places as London, Chichester, Long Crendon (Buckinghamshire), the Arrow valley (Redditch, Worcestershire) and later, Hathersage.<sup>28</sup>

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<sup>26</sup> Warner, O., *A History of the Tin Plate Workers alias Wire Workers Company of the City of London* (London, 1964), p. 16.

<sup>27</sup> Bartlett, J., *Some Aspects of the Economy of York in the Later Middle Ages, 1300-1500*, Unpublished Ph.D. Thesis (London, 1958) in Caple, C., 'The detection and definition of an industry: the English medieval and post medieval pin industry', *Archaeological Journal*, 148 (1991), p. 243.

<sup>28</sup> Needle-making was started in London by a Flemish man, Christopher Kinge in 1559 and also in Colchester. In the early seventeenth century needle-makers were to be found in Dorchester and Chichester, and later in Long Crendon, Much Wenlock and Bridgenorth. Records of the Worshipful Company of Needlemakers, Guildhall Library, MS2818, in Jones, S., *John English and Co., Feckenham: a Study of Enterprise in the West Midlands Needle Industry in the Eighteenth and Nineteenth Centuries*, Unpublished Ph.D. Thesis, London, 1980, pp.9-10.

The needle manufactory in Hathersage was well placed geographically to supply the framework knitting industry, predominantly in Nottinghamshire and Leicestershire, with the needle components of their machinery.<sup>29</sup> However, no evidence can be found that the two were associated. The Hathersage needle-makers produced sewing needles, hackle-pins and gill-pins for the textile industry and other straight iron wire products. Some firms of the Arrow Valley produced curved needles both for textile and medical use. Documentary evidence suggests that knitting machines were made in their entirety close to where they were operated. Felkin provides figures for the numbers of master craftsmen in Nottingham in the year 1864 which includes 24 master frame-smiths, eight master sinker-makers and 29 master needle-makers.<sup>30</sup> Felkin describes in detail various modifications and improvements, many of which are clearly promoted by the cloth manufacturers rather than engineers or machine makers. For example, Luke Barton of Arnold, a hosier, applied for a patent for a circular rotary frame.<sup>31</sup> Likewise, Matthew

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<sup>29</sup> The first knitting machine was invented c.1589 by William Lee, a Cambridge educated clergyman from Calverton near Nottinghamshire. This was a flatbed device which produced a sheet of cloth, later to be sewn up into hose. Needles were set horizontally in a bar. Each needle was a springy hook (bearded needle) loaded with thread which was looped by a line of straight needles called sinkers descending between the bearded needles. In the first machines needles were spaced at eight to the inch. A later version was made with 20 needles to the inch. Unable to find favour with Elizabeth I in England, he took his frames to Rouen in Normandy setting up in 1610. William died in France and his brother, James, brought eight frames back to England setting up a business in Old Street Square in London. However, trade was poor and James returned to Nottinghamshire where he and a former apprentice of William improved the original design. Silk knitting was established with Huguenot knitters in Spittlefields while Nottingham specialised in worsted hosiery. Growth of the framework knitting industry was slow during the seventeenth century as the machines were costly to build and they required skilled operators to use and maintain them. (Wells, F.A., *The British Hosiery and Knitwear Industry: its History and Organisation* (1935, Newton Abbot, 1972), pp. 18-23.) In 1664, it was estimated that there were some 500 frames in London, 50 in Berkhamsted, Chesham and Tring, a handful in Surrey and Hampshire, over 100 in Nottinghamshire and 50 in Leicestershire, in total some 650 frames and twice as many workers. (Henson, G., *The Civil, Political and Mechanical History of Framework Knitters* (Nottingham, 1831), p. 60). Henson describes in detail the construction, consisting of over 2000 components, and functioning of the frame-knitting machine and its modification but does not discuss the men who made them.

<sup>30</sup> Felkin, W., *A History of the Machine-Wrought Hosiery and Lace Manufacturers* (London, 1867), p. 516.

<sup>31</sup> *Ibid.*, p. 490.

Townsend, a hosiery manufacturer in the Leicester census of 1851, invented the 'tumbler' or latch needle in 1847.<sup>32</sup> Thomas Brillyeald, documented as a lace manufacturer in the 1841 and 1851 censuses for Nottingham, applied for a patent in 1853 describing a modification for looped garments.<sup>33</sup>

Traditional methods of pin-making were labour-intensive and suited cottage industry involving a minimum of tools, though access to water power was advantageous for driving grinding wheels. The first process involved drawing brass wire down to the required gauge using a draw-plate. The wire was then straightened and cut into lengths to form the shank, one end being ground into a point with a rotating grind-stone wheel. Finer gauge wire was wound round a rod of the same diameter as the shank to form a coil of approximately three turns. These pieces were slipped on the blunt end of the shank and hammered several times while rotating the shaft in the fingers to form the head which was not always secure. The pin was then cleaned, sometimes plated or tinned, stuck into papers and packaged. As Ashton points out, the fitting of the pin head was the most time consuming and therefore the most costly part of the process and most amenable to mechanisation.<sup>34</sup> In Gloucester, factory based pin manufacture was introduced in 1626 by John Tilsley who contracted with the overseers to provide relief work for the poor.<sup>35</sup> He was said to have employed 80 'boys and wenches'.<sup>36</sup> In the early eighteenth century there may have been a hundred pin-making factories concentrated in London, Bristol and Gloucestershire. By 1763, 1,200 men, women and children were employed in Gloucester making pins from brass wire. Clifford Pratten states that in 1820 Gloucester boasted 11 pin factories employing 20 percent of the population of 7,500 which included the Kirby Beard and Co. factory. This was established in 1743 and employed 132 hands in 1851, but the business was then moved

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<sup>32</sup> Wells, *British Hosiery*, p. 118.

<sup>33</sup> Specifications of patents recently filed, *Mechanics Magazine*, 59 (1853), p. 34.

<sup>34</sup> Ashton, T., 'The records of a pin manufactory, 1814-1821', *Economica*, 15 (1925), p. 287.

<sup>35</sup> Wire drawers and Pinmakers Co., Bristol, Minute Books, 1493/1797. Bristol Central Library, quoted in Jones, S., 'Hall, English and Co., 1813-41: a study of entrepreneurial response in the Gloucester pin industry', *Business History*, 18 (1976), p. 35.

<sup>36</sup> Cox, N., 'Gloucester folk museum and the mechanisation of the pin industry', *Gloucestershire Society for Industrial Archaeology Journal*, n.vn (2005), p. 14. (volumes are not numbered).



to Birmingham. The Gloucestershire industry had all but vanished by 1870.<sup>37</sup> Indeed, Dutton and Jones suggest that there were as few as 12 firms involved in British pin manufacturing by 1842. The decline in the industry may have been partly due to the post-Napoleonic war economic recession and partly to the inability or reluctance to embrace new technologies.<sup>38</sup> The production of machines for making pins was developed in Birmingham, progressing more rapidly from about 1860. By 1900 there were around 50 manufacturers there. Mechanisation was slow, raising productivity from 4,800 pins per day per employee by 100 fold over a period of 200 years.<sup>39</sup>

Needle-making was similar in the initial processes but used steel wire. Traditionally, needle wire was cut to the length of two needles and both ends were pointed. A pair of eyes was then punched in the middle and split in two. Finally, the needles were filed, polished and sometimes plated. Spanish needle-makers used fine steel to produce superior quality needles. Prior to the sixteenth century large quantities were imported into England. At this time needle-workers migrated to France and Germany and a few to England where they settled in London along the Thames. Although iron from Sussex, presumably used by needle-makers in London and Chichester, was capable of being worked to produce needles, the result was of poor quality. The iron produced from ores mined in the Forest of Dean, known as Osmond iron, was better suited to drawing.

There are many needle-makers listed in the London Poll book of 1837, scattered over a wide area from Borough in the south to Camden Town in the north.<sup>40</sup> The implication is that the majority were sole traders rather than employed in workshops or factories. *The Shopkeeper's Guide* published in 1853 lists 21 'pin, needle and fish-hook manufacturers' in London.<sup>41</sup> These included Abel Morrall, Shrimpton and Hooper of Redditch and Kirby, Beard and Co. but there is no mention of Cook or Cocker. It is

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<sup>37</sup> Pratten, C., 'The manufacture of pins', *Journal of Economic Literature*, 18, (1980), p. 93.

<sup>38</sup> Dutton, H. and Jones, S., 'Invention and innovation in the British pin industry, 1790-1850', *The Business History Review*, 57 (1983), p. 175.

<sup>39</sup> Pratten, 'The manufacture of pins', p. 94.

<sup>40</sup> Rickerby, J., *City of London Poll Book. Election 1837* (London, 1837).

<sup>41</sup> Philp, R., *The Shopkeeper's Guide* (London, 1853), p. 243.

true, however, that some of these firms, for example, Kirby, Beard and Co. of Gloucester, were merely represented by offices and warehouses in London while their pins were manufactured in Gloucester and needles in Long Crendon. Some needle factories used distributors, especially in London and abroad. The Cocker's needle manufactory of Hathersage, for example, operated a London office. Outside London, needle-making was confined to a small number of locations and their respective histories are briefly outlined below.

## Chichester

During the siege in late 1642, Parliamentary forces under Sir William Waller virtually destroyed the suburb of St Pancras and the needle industry within it.<sup>42</sup> Some of the needle-makers are said to have migrated northwards and settled in the Redditch area.<sup>43</sup> Francis Steer lists the names of needle-workers in Chichester and their apprentices, the latter totalling eight between the years 1716 and 1738.<sup>44</sup> Steer also provides some insight into the working methods and wealth of at least one needle-maker, Isaac Hammond, by reproducing his will and post mortem inventory of 1733. His working materials, stock of a wide variety of needle types and sizes, and tools were valued at just over £92 out of an estate total of £325.<sup>45</sup> The last needle-maker, named Scale, was parish clerk in 1783.<sup>46</sup> Alexander Hay writing in 1804 said

The needle manufacture in Chichester never thoroughly recovered from the cruel interruption and desolations of the civil war in England. About fifty years ago it employed forty or fifty hands, and supported almost twenty families: but now it is entirely dropped.<sup>47</sup>

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<sup>42</sup> Thomas-Stanford, C., *Sussex in the Great Civil War and the Interregnum, 1642-1660* (London, 1910), pp. 50-63.

<sup>43</sup> Rollins, J., *A History of Redditch* (Chichester, 1984), p. 46.

<sup>44</sup> Steer, F., *The Chichester Needle Industry* (Chichester, 1963), p. 4.

<sup>45</sup> *Ibid.*, pp. 5-9.

<sup>46</sup> Salzman, L., (ed.) 'The City of Chichester: Trades, industries, markets and fairs', *The Victoria History of the County of Sussex*, 3 (1935), pp. 97-98.

<sup>47</sup> Hay, A., *The History of Chichester* (London, 1804), p. 330.

## Long Crendon

In Long Crendon, Christopher Greening of Dragon's Farm is attributed with starting the needle-making industry in the sixteenth century. The first written records relate to the Tompsons of Tompson's Farm in the early seventeenth century.<sup>48</sup> In 1672 a John Warwick travelled from Long Crendon to London to become apprenticed to John Jones, a freeman of the Needle Makers Company. He returned in 1681 with another needle-maker, Joseph Pell, and the needle industry expanded from then on. It is difficult to understand why the industry took hold in Long Crendon. It is in an elevated position some way from the River Thame and devoid of raw materials. William Shrimpton describes the arduous seven to ten day journey a needle-maker would make to London and back to sell finished needles and purchase wire.<sup>49</sup> Such journeys were made infrequently, about every ten weeks, on account of the cost and time involved. In the absence of a stream, men or horses provided power for grinding and scouring.

The Shrimpton family were well established in the area during the reign of Elizabeth I and may have been needle-makers from the start.<sup>50</sup> Donald, however, places their involvement in needle-making rather later at 1735.<sup>51</sup> The extent to which the Shrimpton family dominated the needle industry in Long Crendon is illustrated by the fact that the Posse Comitatus of 1798 lists 228 men eligible for the militia, and 21 of these were needle-makers; 11 of these were Shrimptons.<sup>52</sup> In 1830 Pigot's Directory listed ten manufacturers, nine being Shrimptons. The Harris family and the Spencers were also important needle-makers in Long Crendon.

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<sup>48</sup> Donald, J., 'The Crendon Needlemakers', *Records of Buckinghamshire*, 19 (1971), p. 8.

<sup>49</sup> Shrimpton, W., *Notes on a Decayed Needle-land, with a History of the Needle* (Redditch, 1897), pp. 14-15.

<sup>50</sup> *Ibid.*, p. 12-13.

<sup>51</sup> Donald, 'Crendon Needlemakers', p. 11.

<sup>52</sup> Beckett, I., 'The Buckinghamshire Posse Comitatus, 1798', *Buckinghamshire Record Society*, 22 (1985), p. 56.

A John Harris built an engine house in 1845 and the Shrimptons built two in 1848 at 76 High Street and Arnott's Yard on Burts Lane.<sup>53</sup> Long Crendon specialised in heavy needles used for canvas sewing, for example, ship's sails, packing and mattress making and also surgeon's needles. Several cottages in the High Street, each performing a different process of manufacture, were connected together by needle cupboards through which needles could be passed from one cottage to the next.<sup>54</sup> The Shrimptons produced particularly large families. The 1851 census lists Edward (born 1779) a farmer and at least three needle-makers living in Long Crendon (Charles, born 1768; David, born 1777; Noah, born 1791). There were also five Long Crendon Shrimptons born at the end of the eighteenth century living in Redditch and Feckenham, Worcestershire. One was a farmer and four were needle-makers, Peter was described as a 'needle manufacturer'. Peter's household included a wife and son both born in Redditch, the latter in 1825, suggesting a migration date before 1824. Joyce Donald suggests that it was Solomon Shrimpton who first moved to Studley, in 1807 followed by Peter and William who went to Redditch in 1814 and Samuel to Alchester in the 1820s.<sup>55</sup>

Needles were supplied, predominantly to London distributors, one of which was Kirby, Beard and Co. of London and Birmingham. At a time when the Crendon needle-makers were unable to satisfy demand, Kirby, Beard and Co. set up a factory in Long Crendon initially managed by Andrew Shrimpton. Thomas Cooper, Charles Chester and 17 others (five females) came from Redditch. William James and Fred Court married local girls. The factory, in 1861 employed: 22 men, 11 women, nine boys and 16 girls.<sup>56</sup> This was a leased property in Chilton Road shown in figure 2.5.<sup>57</sup>

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<sup>53</sup> English Heritage, *Long Crendon, Historic Town Assessment Report* (Aylesbury, 2009), p. 38. A slightly different sequence of events is recounted by Shrimpton, *Decayed Needle-land*, p. 22.

<sup>54</sup> *Ibid.*, p. 39.

<sup>55</sup> Donald, 'Crendon needlemakers', p. 13.

<sup>56</sup> Govier, K., 'Redditch Needle-makers Recruited by Kirby Beard to work in their Long Crendon Factory, 1848-60' (1966) Unpublished notes, Buckinghamshire Archives, Aylesbury, File 4.

<sup>57</sup> Donald, 'Crendon needlemakers', p. 14.

It has not been possible to gain permission to publish this image, but it can be viewed at: (correct on 30.5.2018).

<http://www.long-crendon.com/history.php>

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<http://www.long-crendon.com/history.php>

**Figure 2.4.** Draggon's Farm (above) and Warwick Farm (below), Long Crendon. Early sites of needle-making in seventeenth-century Buckinghamshire.

Source: The History of Long Crendon, [www.long-crendon.com/history.php](http://www.long-crendon.com/history.php) (accessed 3rd January 2018).

The 1851 census for Long Crendon includes six groups consisting of one or more needle-workers born in the Redditch area. In 1852 Charles Bayliss from Redditch became manager. However, the needle industry in Long Crendon was in decline and in 1861 only 53 workers were employed and the factory closed the following year when

two-thirds of the workers moved back to Redditch. Three independent needle-makers remained, the last, Matthew Shrimpton, working until his death in 1894. Thus needle manufacture in Long Crendon came to an end within a few years of its demise in Hathersage. The demise of the respective industries will be further examined in Chapter 9.

It has not been possible to gain permission to publish this image, but it can be viewed at: (correct on 30.5.2018).

<http://www.long-crendon.com/history.php>

**Figure 2.5.** Old Needle House, Chilton Road, Long Crendon where Kirby Beard and Co. set up their needle works.

Source: The History of Long Crendon, [www.long-crendon.com/history.php](http://www.long-crendon.com/history.php) (accessed 3rd January 2018).

## The Arrow Valley

The early days of needle-making in the West Midlands have been discussed by Stephen Jones.<sup>58</sup> He concludes that it began in the second quarter of the seventeenth century after the arrival of William Lea in Studley. He proposes that William Lea might have come from London but the evidence is somewhat thin. William Sherwood, one of the brothers who built the Quaker Meeting House at Studley in 1704, had set up business as a needle factor or middle-man in 1702, buying needles from individual makers and

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<sup>58</sup> Jones, S., 'The development of needle manufacturing in the West Midlands before 1750', *Economic History Review*, 31 (1978), pp. 354-368.

selling them to the public.<sup>59</sup> Many of the needle-makers were Roman Catholic; Redditch was the first to build a new Catholic Church after the Catholic Relief Act of 1829.<sup>60</sup> John Rollins fixes the beginning of needle-making much earlier, stating that a group of Norman needle-makers came to Coughton under the patronage of Sir Nicholas Throckmorton in the reign of Elizabeth I and that needle-makers were established in Redditch and Washford as early as 1538.<sup>61</sup> The first documentary evidence comes from the bills of a literate needle-scourer of Washford, a J. M. Hill, from 1730.<sup>62</sup> His customers included Archers, Milwards and Morralls, names which crop up frequently in the subsequent history of needle-making in the area.

Redditch and the surrounding countryside proved ideal for needle-making. First, the river Arrow and its tributaries provided power for grinding wheels and scouring. Secondly, raw materials in the form of steel wire, charcoal from Studley and a paper mill at Beoley were available nearby.<sup>63</sup> As well as obtaining steel wire from Birmingham manufacturers there is evidence that Worcestershire needle-makers bought-in wire from Hathersage and the Sheffield area. B. Nokes in his study of John English of Feckenham found company papers suggesting considerable quantities coming from Hathersage in the mid 1840's and that Joseph Dyson and Co. of Thurgoland to the north-west of Sheffield was a significant supplier by 1849, going on to supply the majority of wire by 1860.<sup>64</sup> The loss of the Redditch market may have contributed to the decline of wire-drawing in Hathersage. Thirdly, the soils were poor and the population was growing rapidly resulting in a ready supply of labour; almost every household in Redditch and the surrounding villages such as Feckenham and

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<sup>59</sup> Luty, J., *Needle Making and the Forge Mill* (1983, Redditch, 1986), p. 5, Rollins, *Redditch*, p. 47.

<sup>60</sup> May, M., *Needlemaking and Needlemakers: a study of the trade in Buckinghamshire, Warwickshire and Worcestershire during the nineteenth century*. Unpublished thesis for the University of London Diploma in Genealogy and the History of the Family (1991), p. 31.

<sup>61</sup> Rollins, *Redditch*, p. 40.

<sup>62</sup> *Ibid.*, p.48.

<sup>63</sup> Heming, W., *The Needle Region and its Resources* (Redditch, 1877), p. 14.

<sup>64</sup> Nokes, B., 'John English of Feckenham, needle manufacturer', *Business History*, 11 (1969), p. 32.

Tardebigge included someone involved in needle-making. Figure 2.6 shows a needle mill in Feckenham, now a dwelling house. Lastly, there was a ready local market for needles in that shoe-making, leather-working and glove-making were already established within the immediate area. By 1776, 400 people were involved in the making of fish hooks and 2000 in needle-making.<sup>65</sup> The industry grew rapidly during the industrial revolution and at its peak employed more than 4,000 people.<sup>66</sup> Life in the Redditch area is vividly portrayed in fiction by Roy Clews.<sup>67</sup>

Like Long Crendon, needle-making took place in the domestic arena. In the second quarter of the nineteenth century there was a move to factory production. This move occurred principally because of the introduction of steam power and stamping machinery used to fashion the eye.<sup>68</sup> Despite the fact that prices of medium quality sewing needles fell by some 40 percent between 1820 and 1850, the number of manufactories grew from 50 in 1828 to 129 in 1873.<sup>69</sup> This figure had dropped to 61 firms in 1913 due to amalgamations.<sup>70</sup>

Church Stretton in Shropshire was said to be another centre for needle-making, better known for quarrying it has not been possible to substantiate this claim.<sup>71</sup>

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<sup>65</sup> Luty, *Needle making*, p. 12.

<sup>66</sup> Jones, *John English and Co.*, p. 45.

<sup>67</sup> Clews, R. *Young Jethro* (London, 1975).

<sup>68</sup> Jones, *John English and Co*, p.32.

<sup>69</sup> *Ibid.*, pp. 46 and 51.

<sup>70</sup> *Ibid.*, p. 66.

<sup>71</sup> Baggs, A., Baugh, G., Cox, D., McFall, J. and Stamper, P., 'Church Stretton', in Currie, C. (ed.), *A History of the County Of Shropshire: Volume 10, Munslow Hundred (Part), the Liberty and Borough of Wenlock* (London, 1998), pp. 72-120. <http://w.w.w.british-history.ac.uk/vch/salop/vol10/pp72-120> [accessed 7 April 2015].





**Figure 2.6.** Former needle-making factory near The Green, Feckenham.  
Photograph: C. Side, September 2013.

## Craft Companies and Trades Unions

In London the earliest mentions in extant records refer to ‘The Mistery of Pynners’ and ‘The Mistery of Kardemakers’ in 1356. By 1386 ‘Kardmakers’ and ‘Wyrdrawers’ were a single entity and in 1425 the wire-drawers were specifically called ‘Irenwiredrawers’<sup>72</sup> In the same year both the Pinnars and the Wire-drawers jointly came under the protection of the larger Girdler’s Company. During the reign of Charles I the Pinnars became independent and the Wire-drawers made an alliance with the Tin Plate Workers, an offshoot of the Ironmongers Company.<sup>73</sup> Initially called ‘The ‘Wyreworkers alias Plate-workers’ the charter of Charles I renamed it ‘Tinplate Workers alias Wireworkers’ in recognition of the growing importance of tin plate.

<sup>72</sup> Sharpe, R. (ed.), *The Calendar of Letter-Books of the City of London, 1899-1912*, quoted in Hunt, A., Letter to the editor, *Journal of the Textile Institute Proceedings*, 40 (1949), pp. 1055-6.

<sup>73</sup> Warner, O., *A History of the Tin Plate Workers alias Wire Workers Company of the City of London* (London, 1964), pp. 2-3.

Future conduct of the company appears to have been dominated by the tin-plate workers.<sup>74</sup>

In York, The Pinners' Guild is recorded in 1381 and expanded such that there were 20 freemen in the period 1411-41.<sup>75</sup> In the fifteenth century the guild provided 20 men at arms to the city watch. The Guild maintained a monopoly on making and selling pins and maintained standards of manufacture and sale. The Pinners merged with Wire drawers in 1482/3 but none were recorded as council members after 1579.<sup>76</sup>

The Worshipful Company of Needle Makers had been granted letters patent in 1656 by Oliver Cromwell and confirmed by a Royal Charter from King Charles II in 1664.<sup>77</sup> The activities of the company appear to have been largely directed towards protecting London needle-makers from competition in the provinces.

Craft guilds declined during the eighteenth century and trades unions became established in the nineteenth. The term 'trades union' was not used in parliamentary legislation until 1871.<sup>78</sup> Whether trade unions evolved from guilds or arose as new and independent institutions is a matter of debate. Sidney and Beatrice Webb maintained that there were no examples of a trades union arising from a craft guild while Malcolm Chase argued that their cultures and procedures suggest a transition from guild to friendly society and then to organisations characteristic of twentieth-century trades unions.<sup>79</sup> While friendly societies were principally involved in the provision of sickness

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<sup>74</sup> Warner, *A History of Tin Plate Workers*, Ebbelwhite, E., *A Chronological History of the Worshipful Company of Tin Plate Workers alias Wire Workers of the City of London* (London, 1896).

<sup>75</sup> Bartlett, J., *Some Aspects of the Economy of York in the Later Middle Ages, 1300-1500*, unpublished Ph.D. Thesis (London, 1958) mentioned in Caple, C., 'The detection and definition of an industry: the English medieval and post medieval pin industry', *Archaeological Journal*, 148 (1991), p. 243.

<sup>76</sup> Caple, C., 'The detection and definition of an industry: the English medieval and post medieval pin industry', *Archaeological Journal*, 148 (1991), p. 244.

<sup>77</sup> [http://www.needlemakers.org.uk/about\\_us/short\\_history.htm](http://www.needlemakers.org.uk/about_us/short_history.htm) (accessed 5.11.2011).

<sup>78</sup> Chase, M., 'A sort of corporation (tho' without a charter)': the guild tradition and the emergence of British trade unionism', in Gadd, I. and Wallis, P. (eds), *Guilds and Association in Europe, 900-1900* (London, 2006), p. 187.

<sup>79</sup> *Ibid.*, pp.187-198.

and death benefits the emphasis of trades unions were occupational based associations for waged labour with the aim of regularising wages and conditions for the mutual benefit of employer and employee. The Government attempted to control 'and encourage' friendly societies by the Act of 1793 and subsequent amendments, but it was not until 1846 that the first Registrar of Friendly Societies was appointed.<sup>80</sup>

Martin Gorsky demonstrated that in the first two decades of the nineteenth century, friendly societies were concentrated where industrial productivity was most active.<sup>81</sup> Derbyshire had the second highest friendly society membership as a proportion of population and may have offered benefits to one third of households. In Hathersage, The Rose of Sharon Lodge of the Independent Order of Oddfellows, a branch of the Manchester Unity, was formed in 1836. It was reported at its 50<sup>th</sup> anniversary dinner that there were 204 members and its assets amounted to £4,353.<sup>82</sup>

Before 1900 and especially in the provinces, the majority of wire-drawers worked alone or for small scale masters. Despite industrial production being shared by urban and rural environments the latter made it difficult or impossible for fraternities of workers to establish.<sup>83</sup> Although this is a general observation it especially applied to wire workers being few and scattered. Further, the wire-drawers seldom found themselves in dispute with their employers, having a reputation for being 'noncontentious', though there is evidence of them supporting with donations other workers in strike actions.<sup>84</sup> As a result, the Wire Workers Union was formed in 1840 as an amalgamation of the separate societies. Its main aim was to facilitate a national labour force. The general secretary was appointed for three years and the union headquarters was located in the town where the secretary lived for that three year period. By the means of controlling labour supply,

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<sup>80</sup> Report from the Select Committee on the Laws Respecting Friendly Societies (London, 1825).

<sup>81</sup> Gorsky, M., 'The growth and distribution of English Friendly Societies in the early nineteenth century', *Economic History Review*, 51 (1998), pp. 489-511.

<sup>82</sup> *SARI*, 12/10/1886, p. 3.

<sup>83</sup> Chase, M., *Early Trade Unionism: Fraternity, Skill and the Politics of Labour* (London, 2012), pp. 3-9.

<sup>84</sup> Bullen, A., *Drawn Together: One Hundred and Fifty Years of Wire Workers' Trade Unionism* Wire Workers' section of the Iron and Steel Trades Confederation (1992), p. 6.

wages were high, at least twice that of engineers, and in return loyalty to an employer was pronounced.<sup>85</sup> There were few local disputes and few threats to jobs or incomes as a result of nineteenth-century mechanisation.

### Iron working near Hathersage

In Derbyshire, there is documentary evidence of extraction of iron nodules from the thirteenth century and at Norton, now the southern edge of Sheffield, the use of water to power furnace bellows in 1507. Scythe making in Norton is believed to have started in the late sixteenth century by a group of Flemings encouraged by the Earl of Shrewsbury. Nail making was widespread in the Sheffield area in the seventeenth century.<sup>86</sup> A German, Christopher Schultz, came to England in 1564 and is said to have subsequently set up a wire works in Hathersage for the manufacture of knitting needles and wire for lead ore washing sieves.<sup>87</sup> His work was halted as a result of an action by Sir William Humphrey, goldsmith and Assay Master at the Royal Mint and involved in the Tintern project.<sup>88</sup>

Graham Ullathorne in his examination of the Cutlers' Company records between 1624 and 1814 notes the 'almost complete absence of cutlery and allied trades within the High Peak' which includes the parish of Hathersage on its eastern border.<sup>89</sup> He did find

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<sup>85</sup> Bullen, *Drawn Together*, pp. 7-11.

<sup>86</sup> Hey, D., *The Rural Metalworkers of the Sheffield Region* (Leicester, 1972).

<sup>87</sup> Buxton, *Hathersage*, p 60, Nixon, F., *The Industrial Archaeology of Derbyshire* (Newton Abbot, 1969), p 50. (Neither cites primary sources nor has any other evidence been found to support any association of Hathersage with Schultz. There is also variation in the date of his appearance.)

<sup>88</sup> While it is plausible that Christopher Schultz, disgraced at Tintern, may have subsequently moved to Hathersage and even set up a similar business, it would have been several years later than 1566. It is further understandable that Humphrey might have tried to prevent Schultz engaging in a rival concern. However, like the story of the secretive 'Moor' of London, certain names crop up in different locations associated with attributes which vary with the location. Such stories usually lack supporting evidence. The precise nature of the beginnings of wire-drawing and needle making are sparse in evidence and rich in myth and supposition.

<sup>89</sup> Ullathorne, G., 'Migration from Derbyshire to Hallamshire: the evidence of the Cutler's Company records, 1624-1814', *Northern History*, 41, (2004), p. 81.

mention of a Robert Slinn, a filesmith from Hillfoot, Hathersage, in 1806, and Thomas Wright ‘wyredrawer’ in 1684, and George Booker, wiredrawer, in 1797.<sup>90</sup> Ullathorne found that apprentices were sent to Sheffield from 68 out of 77 High Peak parishes and in 1195 cases the occupation of the father was recorded. These included only one grinder, 2 knife makers, a saw maker and 3 wire-drawers. This is further evidence for the low density of wiredrawers. Master cutlers receiving apprentices from the High Peak were predominantly located in Stannington, Upper Hallam, Wadsley and Hallam. These observations confirm that cutlers were confined to the Sheffield area and that wire-drawing in Derbyshire may have been local to Hathersage before the nineteenth century. There were several button-making workshops in Hathersage at the end of the eighteenth century but there is little evidence that more than a handful of people were so employed.<sup>91</sup> Quarrying employed rather more, but agriculture was the largest employer.

## Summary

Early ‘wire’ was produced by hammering, though archaeological evidence points to wire-drawing dating from the Viking period, and written evidence dates from Theophilus in the twelfth century. Evidence for English wire-drawing accumulates after the early fourteenth century and the first water-powered mechanical method using Osmond iron is associated with Tintern in the second half of the sixteenth century. Initial attempts by William Humphrey to maintain a monopoly were short-lived; by the late eighteenth century wire-drawing was widespread though the exact methods used are less clear and poorly documented. Needle and pin-making almost certainly began as a local and on-demand production by whitesmiths and possibly blacksmiths. The evidence suggests that sixteenth-century migrants from the continent brought the art of needle manufacture in London and subsequently moved to other areas such as Redditch. Why needle-making began in Chichester is less clear but in Long Crendon it was probably started by a migrant worker and in Redditch, iron wire and water-power was

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<sup>90</sup> In addition, there is a will and inventory of a William Walkton who died in 1726 described as a wire worker. LRO, B/C/11. There is mention of a Thomas Heaton of Mitchell Field, Hathersage who died in 1670 described as a wire-drawer. Buxton, *Hathersage*, p. 94. These outworkers were supervised by Sheffield steel makers.

<sup>91</sup> Buxton, *Hathersage*, p. 76.

readily available. Pin making was centred in Gloucester, Bristol and Birmingham. There is no doubt that some interchange of needle-makers between the various centres occurred, though it is less clear if such movements were planned or for more personal reasons. Wire-drawing and needle-making in Hathersage occurred later; beginning in the latter part of the eighteenth and early nineteenth century respectively and unlike existing manufactories combined the two activities under one roof.

Prior to nineteenth-century industrialization, drawn iron wire was used principally for the manufacture of needles required for textile production and garment making, the making of wire cages and netting for sieves used in the separation of ores. Small amounts were used for fish hooks, clock springs and music wires. The building of textile factories increased the demand for carding and combing wires (e.g. hackle-pins) and sewing needles of all types. Throughout the nineteenth century the quality and quantity of drawn wire increased which enabled it to be used in new applications. The development of suspension bridges, for example, went hand in hand with the production of heavy wire cables capable of bearing high loads in tension without significant stretching. Wire cables were also used in the winding gear of mines and for hauling boats. The expansion of electrical communications depended upon conductive wires of great length. Trans-Atlantic cables and signalling equipment associated with the railways required huge quantities of drawn wire although this was traditionally of copper rather than iron. Later, wires were used to transport electrical energy. Changes in agriculture provided a new market for wire netting and wire fencing used to define boundaries and contain animals. Indeed, few industries did not use wire in one form or another.

# Chapter 3. Hathersage and the Industrial Revolution.

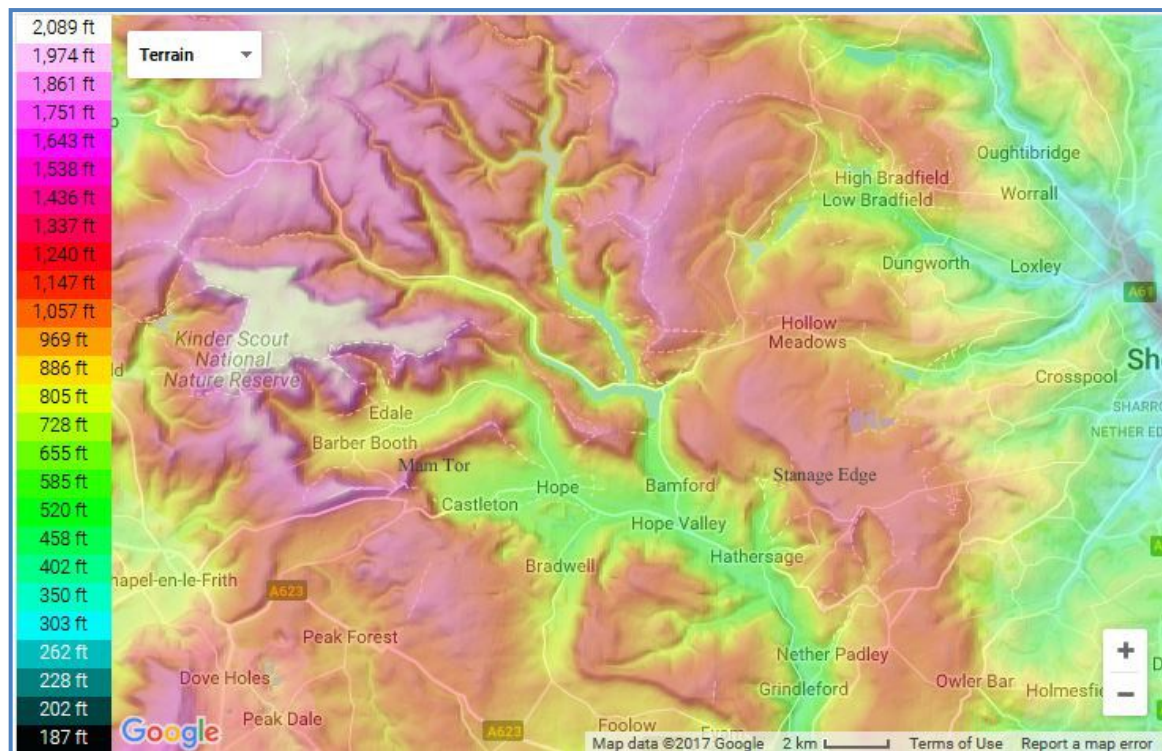
In this chapter Hathersage is placed in the context of the Hope Valley in north-east Derbyshire. Despite its pivotal position on an east-west trade route between Manchester and Sheffield, modes of transport remained rudimentary to within six years of the twentieth century when the railway link was completed. The occupational nature of the township is described in some detail to provide a backcloth onto which to project the history of needle-making and its relationship with the community. The foundations and course of the needle-making industry is presented in some detail. Superficially Hathersage presents a good example of proto-industrialization with its subsistence farming, foci of craft industries and proximity to urban Sheffield. Investigation reveals the extent to which the historic reality fits the concept of proto-industrialization.

## Hathersage and the Hope Valley

At the end of the eighteenth century Hathersage was one of the larger villages in the relatively isolated and transitional area of north-east Derbyshire. The Hope Valley was largely agricultural with a small textile industry sandwiched between the historic lead mining areas to the west and south, the growing urban and better connected areas of south-west Yorkshire to the east and the coal fields to the southeast. A topographical map is presented in figure 3.1.

The Hope Valley is a star-shaped valley of the River Derwent and its tributaries. It extends to Edale in the northwest and the Upper Derwent Valley in the north, now flooded to create the Derwent Reservoirs. The Derwent River runs southwards past Bamford and Hathersage and through Grindleford Bridge. The valley complex is surrounded by high ground: Mam Tor in the west, Kinder Scout to the northwest and Stanage Edge rising to 600m to the north-east. The latter and its attendant moorland separates Hathersage from Sheffield. The gritstone cliffs continue dramatically southwards to Froggatt, towering to the east of the Derwent River as it flows virtually due south towards Matlock.





**Figure 3.1.** Hathersage in the Hope Valley and its relationship to Sheffield.

Source: <http://en-gb.topographic-map.com/places/Derbyshire-13257/> (accessed 17/10/2016)

The origin of the name, *Hereseige*, as it appears in the Domesday Book might be ‘he-goat’s ridge’ or ‘ridge of a man called Haefer’ – an Old English derivation.<sup>1</sup> Part of the land of Ralph FitzHubert, Baron Crich, ‘was held by Leofnoth and Leofric: 2 carucates to the geld and a further 2 carucates in the 4 berewicks of Bamford, Nether and Upper Hurst, half of Offerton and 2 parts of Stoney Middleton. There were 8 villans and 2 bordars for 5 ploughs.’<sup>2</sup> In the eighteenth century the lordship came to the Duke of Devonshire and has remained to the present day. Hathersage was too far off the beaten track to demand any comment by Defoe, Leland or Celia Fiennes though John Leyland refers to the church, Little John’s grave and the Eyre family in his volume on the Peak District.<sup>3</sup> A wider view of the area and the characters living within it is provided in fiction by Charles Edmund Hall.<sup>4</sup>

<sup>1</sup> Mills, A., *A Dictionary of British Place-names* (1991, Oxford, 2003), p. 231.

<sup>2</sup> Williams, A. and Martin, G., *Domesday Book: a Complete Translation* (1992, London, 2002), p. 751.

<sup>3</sup> Leyland, J., *The Peak of Derbyshire: Its Scenery and Antiquities* (1891, London, 1909), pp. 79-90. For a general account of the early history of Hathersage, the reader is referred to



The soil in the area is thin, overlying gritstone which also forms the rocky outcrops and prominent *edge* which was extensively quarried for millstones and grindstones as well as building material. In the valleys farming was carried out extending to the moorland which was essential for grazing and where peat was harvested for fuel. Farming was pastoral with a small amount of arable. Field boundaries are delineated by dry stone walls, as demonstrated in figure 3.2. Mining is not a feature of Hathersage though the lead fields and coal measures are close. There is however, a single site providing archaeological evidence of lead smelting.<sup>5</sup> Apart from gritstone the only industrial draw was the potential power source provided by brooks and streams which eventually found their way to the River Derwent. Textile mills are best known in the Cromford area, south of Matlock and hosiery manufacture was concentrated in Leicestershire, Nottinghamshire and Derbyshire. By the nineteenth century it has been estimated that there were 5000 knitting frames in Derbyshire villages.<sup>6</sup> The nearest cotton mill to Hathersage was in Bamford, built on the Derwent in 1780, burnt down and rebuilt 11 years later and continued until the mid-twentieth century. It has now been converted into dwellings. There were also textile mills in Edale and Brough. There is no mention of framework knitting in Hathersage in the Felkin report of 1844 and no such occupations recorded in the 1841 and 1851 censuses for the village.<sup>7</sup> Castleton, to the west, was a lead mining centre.

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Buxton, B., *Hathersage in the Peak: a History* (Chichester, 2005). This is the most detailed account of local history though is regrettably unreferenced.

<sup>4</sup> Hall, C., *Hathersage: a Tale of North Derbyshire* (London, 1896).

<sup>5</sup> The lead smelting cupola was probably built in the 1740s on the hillside in Callow Field within a mile to the east of Hathersage. It used coal in a reverberatory furnace to smelt lead ore and expel arsenic and sulphur impurities. There was a similar smelter at Ringinglow further to the east. The Hathersage Cupola was closed in the 1820s. The site was almost certainly chosen on the west facing slope to take advantage of the strong prevailing winds.

<sup>6</sup> Ashmore, O., 'The early textile industry in the Derwent Valley', *Derbyshire Miscellany* (1957), p. 57, Felkin, W., *A History of the Machine-Wrought Hosiery and Lace Manufacturers* (1867, New York, 1967), pp. 84-101. (Relating to Jedediah Strutt in Derby and Arkwright in Belper, both on the River Derwent.)

<sup>7</sup> Felkin, W., *An Account of the Machine-Wrought Hosiery Trade: Its Extent and Condition of the Framework Knitters* (London, 1844), p.42.

The economy of the Hope valley could be described as mixed and diverse with some 30 percent of the working population being involved in agriculture and 34 per cent in industrial crafts, perhaps what we would call light industry today.<sup>8</sup> There were few landed gentry and few large farms. The Duke of Rutland owned the Longshaw Estate southeast of Hathersage but it was rarely occupied though the Duke hosted shooting parties throughout the nineteenth century. The Shuttleworth family owned Nether Hall and Hathersage Hall as well as many acres of farmland, quarries and lead mines. Both John and Ashton Ashton Shuttleworth (sic) lived in Hathersage Hall and took a keen interest in the village. They were local J.P.s and business men.



**Figure 3.2.** High moorland towards Stanage Edge north of Hathersage. Remnants of stone walls suggesting past grazing at the higher levels. SK 234 845 (Photograph by CS, May 2015.)

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<sup>8</sup> Fletcher, A., 'The Hope Valley in 1851', *Derbyshire Archaeological Journal*, 91 (1973), pp. 171-172.

## Transport

Transport links were historically east-west between Sheffield and Manchester and more locally between Castleton and Hope in the west along the valley, over Stanage Edge and across the moor to Sheffield in the east. Causeys are difficult if not impossible to date, but the rising line of heavy square stones which ascend the slope over Stanage Edge towards Stanage Pole and then on towards Sheffield from North Lees, surely represent a route from Hathersage trod long before the turnpikes were constructed.<sup>9</sup> See figure 3.3. Road transport began to improve when turnpike trusts were enabled by the Turnpike Act of 1663. By 1770 there were 15,000 miles of turnpikes in England and Wales rising to 22,000 miles by the mid-1830s. The Manchester to Sheffield turnpike was authorised in 1758 and more or less coincides with the modern main road from Hathersage westwards (A625), but eastwards it followed Hathersage Dale from the milestone at Dale Bottom to ascend the steep Callow Bank and over Burbage Moor towards Ringinglow and thence to Sheffield.<sup>10</sup> The Sheffield to Glossop turnpike was built by Thomas Telford between 1818 and 1821; from Sheffield it crossed the river Derwent at Ashopton and then continued west to Glossop (now the A57 through the Snake Pass).<sup>11</sup>

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<sup>9</sup> Dodd, A. and Dodd, E., *Peakland Roads and Trackways* (1974, Ashbourne, 1980), p. 105.

<sup>10</sup> *Ibid*, pp. 148-9.

<sup>11</sup> Bevan, B, *The Upper Derwent, 10,000 years in a Peak District Valley* (Stroud, 2004), p. 135.



**Figure 3.3.** Ancient steps ascending Stanage Edge from North Lees, en route to Sheffield. SK 240 840. (Photograph by CS, May 2015.)

The River Derwent was too shallow and rocky to be useful for transport except for very local journeys. Canal building became significant in the last decade of the eighteenth century and was principally involved in the transport of coal and other heavy or bulky materials. Because of its reliance on animal traction, canal transport might be seen as a transitional phase between the pre-industrial and the industrial ages.<sup>12</sup> It took over 100 years to build 4,000 miles of waterways thickly covering the midlands and the north from the Mersey to the Humber.<sup>13</sup> Gerard Turnbull demonstrated the canal pattern related well to the distribution of coal within regions; coal being one of the principal cargoes. The canals did not penetrate the peak district of Derbyshire and played no part in the industrialization of Hathersage. There were schemes to extend navigation from the Humber to Sheffield to obviate the need for land transport to Bawtry and most

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<sup>12</sup> Freeman, M., 'Transport', in Lantgon, J. and Morris R.J. (eds), *Atlas of Industrializing Britain, 1780-1914* (London, 1966), p. 84.

<sup>13</sup> Turnbull, G., 'Canals, Coal and Regional Growth during the Industrial Revolution', *Economic History Review*, 40 (1987), pp. 537-560, particularly figs. 1-5, p. 542; Trinder, B., *Britain's Industrial Revolution: the Making of a Manufacturing People, 1700-1870* (Lancaster, 2013), pp. 127, 159-170.

suffered opposition from land owners or funding failure.<sup>14</sup> The nearest canal to Hathersage was completed in 1777 from Chesterfield to Stockwith on the River Trent some five miles east of Bawtry, but was not a great commercial success.<sup>15</sup>

Railways became commercially important after 1834 and were initially short lengths used for transporting coal from the pit-head to the nearest port or steel furnace. Gradually throughout the nineteenth century the length of track increased, reaching 20,000 miles in 1914.<sup>16</sup> In all cases it was the need to transport goods and raw materials which stimulated the growth of the railway network. However, Hudson points out that the railway network did not alter the regional distribution of industries, suggesting that railway transport was an enhancer rather than an enabler in the progress of industrialization.<sup>17</sup> The railway came to Hathersage late in its industrial history opening in 1894, so rather than assisting the local industry its absence may have played a part in its demise, and paradoxically, assisted the development of the village as a commuter suburb of Sheffield. This is further discussed in chapters 8 and 9. Interestingly, there had been several previous attempts to form companies with the intention of laying track through Hathersage. These were strongly supported by land owners such as the Shuttleworths but they came to nothing, due to the inability to raise sufficient capital. The projects were particularly expensive due to the extensive tunnelling that was required east of Hathersage.

Possibly wire-drawing was introduced to Hathersage by Christopher Schulz in the sixteenth century, though without major impact.<sup>18</sup> Solomon Cocker's arrival in the village in the 1730s undoubtedly initiated a chain of events which was to propel the village community through the industrial cycle in little over a century. The lack of

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<sup>14</sup> Hopkinson, G., 'The development of inland navigation in south Yorkshire and north Derbyshire, 1697-1850', *Transactions of the Hunter Archaeological Society*, 7 (1956), pp. 229-51.

<sup>15</sup> *Ibid.*, pp. 237-40.

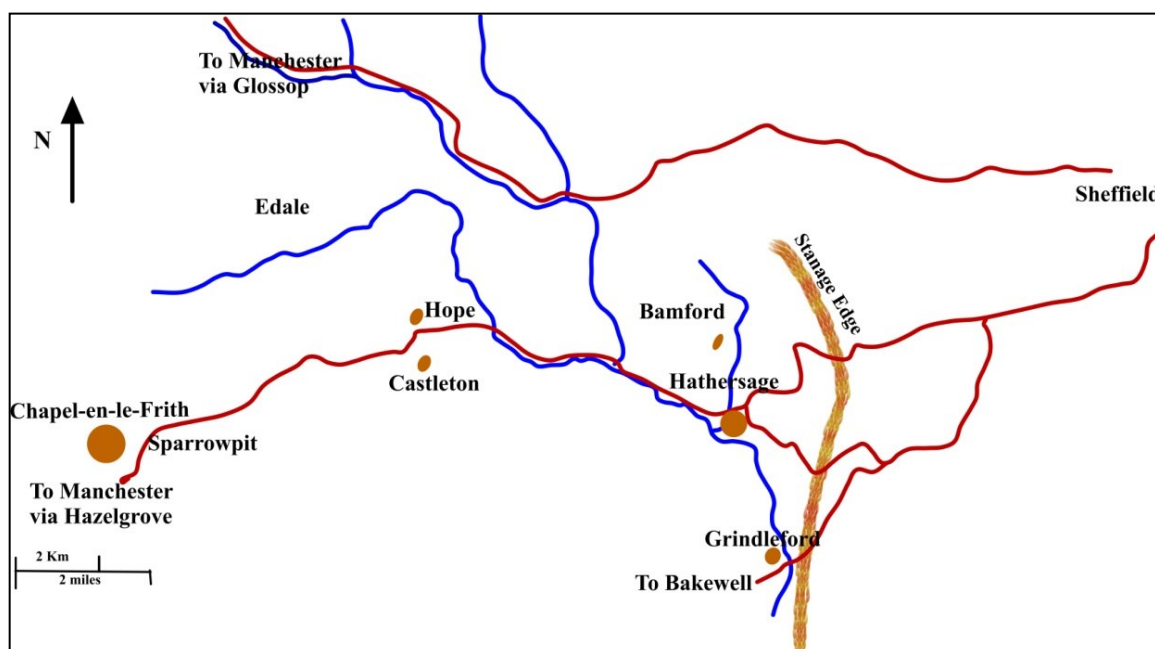
<sup>16</sup> Freeman, 'Transport', p. 88.

<sup>17</sup> Hudson, P., *Regions and Industries* (1989, Cambridge, 1993), p. 28.

<sup>18</sup> Although this assertion is found in the secondary literature no supporting evidence has been found by the present author who believes that such an event is inconsistent with the history of the Tintern works mentioned in chapter 2.



mature transport infrastructure was a disadvantage to Hathersage throughout its industrial phase. Movement of raw materials, iron bar, wire and coal, and the manufactured products of drawn-wire and needles of all sorts depended solely upon road transport. The horse and cart was also used to transport the heavy millstones. The transport routes serving Hathersage during the nineteenth century are summarised in figure 3.4.



**Figure 3.4.** Transport links serving Hathersage before 1890.

The un-navigable River Derwent and its tributaries are shown in blue and the turnpike roads in red.

## Agriculture

A pre-nineteenth-century history of farms in Outseats has been documented by Rosamond Meredith.<sup>19</sup> The present account is a continuation, but only in sufficient detail to show that it was largely unaffected by the industrialization occurring in the village further down the valleys. In each of the eight censuses between 1841 and 1911 there were between 28 and 43 heads of household described as “farmers”.<sup>20</sup> On average

<sup>19</sup> Meredith, R., *Farms and Families of Hathersage Outseats from the 13th to the 19th Century* (Sheffield, 1981).

<sup>20</sup> A change in electoral boundaries in 1891 led to a further seven farms to the south being included in the Hathersage district, including Offerton, Lead Mill, Highlow and Mount Pleasant Farms. This inclusion further increased the calculated population at this time. A low in 1881 is less explicable.

40 per cent of farmers were Hathersage natives, the remainder had been born within a short distance, for example, Hope, Bamford and small farms between Hathersage and Sheffield. There was no demonstrable change over time. From 1851 to 1881 the acreage was recorded in the CEBs and again there was no definite trend, the total being within 5 percent of 2034 acres.<sup>21</sup> This suggests that very little marginal land was taken into cultivation during this period or indeed lost. 19 farms were identified in 7 or 8 of the 8 censuses and 4 were regularly in multiple tenancies. These were Callow Farm, Gatehouse Farm, Nether Hurst and Green's House, shown in figure 3.6. Below Green's House was a paper mill taking its power from the Hood Brook. A large number of smaller farms appeared in 2, 3 or 4 censuses. On occasions such an observation represented a change of farm name. George Cooper for example, resided at 'Barn in the Woods' in 1871 and 1881 but in 1891 and 1901 at 'Padley Farm', almost certainly at the same geographical location. In other instances a change in ownership might have led to absorption or division of an existing farm. North Lees for example, ranged from 100 acres in 1861 to 225 acres in 1871 and at that time was by far the largest farm in Hathersage. North Lees Hall is illustrated in figure 3.5. When North Lees was let in 1875, it was described as being 220 acres "thereabouts" of which 60 acres were arable and the remainder was rough pasture.<sup>22</sup> This proportion of arable is thought to be fairly typical of Hathersage farms. In 1844, John Platts sought to sell the freehold of part of Nether Hurst described as including a "commodious farmhouse" and land of about 51 acres of which seven acres was a plantation, let to an "industrious and good managing tenant".<sup>23</sup> In the case of Barnfield House, Mary Cook (relict of Robert Cook, needle manufacturer) farmed 20 acres in 1871 but this land was not adjacent to Barnfield House and strictly was not a farm.

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<sup>21</sup> The total given for 1861 was 1200 acres but several farmers failed to declare their acreage in this census.

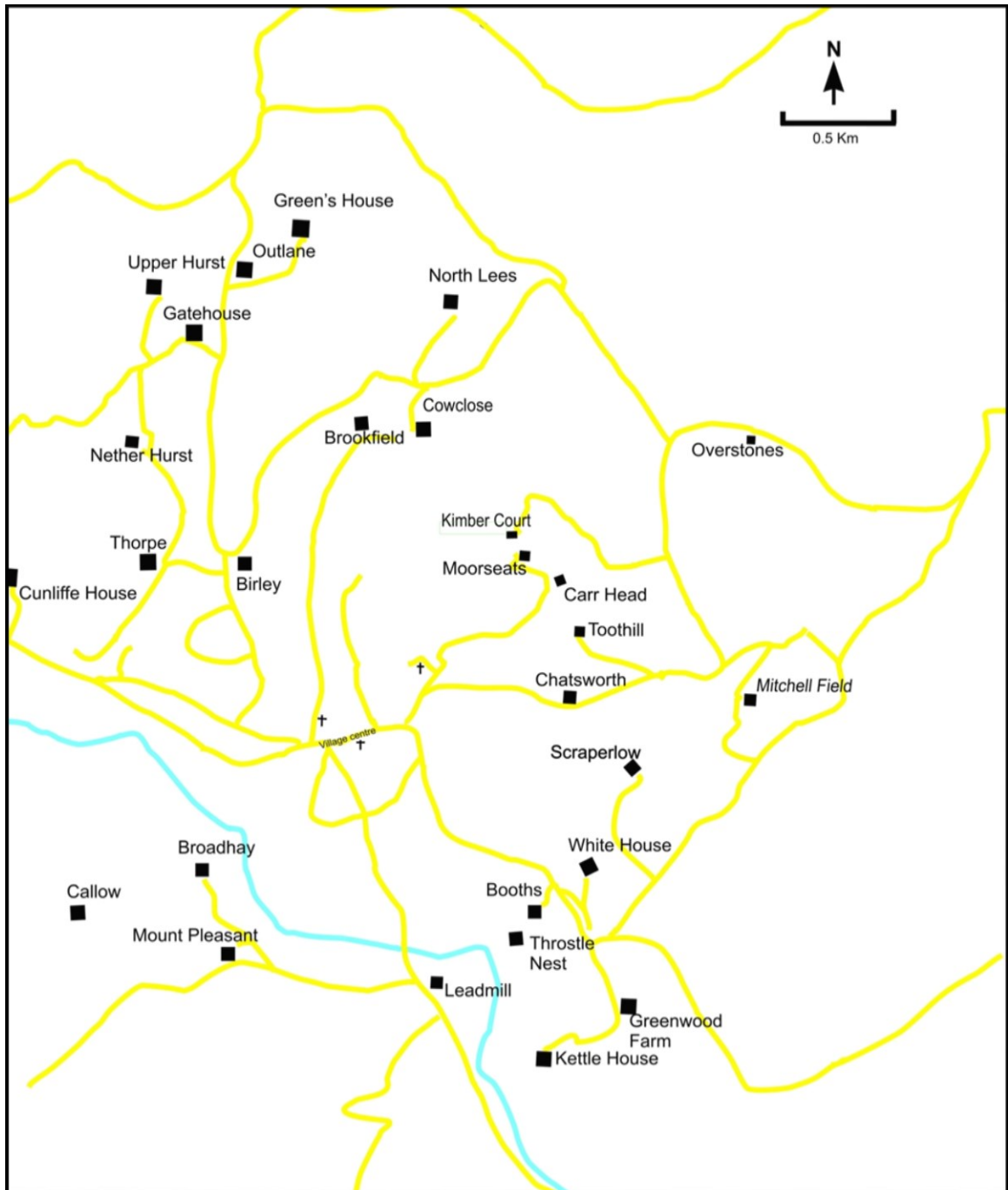
<sup>22</sup> *SARI*, 9/3/1875, p.5.

<sup>23</sup> *TMP*, 13/11/1844, p. 1. The tenant was Henry Thorpe.



**Figure 3.5.** North Lees Hall in 2012 after restoration.  
The farm buildings are behind. SK 235 835. (Photograph by CS, May, 2012.)





**Figure 3.6.** Location of farms in and around Hathersage during the nineteenth century. Roads and tracks are in yellow, the River Derwent in blue.

Hathersage farms were generally small, as would be expected of a sub-moorland area with steep sided valleys and rocky outcrops. Of the 24 farms where a sequence of acreages is available from the CEBs, six were over 100 acres and four under 50 acres. The average size of Derbyshire farms in 1851 was 67 acres, almost the lowest average

in England.<sup>24</sup> Some farms were occupied by the same families for decades while for others the tenants changed frequently. Overstones, shown in figure 3.7, of approximately 140 acres, was occupied by Samuel and Hannah Priestley in 1841, though Samuel was at his other farm in Bradfield (Yorkshire) on census night. After Samuel's death in 1858, Hannah continued to farm with her married son John until her death in 1865. John died in 1879 leaving his wife Millicent, who initially trained as a teacher, to manage the farm. This she did until her own death in 1901. It was characteristic of Hathersage farmers that when the householder died, even if a family member inherited the tenancy, the farm stock and often the implements were sold. Thus, following Hannah's death, two draught mares, 25 cows, three pigs and nine couples of fowls in addition to a plough, harrows, four carts, chopper, a fan and farm utensils were duly auctioned.<sup>25</sup> Then in 1878, 15 cows, 200 sheep and lambs, three horses, pigs, carts and other effects were put up for sale.<sup>26</sup> Other farms, like Scraperlow, illustrated in figure 3.8, which was about half the size of Overstones, changed tenancies frequently. On almost every occasion the tenant was from outside the area. When George Grayson gave up farming in February 1880 he likewise auctioned his stock and machinery (10 cows, 92 sheep, one horse, a grass mower, a seed harrow, a fallow drag and a winnowing machine).<sup>27</sup>

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<sup>24</sup> Shaw-Taylor, L., 'Family farms and capitalist farms in mid nineteenth-century England', *Agricultural History Review*, 53 (2005), p. 180.

<sup>25</sup> *SARI*, 27/3/1866, p. 4.

<sup>26</sup> *SARI*, 12/11/1878, p. 4.

<sup>27</sup> *SARI*, 7/2/1880, p. 4.



**Figure 3.7.** Overstones Farm. Stanage Edge looms behind. SK 248 828. (Photograph by CS, 2014)



**Figure 3.8.** Scaperlow farm.

Photograph taken from the road between Hathersage Booths and the turnpike road to Sheffield via. Ringinglow. SK 244 814. (Photograph by CS, 2012.)

Assessing the number of agricultural workers using CEBs is fraught with difficulties. There were major changes in terminology and recording between 1841 and 1911. In 1841 a farmer's son was not allocated any occupation, though in 1871 the occupational term 'farmer's son' has been taken to signify being employed on the farm even if they

might not have received pay except their keep. In the Hathersage CEBs for 1841 the only term used to describe a farm worker was 'agricultural labourer'.<sup>28</sup> Servants were described as male or female and one cannot distinguish between domestic and farm servants. In all censuses, an unknown number of those labelled 'general labourers' might have been involved in agriculture for at least some part of the year.

Notwithstanding these caveats, it is clear that there was only a modest decrease in the number of agricultural workers over the period. Taking workers and working relatives, the number of *hands* reduced by only 17 per cent between 1851 and 1911. As described in chapter 7, farmers and agricultural labourers sometimes moved away from Hathersage but when they did so they rarely moved further than 10 miles, as shown in figure 7.4.

In historical writing a distinction has been made between farm servants on yearly contracts and agricultural labourers employed by the day.<sup>29</sup> As late as the 1870, Thomas Hardy described the annual hiring fair as an important event in the calendar.<sup>30</sup> In Cheshire, Stephen Caunce found evidence for the hiring of farm servants into the twentieth century.<sup>31</sup> However, farm servants do not appear to have featured significantly in Hathersage. Only one was recorded in 1851, though numbers were higher in 1861 and 1871 (13 and 11 respectively), only to fall back subsequently.

Judging from the fact that the size of the farming units remained small and that there was little change in the number of agricultural workers might lead us to suppose that there had been little change in farming methods during the nineteenth century. This is not surprising considering the terrain where modern farming methods would have been

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<sup>28</sup> The 1841 census in general contains a number of more specialised descriptions of agricultural workers. For example, for Chard (Somerset), a dairy farming area, a number of 'dairymen' were registered despite the vast majority of workers being described as 'ag lab'. It can be assumed that although many of the farmers in Hathersage owned one or more milking cows, none had a herd large enough to employ a dedicated 'dairyman'. The failure to register any agricultural specialism by the Hathersage enumerator cannot be ruled out, however.

<sup>29</sup> Kussmaul, A., *Servants in Husbandry in Early Modern England* (Cambridge, 1981).

<sup>30</sup> Hardy, T., 'The Dorsetshire labourer', *Longman's Magazine*, July 1883, pp. 252-269.

<sup>31</sup> Caunce, S., 'Dancing and drinking were the order of the day: the hiring fairs of Chester, Nantwich and Whitchurch in the late-nineteenth century', *The Local Historian*, 47 (2017), pp.111-126.

inappropriate. In the twentieth century there has been a tendency for farms to amalgamate and some of the farmhouses have become private non-farm residences. The descendants of Alexander Elliot who from 1861 worked Toothill Farm are still at Toothill running a livestock farm. Broadhay now offers 'simulated shooting', High Lees rears livestock and Thorpe farm manufactures ice cream and provides accommodation for tourists but remain working farms.

## Quarrying and Millstones

While the lower lands and moors grew crops and animals, the gritstone edge seen behind Overstones Farm provided material suitable for the fashioning of millstones. Millstones have been quarried in the Hathersage area from the thirteenth century and by the seventeenth were being transported throughout England as far away as Dorset. Stones were exported by sea, first being taken by cart to Bawtry and hence by boat to Hull. The main quarries are east of Hathersage near the turnpike road at Surprise View. Here one can find a quarry on the hillside with 10 separate bays below the escarpment, where each was worked by individual quarrymen. One such is shown in figure 3.9. Today many millstones can be seen in the quarries and on the hillside in various states of completion, which suggests that the work may have been seasonal at least in part. An example is presented in figure 3.10. During favourable weather stones might have been made in anticipation of future orders. As well as being utilized for grinding corn, stones were used for ore crushing, illustrated in figure 3.11, milling animal feed and grinding edge tools in Sheffield and needles in Hathersage and Leeds.

According to Harold Fox, medieval millstone makers of Dartmoor might earn the equivalent of 20 days labouring for each millstone, giving an indication as to how long it took to carve out an individual stone.<sup>32</sup> Dartmoor stones were of granite and used for flour milling and the crushing of tin ore.

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<sup>32</sup> Fox, H., 'The millstone makers of medieval Dartmoor', *Devon and Cornwall Notes and Queries*, 37 (1994), pp. 153-7.





**Figure 3.9.** Quarry on hillside above Millstone edge at Surprise view. Unfinished stones without central holes can be seen in the right foreground. SK 247 804 (Photograph by CS, 2010.)



**Figure 3.10.** A partially completed millstone. Note the central hole for a driving shaft, a chamfered top and surrounded by discarded fragments. Millstone Edge. (Photograph by CS, 2010.)





**Figure 3.11.** Lead ore crushing circle near the Odin mine. This is a reconstruction west of Castleton, Derbys. The grindstone was tethered by a pole to the centre of the circle and towed round the circle by animal or hand. SK 141 842 (Photograph by CS, 2010.)

Gordon Tucker describes how millstones were made allowing for temporal and spatial variations.<sup>33</sup> First, a stone circular in outline was cut and one surface dressed. Then a central hole was bored and the stone was turned over for the second circular surface to be fashioned. It is less clear from the available stones at which stage the circumference edge was dressed. Tool marks remaining on the quarry walls suggest how the stone blocks were extracted. There are suggestions that stones were removed from the hillside by sledge or by rolling a pair of stones connected by a wooden axle, but there is no irrefutable archaeological evidence for either method.<sup>34</sup> Barbara Buxton suggests that long ruts on the hillside above Padley supports the sledge hypothesis.<sup>35</sup> Later removal

<sup>33</sup> Tucker D., 'Millstone making in the Peak District of Derbyshire: the quarries and the technology', *Industrial Archaeology Review*, 8 (1985), pp. 42-58.

<sup>34</sup> Defoe reported seeing two millstones connected by a wooden axle being hauled near Chatsworth; Defoe, D., *A Tour Through the Whole Island of Great Britain*, 2 (1730, London, 1929), p. 583 reported in Radley, J., 'Peak millstones and Hallamshire grindstones', *Transactions of the Newcomen Society*, 36 (1966), pp. 165-175.

<sup>35</sup> Buxton, *Hathersage*, p.73. Such ruts could just as easily have been produced by the method described by Defoe.

by rail is likely: there being large numbers of edge stones adjacent to the railway track at Bole Hill quarry, shown in figure 3.12, though there is no indication how they may have been loaded onto the wagons.



**Figure 3.12.** Bole Hill quarry at Surprise View.

The railway track has now become the pathway on the quarry floor used by walkers and sheep. Over a hundred stones lay by the track-side awaiting shipment, indicating that the demise of the trade was precipitous. The quarry is better known for providing stone for the Derwent dam and was closed at the end of 1914. SK 266 802 (Photograph by CS, 2012.)

The numbers of masons, quarrymen and millstone makers in each census suggests growth up to the 1860s followed by 20 years or so of stability, with between 30 and 40 men involved. There was a rapid rise around 1891 when over 60 men were employed.<sup>36</sup> Although this sudden flourishing of the industry was in part due to the building of the Totley railway tunnel and explains the four-fold increase in the number of masons living in Hathersage, there was, at the same time, a doubling of the number of millstone makers. One possible explanation is that men previously employed to produce millstones and grindstones also extracted blocks of building stone for the masons.

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<sup>36</sup> The figure of 10 workers in 1841 may be artificially low. As we have seen the 1841 census appears to have under-reported occupations. Again, a number of men labelled ‘general labourers’ may have worked in the quarries.



Indeed, as early as 1863 it was announced by John Cooper, millstone manufacturer that Burbage Quarry had begun to supply ashlar.<sup>37</sup> After 1891 the industry declined reaching 42 workers in 1911. Stone from Hathersage quarries have been used for the Howden and Derwent Dams which were completed in 1912 and 1916 respectively. The demand for naturally occurring grindstones slumped when emery grindstones, originally patented in the United States in 1890, were by 1908 becoming readily available in Britain.

Three families, Schofields, Wilsons and Coopers were involved with millstone making and quarrying throughout the period. In 1881 they made up nearly half the workforce between them. Quarrying was a dangerous occupation. In May 1884, it was reported that James Wilson, millstone maker and father of ten, was killed in Shuttleworth's quarry by a drug laden with 12 tons of stone.<sup>38</sup> The only indication of pay rates comes from an advertisement for manpower. In 1876, W.J. and T. Child advertised for millstone makers at Burbage Quarry and offered a generous '5s 6d a day or piece work'.<sup>39</sup>

Evidence for dual occupation comes principally from the parish registers with occasional contributions from newspapers. Probate and inventory evidence has seldom been of value as few inventories have survived. Quarrymen and stone masons appear to have been described as such, or as labourers. Only one instance was found in the parish registers where Thomas Jowle, of Bamford, was variously described as labourer, farmer and stone cutter between 1847 and 1858 suggesting that he may have been a small-time farmer as well as a stone cutter. The extent of multiple occupations, whether continuous or seasonal, is difficult to estimate from historical records for all periods.<sup>40</sup>

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<sup>37</sup> *SARI*, 7/7/1863, p.2.

<sup>38</sup> *SARI*, 15/5/1884, p.3. (A 'drug' is a low four wheeled wagon used for moving heavy objects.)

<sup>39</sup> *SARI*, 8/4/1876, p.5.

<sup>40</sup> Churchley, R.A., *Differing Responses to an Industrial Economy: Occupations in Rural Communities in the Heart of England from the Restoration to the Railway Age* (c.1660-1840), Unpublished Ph.D. Thesis, University of Birmingham (2010), pp. 347-9.

## Button Making

Most Hathersage inhabitants made their living from the land, either by farming or quarrying. A small number were involved in craft industries; there was typically a smith, a broom maker, saddler and basket maker in the community. More pertinent to the present enquiry were two metal industries; button making and wire-drawing. Button making might be thought of as being a precursor of the wire industry but this is almost certainly not the case. The Hathersage buttons were of cast brass and there is no evidence that the manufacturing Furniss family became seriously involved in the wire industry, as demonstrated in figure 3.13.

It is not known when the button industry started. Aiken mentions it in 1795; ‘a small manufacture of metal buttons.’<sup>41</sup> The house in Besom Lane, built by Thomas and Ann Furniss, bears a date stone of 1781 seen in figure 3.14. Thomas Furniss died in 1820; in his will, where he is described as a ‘Yeoman’, he leaves his workshops and tools to his sons John and James in undivided moieties.<sup>42</sup> John died in 1830 and the following year James Furniss, ‘now of Sheffield’ leased the cottage and garden of Hemp Yard to George Morton, innkeeper of Hathersage with Henry Cocker, needle manufacturer, as trustee.<sup>43</sup> It seems that 1830 marks the end of button making by the Furniss family in Hathersage. James died in 1838 at Ecclesall Bielow (Sheffield) where he had been a clerk in a warehouse. C. J. Fox had latterly been a partner of John and James Furniss. He was an executor of John’s will (together with James Furniss and Henry Cocker) and a notice appeared in the press that the partnership of C.J. Fox and Co., button manufacturers had been dissolved.<sup>44</sup> On the same day a similar notice appeared in *The Standard* relating to Furniss and Sons, button manufacturers.<sup>45</sup> The possibility of two

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<sup>41</sup> Aiken, J., *A Description of the Country from Thirty to Forty Miles Round Manchester* (1795, Newton Abbot, 1968), p. 496.

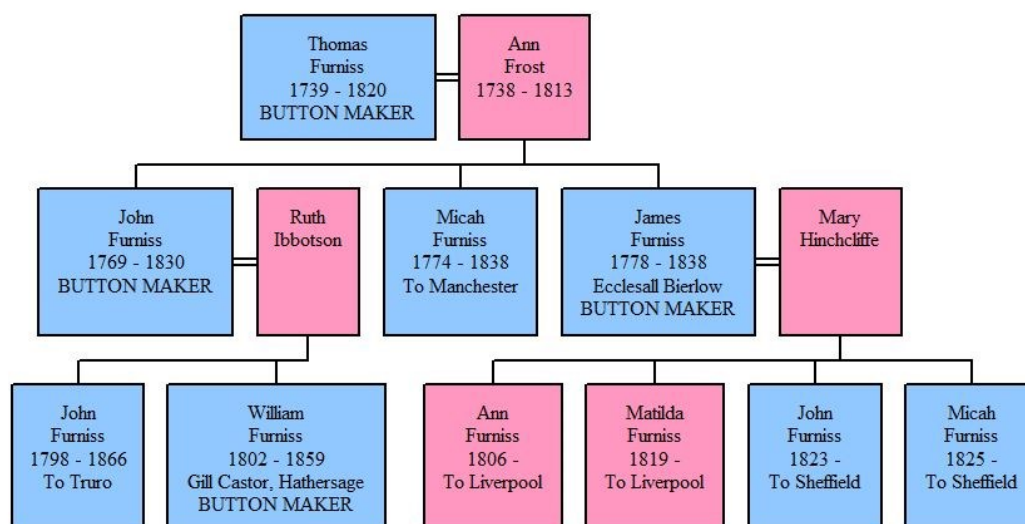
<sup>42</sup> Will of Thomas Furniss (1815), DRO, Cam D/73.

<sup>43</sup> Lease and Release, (1831) DRO, Cam D/77.

<sup>44</sup> *Morning Post*, 18/9/1830, p. 1. (C. J. Fox may have been a brother of Betty Fox, the second wife of John Furniss, born 1769.)

<sup>45</sup> *The Standard* (London), 18/9/1830, p. 1.

companies of button makers is supported by the trade directory entry of 1829: ‘Button Manufacturers, Hathersage (2)’<sup>46</sup> *Pigot’s Directory* of 1835 lists Richard Froggatt as a ‘button manufacturer’.<sup>47</sup> In the 1841 census, Richard is described as a ‘labourer’. Only William Furniss remained in Hathersage.



**Figure 3.13.** Abbreviated family tree of the Furniss family.

This demonstrates the involvement in button making and the eventual migration from Hathersage.

Brass had been imported from Sheffield and Bristol via Liverpool. The Furniss family spread to Liverpool, Manchester (where Micah, son of Thomas and Ann, was a silversmith) and Truro (Cornwall). It is said that the brass button trade flourished during the Napoleonic Wars but there is no evidence that the Hathersage workshops were large. During the 1820s, only seven fathers recorded in the baptism register are described as ‘button makers/manufacturers’.<sup>48</sup> William Furniss (son of John) became a gill castor when the company closed in 1830 and was described as a ‘brass founder’ in the 1851 census. As with stone workers, there is no evidence of button makers having a second occupation.

<sup>46</sup> Glover, S., *Directory of the County of Derbyshire* (1829), p.154.

<sup>47</sup> *Pigot’s Directory of Derbyshire*, (1835), p. 28.

<sup>48</sup> In the 1851 census, William Crossland is described as a button maker but this is the only entry for the craft in the censuses (1841-1901) or the parish registers after 1838 for Hathersage.



**Figure 3.14.** The house in Besom Lane built by Thomas and Ann Furniss. The upper floor was used as a workshop. Inset: date stone seen between the 1<sup>st</sup> and 2<sup>nd</sup> story windows. SK 232 816 (Photograph by CS, 2014.)

## Textiles

Flax and hemp were processed in Hathersage during the seventeenth century, the latter persisting to 1827 when George Stones was described as an apprentice flax-dresser and rope-maker.<sup>49</sup> Spinning and weaving were widespread activities in the home prior to the industrial revolution and Buxton mentions the calico works, later to become the Victoria Needle Works, owned by Ashton Ashton Shuttleworth, and shown as it is today in figure 3.15. Interestingly Buxton also alludes to Henry Cocker's weaving house in the 1770s.<sup>50</sup> It is noteworthy, however, that the 1841 census for Hathersage and Outseats does not record anyone associated with textile manufacture. Shoemaking and tailoring continued in the village throughout the nineteenth century employing several men at the time.

<sup>49</sup> Buxton, *Hathersage*, p. 60.

<sup>50</sup> *Ibid.*, p.94.





**Figure 3.15.** The Victoria Works Shed in 2015. SK 228 813 (Photograph by CS, May 2015)

### **Metal working**

Sheffield was a cutlery town many years before the industrial revolution. Indeed three-fifths of men recorded in the parish registers mid-seventeenth century were described as ‘cutlers’.<sup>51</sup> Cutlers initially used local ironstone but subsequently used German, Spanish and Swedish steel. The first documentary evidence for steel-making in Sheffield dates to 1642. We know from Angerstein’s diary of 1753-5 that there were 8 wire-masters in the Wortley and Barnsley area using English and Swedish iron for needle-making. He recorded prices and wages as well as describing the processes involved and intimated that wire-drawing had recently been introduced from Wales.<sup>52</sup> Following Huntsman’s arrival, the reputation of Sheffield grew rapidly to a point in the mid-nineteenth century when 90 per cent of British steel was made in the Sheffield area.<sup>53</sup> While Sheffield was

<sup>51</sup> Hey, D., ‘The South Yorkshire Steel Industry and the Industrial Revolution’, *Northern History*, 42 (2005), p. 90.

<sup>52</sup> Berg, T. and P. (Trans.), *R. R. Angerstein's Illustrated Travel Diary, 1753-1755* (London, 2001), pp. 216-219.

<sup>53</sup> Hey, ‘South Yorkshire Steel’, p. 94.

known for steel manufacture and edge tool making, Hathersage earned its fame from the production of wire and wire-based products in the nineteenth century.

Graham Ullathorne identified the occasional wire-drawer in the Hope Valley area.<sup>54</sup> There is also probate evidence of William Walkton of Hathersage, wire-drawer, who made his will on 8<sup>th</sup> September 1722.<sup>55</sup> Interestingly, although Walkton described himself as a wire-drawer, there was no mention of any tools or materials in the post-mortem inventory. This was short and was valued at £17 12s. The list comprised bedding, a few items of furniture, a few pots, hay and straw and a 'small cow' which was the most valuable item; a mere £2.10s. Documents suggest that there were a few isolated wire-drawers in or around Hathersage from the end of the seventeenth century. There is no clear evidence as to whether these men worked independently or as out-workers, raw materials being supplied and finished products collected by a travelling merchant. Possibly, they worked in a similar way to a village blacksmith. The only evidence for the operation of a dual family economy comes from Samuel Cocker who in 1821 was described as a farmer in the baptism register but previously and afterwards as a wire-drawer or needle manufacturer. There is much evidence of the operation of a dual economy both in Derbyshire lead mines and metal working in and around Sheffield, though wire-drawing and needle-making are not specifically mentioned.<sup>56</sup> Although Thomas Cocker was a tenant at Moscar farm it is unclear how much he was involved in farming. Wire-drawing and needle-making became a significant activity in Hathersage in the second decade of the nineteenth century but had disappeared by the very early years of the twentieth century.

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<sup>54</sup> Ullathorne, G., 'Migration from Derbyshire to Hallamshire: the evidence of the Cutler's Company records, 1624-1814', *Northern History*, 41, (2004), p. 81.

<sup>55</sup> Will and inventory, LRO, B/C/11.

<sup>56</sup> Hey, D., 'A dual economy in South Yorkshire', *Agricultural History Review*, 17 (1969), pp. 108-19.

## The Evolution of Wire-working and Needle-making

The major landowners in the area were the Duke of Devonshire and the resident lords of the manor, the Shuttleworth family.<sup>57</sup> In the mid-1820s James Holworthy developed Brookfield estate and became a substantial landowner. The estate was bought by Charles Cammell for £44,100 in 1867.<sup>58</sup> It is also significant that lead was smelted on the North Lees estate in the late seventeenth century on a site that was converted to paper making by Joseph Ibbotson in the 1760.<sup>59</sup>

The suggestion made in the opening paragraph of chapter 1, that ongoing wire-drawing was introduced at the end of the eighteenth century, may be a fanciful simplification and lacks veracity. A more reliable history is obtained from studying the Hathersage Cocker family while acknowledging the existence of other individual wire-drawers living in the vicinity from time to time. The history of the manufactories was intimately entwined with the fortunes of the family owners and the following account may be supplemented by reference to appendix 2 which includes more personal details.

Figure 3.16 is a late nineteenth-century map showing the position of the needle mills. Manufacturing was dominated by two families, the Cockers who occupied the Atlas and Dale Mills and the Cooks who worked from the Barnfield Works. Other mills were the Victoria Works, Greeve's needle works and Darvill's. The major manufactories are presented in turn and summarised by a timeline in table 3.1, pinpointing significant events.

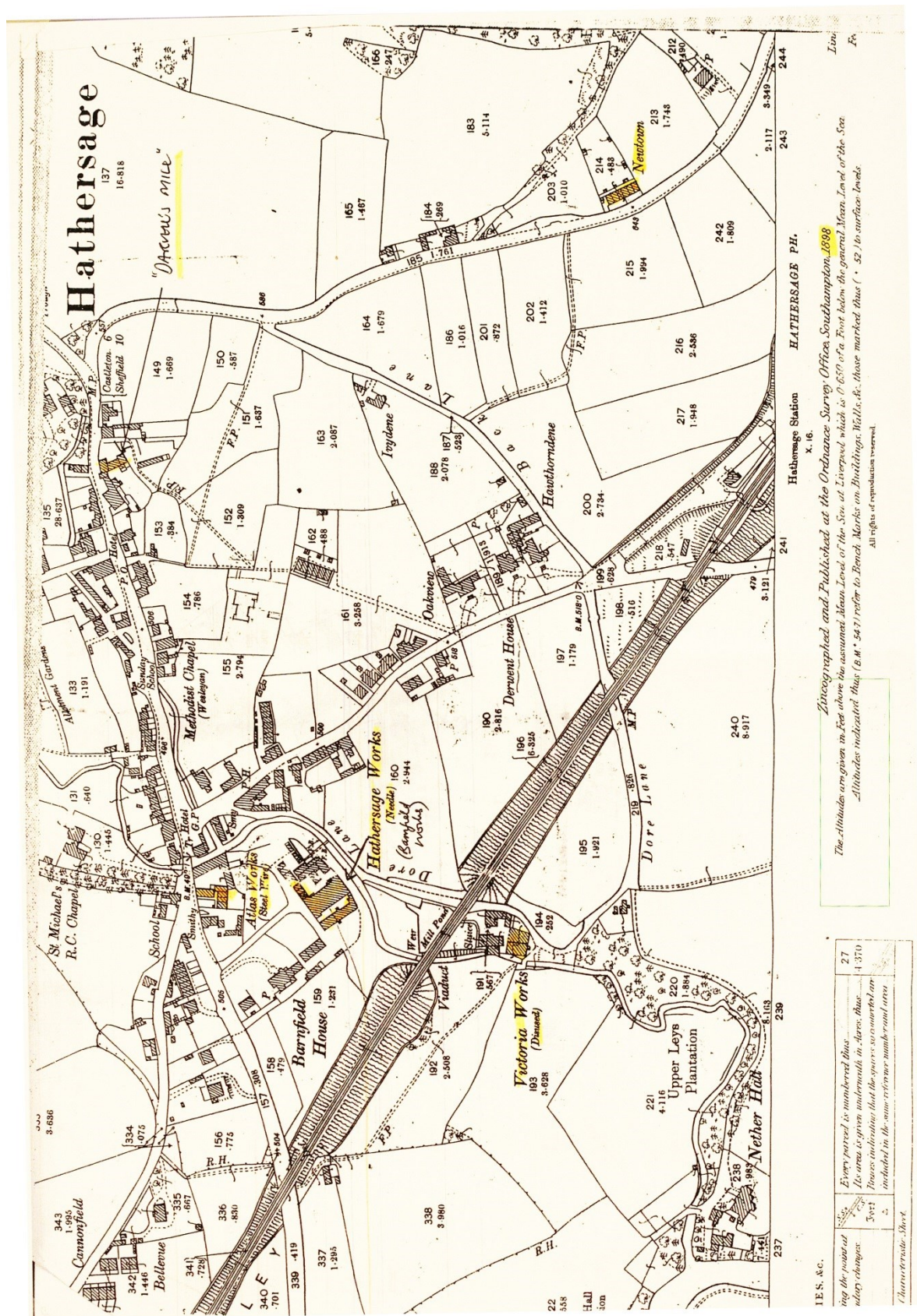
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<sup>57</sup> William Shuttleworth, a London lawyer, married Christiana Spencer, resident of Hathersage Hall in 1748. Upon his death in 1780, the Hall passed to his nephew John Shuttleworth.

<sup>58</sup> *SARI*, 11/12/1867, p. 3. James Holworthy (1781-1841). Watercolour artist and friend of J.M.W. Turner. Married Anne Wright and retired to Brookfield Manor. Charles Cammell (1810-1879) was first apprenticed to an ironmonger in Hull. In 1830, he moved to Sheffield to be a traveller for the Ibbotsons at The Globe Works. In 1837 he formed a partnership with Thomas and Henry Johnson, steel and file manufacturers. This company grew and the Cyclops Works was established in 1845. After further expansion the company became Charles Cammell and Co Ltd with Charles as chairman. In 1903 the company joined with Laird Brothers to create the famous Cammell-Laird shipbuilding company.

<sup>59</sup> Hey, D., *Derbyshire, a History* (Lancaster, 2008), p.309. See also, DRO, D5776/1, p. 49, and DRO, CAM D/5.





**Figure 3.16.** Late nineteenth century map of central Hathersage showing locations of the needle mills.



## The Cocker Manufactories

The first documented evidence of a Cocker in Hathersage was in 1724 when Solomon married Hannah Windle. There is no reliable information relating to Solomon's birthplace, but raised a family in Hathersage. James Holworthy recorded in 1827 what he had been told about the Cockers, though his sources are obscure.

'The Cocker family either were originally of Bamford or came there as apprentices to the Iron wire drawing trade – people in that trade were called *Windle*. Cocker afterwards took to this *flat* wire drawing and this got money fast.'<sup>60</sup>

This suggests that Solomon Cocker became an apprentice wire-drawer in Bamford, and married his master's daughter.<sup>61</sup> It might also explain the high preponderance of wire-drawers and metal-workers among his descendants. The earliest record of the Cockers being associated with land holding is in 1801 when Robert, Jonathan and Thomas were tenants of land belonging to the Brookfield Estate.<sup>62</sup> An abbreviated family tree including Cockers mentioned in this text can be found in Appendix 2.

Robert Cocker (1729-1814, married Mary Fox, 1757,) as a widower lived at Carr Head. Benjamin Huntsman, who had developed the crucible method of steel casting in Sheffield for clock springs, is attributed with asking Robert Cocker of Hathersage to draw steel wire for him in the 1770s.<sup>63</sup> Two of Robert and Mary's children, Thomas

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<sup>60</sup> DRO, Unpublished notes regarding the Brookfield Estate by James Holworthy. D5776/1, p. 51.

<sup>61</sup> Examination of parish registers reveals that Hannah Windle's parents were Joshua Windle and Mary Critchley. Their children were baptised and buried at Hathersage, there being no church at Bamford at that time. Unfortunately, nothing has been found to confirm Joshua's occupation.

<sup>62</sup> DRO, D5776/1, pp. 100-101. These are believed to be Robert (b.1729) and his sons Thomas (b.1758) and Jonathan (b.1763).

<sup>63</sup> Nixon, F., *The Industrial Archaeology of Derbyshire* (Newton Abbot, 1969), pp. 50-51. Benjamin Huntsman was German though born in Lincolnshire. He started life as a clockmaker and part-time oculist in Doncaster, and moved to Handsworth (Sheffield) in 1740. By experimentation, he became able to produce hard steel by the crucible method. Natural conservatism prevented local cutlers from altering their German suppliers and almost all of his output was exported to France. In 1770 he moved his plant to Attercliffe (Sheffield). Eventually, local cutlers realised the superiority of Huntsman's steel and began to use it.

(1758-1834) and Jonathan (1763-1827) went on to produce large families in Hathersage and were prominent in the wire-drawing and hackle-pin making industries. From Thomas's first marriage, his first born, Henry (1786-1856) was a key player in the Hathersage wire and needle works. Joseph Robert Cocker, (1819-1887, son of Thomas by his second wife) managed the Atlas works in the latter years of the business.

According to Michael Morrall, Thomas's son Samuel (1790-1841) was responsible for introducing needle-making to Hathersage.<sup>64</sup> Morrall relates that Samuel learnt the 'old method' of making needles at Bank Top in Manchester and from William Lee in Chester.<sup>65</sup> He continues:

'in 1812, (Samuel) engaged a person who had learned needle-making from the Morralls at Washford Mills, named Robert Cook, to make needles by machinery. The workpeople of course came from the same part as R. Cook, so that they were continually leaving Hathersage, and returned to their old homes in Warwickshire. R. Cook continued in Cocker's employment for nine years. In 1821 he commenced for himself, and the two firms carried on in Hathersage;'<sup>66</sup>

From the register of baptisms, we know that Thomas was a wire-drawer between 1813 and 1819, and that Samuel worked as a wire-drawer in 1818/19. But in 1821 Samuel is described as a farmer and from 1822 as a needle and wire manufacturer. In 1834 he moved to Ecclesall Bierlow.

The Cocker's wire businesses in Hathersage were complex and from the available surviving documents it has been difficult to piece them together. The account which

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Unfortunately, records of Huntsman's business prior to 1787 have been destroyed; Ashton, T.S., *Iron and Steel in the Industrial Revolution* (1924, Manchester, 1951), p. 56. An alternative account states that Huntsman asked Samuel Cocker to draw steel wire at his Porter Steel works at Sharrow Vale (Sheffield) in 1752 and that various Hathersage Cockers assisted him in that endeavour; Buxton, *Hathersage*, p. 94. It has also been stated that in 1802 Robert Cocker supplied William Huntsman with drawn steel (Buxton, *Hathersage*, p. 99.).

<sup>64</sup> Morrall, M., *History and Description of Needle Making* (Manchester, 1862), p. 17. Michael Morrall was a needle manufacturer in Studley and lived in Matlock, Derbyshire. It would be surprising if he were not personally acquainted with the Cocker family.

<sup>65</sup> It has been possible to confirm William Lee as a needle-maker of Chester.

<sup>66</sup> Morrall, *History and Description*, p.17.

appears in this volume seems a true account but may be subject to correction especially in the light of any undiscovered material. In the early part of the nineteenth century Thomas (b.1758) and Jonathon (b.1763) appear to have worked together at the Dale works. Jonathan died in 1827. The composition of the partnership is unclear from this time but in 1830 the partnership of 'Cocker and Co.' was dissolved.<sup>67</sup> Thomas's sons, Henry, Robert and Edwin then continued as wire-drawers and partners for three years when Edwin withdrew from the partnership, then classified needle manufacturers.<sup>68</sup> Sons John, James and Joseph Robert were also involved in some, but unknown, capacity.

On 27<sup>th</sup> June 1828, Edwin wrote to his father, Thomas, from London.

'Ino & I live at Shaker Lane Gt. Tower St, about 10 mins walk from the Office - Mr. A. Dom and Mr Eyre a Surgeon late with Dr. Dom are going to be with us in the same apartments - we have one sitting room and two Bedrooms for which we pay 18/- per week'.<sup>69</sup>

John had just arrived in London. Edwin refers to an 'account for needles'. But by 1841 he seems to have ceased his association with the family firm. James Cocker (b.1813, son of Henry) was involved in the business as shown by a reported episode in 1839. A postman was violently robbed between Fox House and Hathersage but managed to get to Hathersage to raise the alarm. James, together with '11 handpicked men from his factory' set out onto the moor to apprehend the robber.<sup>70</sup> They caught two robbers who were subsequently transported for 15 years.<sup>71</sup> In 1841 James and his wife Margaret, who were married in Aberdeen in 1839, were living at Eastwood Cottage,

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<sup>67</sup> *The Standard* (London), 30/10/1830, p. 1.

<sup>68</sup> *The York Herald, and General Advertiser*, 11/5/1833.

<sup>69</sup> The letter in full is published at <http://places.wishful-thinking.org.uk/DBY/Hathersage/CockerLetters3.html> (accessed 8/7/2014), along with a dozen or so other letters. These will be referred to as 'Cocker Letters' in subsequent footnotes.

<sup>70</sup> *The Morning Post*, 01/8/1839.

<sup>71</sup> *SARI*, 27/7/1839, p. 5.

Hathersage and he was described as a 'merchant'. The family moved to Liverpool at the end of 1844.

In 1843 the Parker and Shore Bank, who had underwritten Cocker's loan of £3000, crashed. This resulted in Henry Cocker appearing at the bankruptcy court in 1847. In November of that year Joseph Robert wrote from Manchester to his sister Hannah at Broom Cottage, Hathersage.<sup>72</sup> He mentioned that he had met Jonathan (his cousin, b. 1802?) and intimated that there was some financial dispute between them. He also said that he had been working on the balance sheet which was required by the court and had found errors in 'Brother's cash book for 1843 and 1844'. It is not clear to whom he is referring but Henry seems the obvious candidate. It is also odd that in all the Cocker letters Henry was never mentioned by name. One might reasonably conclude that Henry (b. 1786) was not uniformly respected within the family and especially by his half-brother, Joseph Robert who was 32 years the younger.

Mr H. Waterfall of the Hallamshire Bank and Mr Broomhead of Hathersage were appointed assignees and liabilities were assessed at £17,000.<sup>73</sup> In the same edition, notice was given for the auction of live and dead farm stock at Carr Head, and in January a notice for the sale of stock in trade and wire-working tools.<sup>74</sup> March 1848 saw the auction of Henry's assets, for all to see, at the Ordnance Arms in the middle of Hathersage. A photograph of the original bill is displayed in figure 3.17. detailing 19 lots included property in Hathersage, Outseats and Froggatt. It consisted of 25 cottages and 12 lots of land amounting to some 50 acres, Dale Mill with its 25 horse-power steam engine and machinery, a separate workshop and warehouse, his own residence of Rock House, a share in the rents of Moscar and a pew in the parish church.<sup>75</sup>

It would appear that the factory including the steam engine and machinery did not sell as it was again advertised for sale or let, in April;<sup>76</sup> and again in November.<sup>77</sup> The Dale

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<sup>72</sup> Cocker Letters, 12/11/1847.

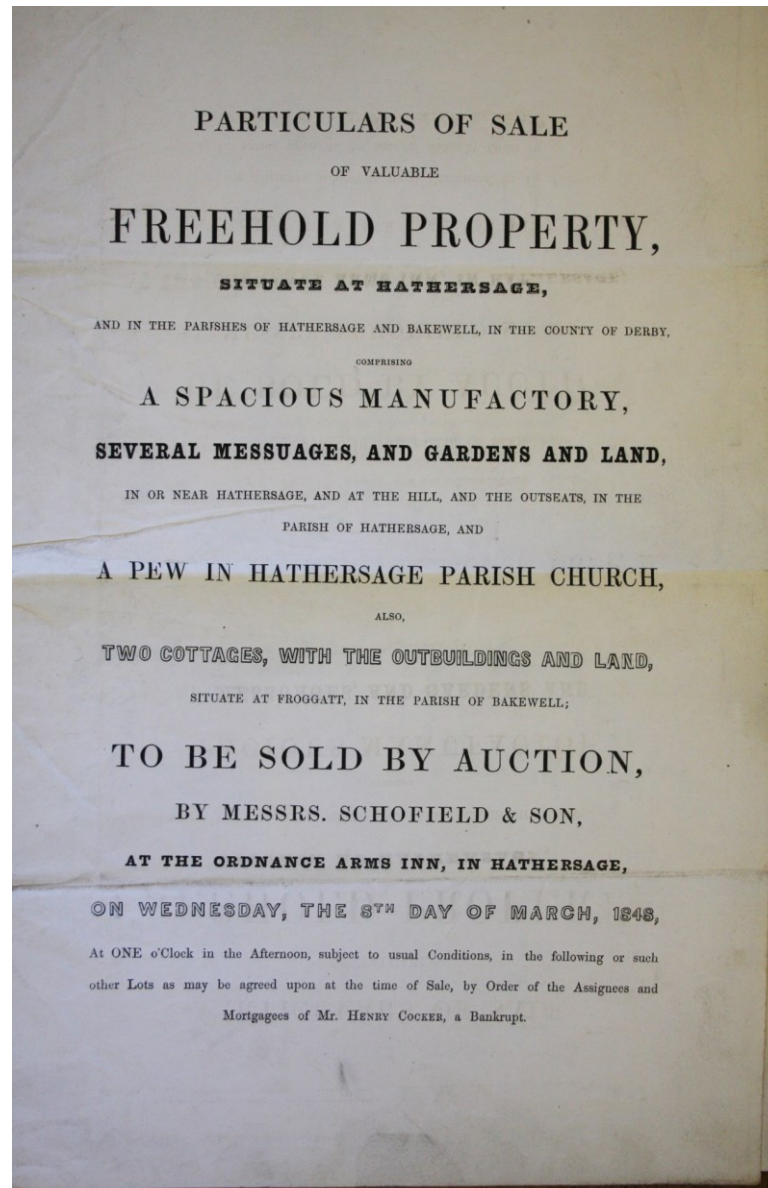
<sup>73</sup> *SARI* 20/11/1847, p.8.

<sup>74</sup> *SARI*, 25/1/1848, p.4.

<sup>75</sup> DRO. Q/SB/9/174.

<sup>76</sup> *Leeds Mercury*, 13/4/1850, p. 5.

Mill asset was proving difficult to realize as March 1853 saw the re-advertisement of several lots which included Dale Mill, the workshops opposite, Eastwoods Farm and Rock House.<sup>78</sup> The advertisement stated that Cook and Co. were occupants at the Mill making it likely that Cook rented the factory pending its sale, perhaps providing some employment opportunities to the community.



**Figure 3.17.** Sale notice of Henry Cocker's property resulting from his bankruptcy.  
Source: DRO, Q/SB/9/174.

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<sup>77</sup> *SARI*, 30/11/1850, p. 4.

<sup>78</sup> *SARI*, 26/3/1853, p. 4.

The announcement of the first dividend in April 1850 reveals that at least two companies were involved, that of Henry Cocker yielding 6¾ d in the pound and for H(enry), R(obert) and J(ames) Cocker, 1s 1½ d.<sup>79</sup>

Robert (b.1808) was the eldest son of Henry Cocker and was a partner in H., R. and J. Cocker, needle manufacturers. Robert travelled in steerage to New York in October 1848 from Halifax (Nova Scotia) on S. Caledonia, describing himself as a merchant. It is assumed that he was selling needles there. The *Morning Post* reported at the end of July 1853 that Robert Cocker, formerly of New York but now a needle manufacturer in Hathersage was bankrupt in his own right.<sup>80</sup> In the 1861 census, he was resident in Attercliffe (Sheffield) with his wife and daughter and described as a ‘manufacturer of cast steel, employing 25 men’. Certainly, Cocker Brothers (of Sheffield, and possibly the company with which Robert was earlier associated) were exporting substantial quantities of good crucible steel wire to the United States in the 1880s and 1890s.<sup>81</sup>

The final event in the Cocker partnerships was the dissolution of that between Henry and his son Joseph Robert, wire-drawers and needle manufacturers at the Atlas Works, Hathersage. This was announced in early 1855.<sup>82</sup> Within 15 months Henry was dead and Joseph Robert Cocker was the sole trader in what remained of the Cocker needle-making manufactory of Hathersage. Joseph continued to manage the Atlas works until his death in 1887 with his only son, John Armstrong Cocker, acting as commercial traveller. John inherited the works but died within 3 months leaving the major part of his estate to his wife Harriet. Within a short time she had sold the company, remarried, and left the village forever.

The history of the company after the death of John Armstrong Cocker appears undocumented. Buxton mentions a five-year closure, a brief revival and finally,

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<sup>79</sup> *Daily News*, 6/4/1850.

<sup>80</sup> *Morning Post*, 30/7/1853, p.7.

<sup>81</sup> Tweedale, G., *Sheffield Steel and America: A Century of Commercial and Technological Interdependence, 1830-1930* (Cambridge, 1987), p. 29.

<sup>82</sup> *The Morning Post*, 28/2/1855, p. 7.

demolition in 1902.<sup>83</sup> Strangely, these terminal events appear to have gone unreported in the local press. Two comments are worth reprinting as they provide inkling of the persisting feeling surrounding the closure.

'Joseph COCKER built Belle Vue to be near the works, and moved there from Rock House. He had one child only, a son, who on his parents' death married his mother's maid, and died shortly afterwards. She thus became owner of all the COCKER property, and a little later married the Wesleyan minister. It was they who sold the mills to the needle combine. It was not their village, and so I suppose it was nothing to them that the entire village was thereby thrown out of work, and the old tradition of the needle-making village broken.'<sup>84</sup>

'On that Whitsun Eve I saw an old man I knew staggering up the village street, and when I got to him the tears were rolling down his face. To inquiries, he replied, 'I have been hammering up the machine I have worked at since I was married, and brought up all my children on it, and my father worked at it before me, and I just can't bear it'. It was indeed a sad day for Hathersage.'<sup>85</sup>

## The Cooks

Although there is some uncertainty concerning the onset of needle-making, even wire-drawing in Hathersage, there is little doubt that Robert and David Cook moved from Studley (Warwickshire) early in the second decade of the nineteenth century and set up business in Hathersage making fish hooks, hackle and gill pins and various other steel wire products.<sup>86</sup> An advertisement appearing in the *Sheffield Mercury* on 22<sup>nd</sup> August 1811 placed by Cocker and Son should not be taken to indicate that the two firms began

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<sup>83</sup> Buxton, *Hathersage*, p. 101-2.

<sup>84</sup> *Sheffield Daily Telegraph*, 7/5/1932. <http://edgoose.one-name.net/> viewed 15/6/2017.

<sup>85</sup> Part of a letter from Lucy Ibbotson Hutt. <http://edgoose.one-name.net/> viewed 15/6/2017. Unfortunately, this quotation is undated and the recipient is not stated. Although Lucy's mother was an Ibbotson, she had been born in Sheffield in 1826 and it has not been possible to determine her parentage, and therefore an intimate knowledge of Hathersage and its business.

<sup>86</sup> *White's Directory* of 1857, 613, is very definite: 'Robert and David Cook first brought the needle business here [to Hathersage] from Redditch on the 14th July, 1811.' This is also the date proposed by Buxton, *Hathersage*, p.95, where she quotes from the *Sheffield Mercury*.

at the same time, or as inferred by Buxton, that the Cook's firm preceded Cocker's works.<sup>87</sup> More likely, the Cocker advertisement was felt to be prudent intervention following the establishment of a rival firm. This account is at variance to that of Michael Morrall, above.

Robert Cook was the 4<sup>th</sup> child of William and Mary, christened in 1790 at Studley.<sup>88</sup> Sometime in his teens, he moved with his younger brother, David, to Hathersage. David Cook was born between 1794 and 1800, and came to Hathersage with his brother. In the 1841 census David Cook described himself as a 'needle-maker', though his partnership with Robert as needle manufacturers was dissolved in July 1820.<sup>89</sup> David died in 1846 at Hathersage.

Examination of the Hathersage parish records and CEBs suggest that the Cook brothers were the first people from the Studley/Redditch area to settle in Hathersage. This observation rules out the notion that word was sent home from needle or wire-workers who had previously moved from Studley to Hathersage. Several people migrated subsequently, for example, Jemima Buxton neé Wright whose father was a needle-pointer, John Darvill, a needle-maker from Alchester (Warwickshire), John Webb a needle-maker from Congleton (Cheshire) and Joseph Wiggett a brass founder from Alchester. There is also evidence that drawn wire was sent from Hathersage to Redditch before 1800 so word may have travelled with supplies. There is nothing inconsistent with the proposal above that Samuel Cocker invited Robert Cook.

Hathersage was suitable because of its proximity to iron from Sheffield, the availability of grinding-stones from local quarries and because a number of water courses capable of driving machinery flowed through the village, notably the Hood and Burbage Brooks. The likely pre-existence of wire-drawing would also have been an advantage, though not pivotal. It is noteworthy that Robert Cook, a Studley man, is listed in 1833 as a steel wire-drawer. Kenworthy states that 'wire has never been drawn at Redditch' leading to the conclusion that Robert Cook employed local wire-drawers to form an

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<sup>87</sup> Buxton, *Hathersage*, p. 95 and p. 98. It has not been possible to confirm the date or content of this advertisement.

<sup>88</sup> There were 8 children. Source: I.G.I.

<sup>89</sup> *The Gazette* (London), 22/7/1820.



integrated working system.<sup>90</sup> John Rollins, on the other hand, intimates that young boys would have been involved in wire-drawing in the Redditch area.<sup>91</sup> However, this does not quite fit with the fact that wire-drawing was a skill acquired by apprenticeship, while other jobs such as scouring and even eyeing were less skilled and often performed by children. S.R.H. Jones suggests that Kidderminster and Stourbridge were the sources of drawn wire.<sup>92</sup>

There is some conflicting evidence regarding the site of the first Cook workshops. When Joseph Lilleman died in 1895, latterly working as manager of Robert Cook and Co., it was reported that he started working for old Robert Cook at the age of 7 years. That would have been around 1833. It was said that he began work at 'Old Padley Water Wheel where pins were first made in the district and wire was brought on the backs of donkeys and horses'. A postcard of Padley Mill is reproduced in figure 3.18.<sup>93</sup> Contrary to this, Buxton states that during the 1820s, the Cooks were working in workshops with wheels powered by the Hood Brook as tenants of Ashton Shuttleworth.<sup>94</sup> Later this became the Barnfield Works. This property was leasehold at a rent of £169 per year and expired in 1882.

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<sup>90</sup> Kenworthy, J, *Wire-drawing: an Ancient Craft in the Thurgoland District* (n.p., n.d.) p14. (Privately published book at the Public Lending Library, Manchester Road, Stocksbridge.)

<sup>91</sup> Rollins, J., *A History of Redditch* (Chichester, 1984), p. 59.

<sup>92</sup> Jones, S.R.H., *John English and company, Feckenham: a study of enterprise in the West Midlands needle industry in 18th and 19th centuries*. Unpublished Ph.D. Thesis. University of London (1980), p.16.

<sup>93</sup> *SARI*, 24/1/1895, p.7.

<sup>94</sup> Buxton, *Hathersage*, p. 95.

It has not been possible to gain permission to publish this image, but it can be viewed at: (correct on 30.5.2018).

<http://places.wishful-thinking.org.uk/DBY/NetherPadley/OldPadleyMill.html>

**Figure 3.18.** Padley Mill.

Source: <http://places.wishful-thinking.org.uk/DBY/NetherPadley/OldPadleyMill.html>.

(Rosemary Lockie writes 'Padley Mill was originally a corn mill but later used as a saw mill and wire-drawing mill.')

Robert Cook managed to build his business in Hathersage without the attention of the press until 1843 when it was announced that his Partnership with Charles Sherriff, an Alcester man, had been terminated.<sup>95</sup> It is possible that Charles Sherriff had invested financially rather than practically as the 1841 census reveals him to be a merchant. The dissolution of partnership was likely to have been because his support was no longer needed rather than there being a dispute, as Mrs Sherriff visited Rhyl (North Wales) with several of Cook's daughters some years later.<sup>96</sup> Robert was clearly accumulating capital: in 1848 he became a shareholder of the Hallamshire Bank and five years later of the Sheffield and Rotherham Joint Stock Banking Company.<sup>97</sup> Robert's second daughter, Elizabeth, married George Holme Spencer from Ashton-under-Lyne

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<sup>95</sup> *Morning Post* (London), 27/5/1843, p. 2.

<sup>96</sup> *North Wales Chronicle*, 23/8/1856, 'The Original Rhyl Visiter' (sic.), p.1.

<sup>97</sup> *SARI*, 19/2/1848, p. 1 and *SARI*, 19/2/1853, p.1, respectively.

(Lancashire) in 1843. Robert, son-in-law George and son Richard formed the new partnership of Robert Cook and Company, sometime after this date but Richard withdrew from it in November 1855.<sup>98</sup> It later transpires that this dissolution was not amicable and a case in Chancery ensued. The discord between Robert and his son Richard led to the trial of John Francis Cook for shooting one of George Holme Spencer's labourers.<sup>99</sup>

The Barnfield Works was powered by the Hood Brook, but by 1846 Robert had converted to steam power for an explosion in the boiler blew the roof off the engine house.<sup>100</sup> 10 years later he may have updated his motive power for he offered a 15 horse-power condensing engine and tubular boiler for sale.<sup>101</sup> An alternative explanation is that Cook and Co was experiencing cash-flow problems because the following year, 1857, Cook and Spencer attempted to sell one of their factories and two cottages.<sup>102</sup> The particulars of these lots correspond closely to those of the works in The Dale previously owned by the Cockers. One might conclude, therefore that the eventual buyer of the Dale Mill was Cook and Spencer, but that in less than 10 years it had become a financial burden.

Despite possible signs of pending disaster, Robert Cook became a partner in The Sheffield Union Banking Company.<sup>103</sup> The needle manufactory was also taking on workers. In 1859 an advertisement appeared in Leeds for 6 to 8 hackle-pin grinders 3 to 4 weeks hence.<sup>104</sup> In 1864 he sought a hardener and 5 grinders<sup>105</sup> and 10 hackle-pin

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<sup>98</sup> *SARI*, 22/12/1855, p. 4.

<sup>99</sup> *SARI*, 18/10/1867, p. 4.

<sup>100</sup> *Glasgow Herald*, 21/8/1846.

<sup>101</sup> *SARI*, 6/12/1856, p. 4.

<sup>102</sup> *SARI*, 28/2/1857, p. 4.

<sup>103</sup> *SARI*, 27/2/1858, p.1.

<sup>104</sup> *Leeds Mercury*, 12/2/1859, p. 5.

<sup>105</sup> *Leeds Mercury*, 30/9/1864, p. 1.

grinders 15 months later.<sup>106</sup> Certainly needle-grinding was taking place in Leeds and it was a favoured place for Hathersage migrants in that occupation. However, judging from the number of disputes with employees (see below) he may not have been regarded highly by everyone as a local employer. Robert Cook died in 1866.

As with the Cockers, there appear to have been several companies. In 1865, George Holme Spencer was declared bankrupt.<sup>107</sup> Two years later the company of George Cook Spencer and Co, being G.H. and G.C. Spencer, were before the Leeds Bankruptcy Court in relation to their hackle and gill-pin manufactories at Hathersage and Brough.<sup>108</sup> Although no record of the Brough works has been found there is a mention of the Stretfield Mill at Brough being used for 'wire making' at some time in the nineteenth century.<sup>109</sup> The Brough Mill was extant in July 1867, because John Hattersley was a labourer there employed by George Holme Spencer.<sup>110</sup> The Spencers moved after 1867 to Ecclesall Bierlow where they are recorded in the 1871 census. He later moved to Aston (Birmingham) and died in 1891. It is unclear if the Spencer bankruptcies resulted in any factory closures or job losses. Richard Cook sold his newly built five-bedroom house in Hathersage and moved to Ecclesall Bierlow and later, after the death of his second wife, to Hornsey (Middlesex).<sup>111</sup> In 1872 Richard Cook went into partnership with Thomas Daniels and John Lewis to manufacture umbrella furniture. This was a branch of the same business that he had carried on in Hathersage and at Stroud (Gloucestershire). The business in Hathersage was turned into a limited company, and quickly got into financial difficulties, Richard having siphoned off customers to Stroud. However, the Stroud company was under capitalised (£712) and got into debt. In 1873 Richard Cook was discharged by his creditors and continued in business without profit. Daniels offered him £500 if he had nothing to do with the wire industry in the future.

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<sup>106</sup> *Leeds Mercury*, 1/12/1865, p. 1.

<sup>107</sup> *Leeds Mercury*, 12/10/1865, p. 4.

<sup>108</sup> *SARI*, 30/7/1867, p. 5.

<sup>109</sup> <http://www.derbyshireheritage.co.uk/Menu/Archaeology/Mills.php> (accessed 17/7/2014).

<sup>110</sup> *SARI*, 7/8/1867, p. 4.

<sup>111</sup> *SARI*, 14/3/1871, p. 4.

This arrangement was agreed by the Sheffield Bankruptcy Court on the proviso that £50 was donated to the trustees.<sup>112</sup>

The continuation of the Cook manufactories post 1867 appears to have been in the hands of Robert Cook's second family. In November 1872, a meeting of shareholders was held at which it was resolved that the company of Robert Cook and Co., Ltd. would be 'wound up voluntarily'.<sup>113</sup> The provisional official liquidator, Mr William Tasker, proposed a scheme of re-organisation which would retain the integrity of the company and the expectation of a good yield for creditors. This was ratified by the court of Chancery. The nominal capital of the company was £25,000 pounds in 1000 shares, only 426 being allocated.<sup>114</sup> At a meeting in January William Tasker encouraged the formation of a new company with the major creditors being involved and showed that the financial difficulties had resulted from bad management practice.<sup>115</sup> The new company was offered at auction in February but withdrawn at £6,000, 'considerably under the reserve price'.<sup>116</sup> The winter of 1873 must have been a bleak one with the Cooks works closed. But bells rang out in March when purchasers were found.<sup>117</sup> The new company trading as Robert Cook and Co. was incorporated under the Joint Stock Company Act in November 1873 with capital of £15,000 in the form of 1500 £10 shares.<sup>118</sup> Good progress was reported at the first annual meeting of the shareholders.<sup>119</sup> The 1876 shareholder meeting was also satisfactory.<sup>120</sup> Indeed the auditor found the balance sheet at the end of May 1878 'favourable' but by February 1879 the capital had

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<sup>112</sup> *SARI*, 4/6/1875, p. 3.

<sup>113</sup> *SARI*, 23/11/1872, p. 2.

<sup>114</sup> *SARI*, 9/12/1872, p.4.

<sup>115</sup> *SARI*, 18/1/1873, p.10.

<sup>116</sup> *SARI*, 8/3/1873, p.4.

<sup>117</sup> *SARI*, 12/3/1873, p. 4.

<sup>118</sup> *SARI*, 1/3/1880, p. 3.

<sup>119</sup> *SARI*, 25/2/1874, p. 3.

<sup>120</sup> *SARI*, 31/8/1876, p. 5.

disappeared.<sup>121</sup> The company was again facing liquidation.<sup>122</sup> The liquidator, John Unwin Wing who had previously been the company auditor, had been instructed to sell by tender the whole of the assets, which included goodwill and interest in the lease for the factory. Figures are given which are of interest, especially as there is so little quantitative data remaining.

Fixed plant and machinery	£4876	3s	8d
Loose tools	£1193	1s	7d
Stock-in-trade	£3250	8s	5d

The lease was short, due to expire in 26 months, at a rent of £169 7s per annum and the freehold rested with the trustees of the late Robert Cook's estate. The proposed sale was complicated by the intervention of William Austin Cook who petitioned the High Court, Chancery Division and sought to have the liquidator replaced.<sup>123</sup> During the hearing it transpired that William Cook had tried to persuade the liquidators to accept a low price, and then join him in a syndicate to run the company for their benefit.<sup>124</sup> The Vice-Chancellor, therefore, imposed a supervision order for the liquidation. On 2<sup>nd</sup> June 1880, 250 lots were auctioned divided into the umbrella warehouse, middle warehouse, two offices, bright stock shop, umbrella cutting off shop and the dressing, drawing and machine shops.<sup>125</sup> After the lease expired on Barnfield House, Robert

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<sup>121</sup> *SARI*, 1/3/1880, p. 3.

<sup>122</sup> *SARI*, 5/1/1880, p. 1.

<sup>123</sup> William Austin Cook (baptised Augustine) was educated at Ratcliffe College, Leicestershire and described himself as an Iron and Steel Manufacturer in 1861. He married a Durban girl in 1873 but she left him 1888 for a Scottish chartered accountant. They were divorced in 1894. While in Cheadle the couple lived Bamford Grange, now rebuilt as a care home, but there is a blue plaque commemorating the birth of Gabrielle Ray, the 19<sup>th</sup>/20<sup>th</sup> century actress, daughter of William Austin Cook. <http://www.stockport.gov.uk/2013/3000/97557/nowandthenwinter2013> (accessed, 21/7/2014).

Like so many men who became rich from humble backgrounds, a fall was almost inevitable. In 1889 William, by then an undischarged bankrupt, was sent for trial at the assizes for multiple fraud (*Manchester Times*, 9/11/1889, p. 3.)

<sup>124</sup> *SARI*, 8/3/1880, p. 3.

<sup>125</sup> *SARI*, 2/6/1880, p. 1.

Cook refused to leave and after many months of tolerance, Mr Shuttleworth had to obtain a court order for possession.<sup>126</sup>

The result of the auction and subsequent configuration of the company is not known. The company appears to have continued manufacturing. In 1885, a fire partially destroyed the factory and damaged some of the stock ready for shipment but the loss was insured.<sup>127</sup> 1899 saw a further re-formation of the company in the form of Robert Cook and Co. (Hathersage) Ltd. with £30,000 one pound shares being issued.<sup>128</sup> At the helm was John F. Cook, then living in Barnfield House, but he died some 2 years later. The firm's activity was tiny at the end. For example, the accounts for the year ending 31<sup>st</sup> December 1900 showed sales of pins at £5255 with a manufacturing profit of a mere £528.<sup>129</sup> The figures become progressively smaller until only a small bank balance remained in 1909. The company account seems to have remained open until 1919 but there had been no manufacturing for over ten years.

By way of a summary, the time-line of the Cocker and Cook manufactories is laid out in table 3.1.

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<sup>126</sup> *SARI*, 24/6/1889, p. 3.

<sup>127</sup> *Liverpool Mercury*, 7/4/1885, p. 3.

<sup>128</sup> *SARI*, 10/3/1888, p. 8.

<sup>129</sup> WYA – WYL 1009/95, pp. 121-7.

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<sup>130</sup> White, W., *History and General Directory of the Borough of Sheffield* (Sheffield, 1833)



In addition the same directory lists 3 wire-drawers in Sheffield, including Robert Cocker, 3 in Thurgoland and 1 in Wortley.

Tobias Child was born in Darlington in 1805. His family were established fellmongers in the area. Why and when he came to Hathersage is not recorded but he was witness to Thomas Cocker's will in 1829 and married Martha Furniss in the same year. Their only child, John Furniss Child died in infancy the following year. In 1832 he appears in the land tax record as joint owner of a farm with James Marsden.<sup>131</sup> In the 1841 census he is described as 'manufacturer and merchant'. He leased some workshops downstream from the Barnfield works on the Hood Brook, later known as Victoria Works. Around this time, he was in partnership with Charles Sylvester, a Hathersage wire-drawer, a partnership of 'hackle manufacturers' which was dissolved in 1844.<sup>132</sup> Sylvester remained a wire-drawer but died in 1860. In the 1851 census Tobias is described as a 'hackle pin manufacturer employing 15 men and 3 farm labourers'.

Sometime in the early 1840s, Tobias Child purchased the lease of the Ordnance Arms in the main street. In 1855 he sold by auction the premises and several quality horses, farm implements and household furniture.<sup>133</sup>

James Marsden (b. 1833), nephew of Martha, lived with the Childs at Furniss House, first as a servant and then in the business as a traveller. In 1871 he is described as a pin-maker and ran the Victoria Works in partnership with Tobias Child. This partnership was dissolved in early 1872 upon the latter's retirement.<sup>134</sup> Although retired from manufacturing, Tobias continued a farming interest as evidenced by him selling 5 stacks of hay in 1875.<sup>135</sup>

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<sup>131</sup> Buxton, *Hathersage*, p.103. (The present author has been unable to locate the original document to verify this statement.)

<sup>132</sup> *Morning Chronicle*, 14/8/1844.

<sup>133</sup> *SARI*, 25/8/1855, p. 4.

<sup>134</sup> *SARI*, 2/4/1872, p.1.

<sup>135</sup> *SARI*, 16/1/1875, p.4

James Marsden died in 1876. The Victoria works was managed by John Stead from Horsforth (Yorkshire) in the 1880s and the main product was gramophone needles. The business continued to be known as Tobias Child and Co, for in 1880 tenders were invited for raising the chimney stack at the works by some 18 feet.<sup>136</sup> Indeed the company name remained after the death of Tobias when the firm advertised for hackle-pin grinders.<sup>137</sup> The works fell into disuse around 1910.<sup>138</sup> However, this does not quite coincide with the Steads' appearance in the 1901 census as manager and 1911 census as steal pin manufacturer and employer. In 1911 there were still nearly 40 men employed in the needle industry though how many worked in Hathersage is unknown.

Ralph Greaves was born in Macclesfield in 1802. After a grammar school education and marriage to Elizabeth Handley the couple moved to Hathersage. His younger sister, Elizabeth had married David Cook in 1820. Ralph's brother had an iron foundry in Macclesfield.<sup>139</sup> Ralph and Eliza appear in Hathersage in 1830, newly married, and was listed as a 'needle manufacturer' in the 1831 edition of Pigot's Directory. He is described as a wire manufacturer in the baptismal register of 1832. He leased a house and mill from the Shuttleworths near the main street.<sup>140</sup> Despite being seriously injured when his horse fell upon him in an unguarded hole in Sheffield, the couple had eight children.<sup>141</sup> Sometime between 1849 and 1851 the family moved to Hulme (Manchester) where he continued as a needle-maker. Eliza died there in 1853 and Ralph succumbed to tuberculosis in 1856. Both are buried in Hathersage churchyard. His properties of workshop, warehouse and house were not auctioned by his trustees until May 1861.<sup>142</sup>

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<sup>136</sup> *SARI*, 9/8/1880, p. 1.

<sup>137</sup> *SARI*, 10/5/1884, p. 4.

<sup>138</sup> Buxton, *Hathersage*, p.103.

<sup>139</sup> For expanded family history see [www.gravesfa.org/gen334.htm](http://www.gravesfa.org/gen334.htm) (accessed 1/7/2014).

<sup>140</sup> Buxton, *Hathersage*, p. 104.

<sup>141</sup> *SIYDA*, 7/12/1833.

<sup>142</sup> *SARI*, 30/3/1861, p.1.

Greaves' mill stood on the south side of the turnpike road between Sheffield and Hathersage and consisted of 'grinding rooms, finishing shops, offices and engine and boiler house with a range of workshops at the back'.<sup>143</sup> The horizontal steam engine produced 15 horse-power and the boiler measured 24x6 feet. There was also a dwelling house. The whole plot was nearly 2000 square yards. A second piece of land was also auctioned. This was situated on the north side of the Sheffield Road and consisted of two houses, a farmyard and several partially built shops and cottages.<sup>144</sup> The position of Greaves workshops are difficult to reconcile with present day landmarks. The auction advertisement states that the mill had been 'in the holding of Messrs. Cocker and Sons, and lately of Mr Cooper, as tenants' ..... 'a peppercorn rent, for a term of 999 years commencing on 30<sup>th</sup> day of September 1697, created by an indenture of that date. Together with the possibility offered above of Robert Cook renting the Dale works, Cockers use of Greaves' Mill suggests a certain fluidity of manufacturing sites in Hathersage at that time.

### **The industry and the community**

We can now evaluate how the mill owners interacted with the community. Again, there is a reliance on reports in the local newspapers which immediately biases impressions towards the very good and the very bad. Samuel Cocker's background is unknown, Ralph Greaves received a grammar-school education but the Cooks and Tobias Child were of humble labouring backgrounds. All, however, as employers in Hathersage clearly sought to emulate the gentry. They did this by buying rights to shoot on the grouse moors, by giving generously (and often conspicuously) to local causes, joining semi-learned societies and taking a prominent part in religious and/or political activities.<sup>145</sup> In Hathersage at least this set them apart from farmers, shop keepers and

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<sup>143</sup> *Derby Mercury*, 8/5/1861, p.1.

<sup>144</sup> One of the houses was occupied by Mary Farnsworth and the yard by George Simpson. Using the census numbers as a guide this would suggest that the land was adjacent to Rock House at the junction of School Lane and The Dale. The position of Greaves workshops is more difficult to reconcile with present day landmarks. An aerial view of the land at the junction of School Lane and Sheffield Road shows some linear marks suggestive of past structures. This is a possible site.

<sup>145</sup> For example, *Derby Mercury*, 12/9/1827, p.1. and 26/9/1849, p.1.

tradesmen who pursued a lower profile existence. This contrast raises the question of what motivated men to become businessmen? Clearly, the prime motive was to make money; but not only to provide the necessities of life or as a primary goal.<sup>146</sup> Money provides security and power through climbing the social ladder. Studies of the lives of leaders of large businesses, such as Arkwright, Strutt, Wedgewood and Courtauld, leads to the conclusion that social advancement was a most prized possession.<sup>147</sup> It appears then, that modest business men have similar motives and exhibit similar behaviour to successful men such as W. H. Lever, Julius Drew and Eric Bowater considered by Reader, or capitalist gentlemen like Samuel Holland, William McArthur or Robert Fowler.<sup>148</sup> Social and philanthropic activities are not purely the pleasurable and altruistic by-products of monetary profit. They may also be means of enhancing business through networking.

‘Networking’ is modern terminology for interpersonal interaction on a variety of levels; social, political, cultural and business. Specifically, economic historians look for financial or power gains as an objective which implies a motive other than altruism in personal relationships. Such activity can be advantageous in the business world, especially when materials are obtained and goods sold over a wide area. It is natural to deal preferentially with individuals known personally and trust is enhanced by multiple favourable interactions. In contrast there is a natural wariness when dealing with a stranger.

Networking is not an activity easy to document or even recognise from historical sources. It is usual to use proxy associations such as shared interests (e.g. membership of societies or clubs), shared occupations and political affiliations. The most tangible forms of association are represented by witnesses and executors of wills. Kinship ties can be included and often provide valuable business links. The Cockers in particular used networking extensively. In the foregoing pages there are several examples. Robert

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<sup>146</sup> Reader, W., ‘Businessmen and their motives’ in Coleman, D. and Mathias, P. (eds), *Enterprise and History: Essays in Honour of Charles Wilson* (Cambridge, 1984), p. 44.

<sup>147</sup> Coleman, D., ‘Gentlemen and Players’ in *Myth, History and the Industrial Revolution* (London, 1992), pp. 127-8.

<sup>148</sup> Malchow, H., *Gentlemen Capitalists: The Social and Political World of the Victorian Businessman* (Stanford, 1992).

Cocker travelled to America and married there. Edwin Cocker promoted the business in London. Henry Cocker joined the Literary and Philosophical Society and became a Wesleyan preacher. From the letters of J. R. Cocker to his sister Hannah which he wrote on his travels around northern England and Scotland it is clear that he was visiting and revisiting acquaintances related to business and kin. He writes from Dundee to his sister Hannah; 'I find Mr Riley here from Cocker and Son' and from Glasgow; 'I came down to Liverpool last night and having about three hours I went to see James' (nephew).<sup>149</sup>

Robin Pearson and David Richardson studied officers of several insurance companies located in northern England and the West Country between 1776 and 1824.<sup>150</sup> Not surprisingly they found a 'high degree of occupational homogeneity' in the board members corresponding to the main industry of the area. A high proportion had been prominent locally for several generations and had accumulated wealth by investments, banking, marriage and inheritance. Property was traded between themselves. Many were involved in local government and philanthropy. Most were Tories and High Church. Kinship was also important though easier to demonstrate in aristocratic families rather than those with artisans ancestors. Intermarriage within business groupings was common and it is notable that the Cockers, Cooks, Childs and Greaves families were linked by marriage. Hathersage needle manufacturers were also linked to high social ranking villagers such as the Broomheads and Ibbotsons. (See appendix 2, figure A2.8.)

Like minded men associated and exploited their power and influence to increase their wealth characteristically by diversification of their activities and interests. By this method they were able to enhance their business by supplying goods to government agencies in which they happen to be associated. As an example of local association, in 1861, the lease on a piece of land including the gas works was auctioned. It was owned jointly by Robert Cook, George Spencer and Joseph Cocker.<sup>151</sup> Although Pearson and

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<sup>149</sup> Cocker Letters, 23rd July 1845 and 14th January 1846.

<sup>150</sup> Pearson, R. and Richardson, D., 'Business networking in the industrial revolution', *Economic History Review*, 54 (2001), pp.657-679.

<sup>151</sup> *SARI*, 12/10/1861, p. 4.

Richardson's work was criticised by Wilson and Popp on the grounds of choice of data source and analytical methods, their original conclusions concur with wider anecdotal evidence.<sup>152</sup> Practical details as to how networks were created and fostered remained unexplained. Chance encounters are likely to play a part but seeking contact without clear objectives seems unlikely. Even kinship links decay unless some benefit is to be had by one or both parties.

Monetary co-operation between business families has been described above but there were also disputes. The Cooks were Catholics and the Cockers were Anglican Non-conformists and one might expect fierce competition in business, as indeed, was alluded to in the press account of the event described below. Further, Cocker's Atlas Works was adjacent to Cook's Barnfield Factory. Plenty to fuel open disputes leading to violence, on occasions. At the Derbyshire Easter Sessions held at Chesterfield on the 4<sup>th</sup> April 1832, Samuel and Henry Cocker together with Thomas Broomhead, then the constable, and sons Thomas and Robert were found guilty of serious assault on William Frost, an employee of Robert Cook. Frost was beaten about the head rendering him unconscious and then imprisoned in the village lock-up. The assault occurred at the Ordnance Arms where Robert Cook was landlord. The dispute involved the Cockers pulling down a building recently erected by Cook which obstructed an ancient carriageway across a piece of wasteland. Cook claimed that he had recently purchased the land. The assault was not popular with inhabitants and a riot ensued with the burning of an effigy of Cocker.<sup>153</sup> The following year Robert Cook was in dispute with James Morton who again claimed that a carriageway had been obstructed by Robert Cook erecting a building on the waste land. The ruling on this occasion went against Cook.<sup>154</sup>

Apart from disputes between rival firms, there were disputes between the mill owners and the local gentry. In 1840 John Shuttleworth took Henry Cocker to the Derbyshire Assize Court to claim damages for the 'effects of a nuisance arising from the

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<sup>152</sup> Wilson, J. and Popp, A., 'Business networking in the industrial revolution: some comments', *Economic History Review*, 56 (2003), pp. 355-361.

<sup>153</sup> *SIYDA*, 14/4/1832. (Several cases were brought before the J.P., J. Holworthy at the time of the riot: *SIYDA*, 29/10/1831.)

<sup>154</sup> *Derby Mercury*, 27/3/1833.

defendant's needle manufactory'. Shuttleworth claimed that dust and smoke soiled his washing and the noise of the extractor fans could be heard 3 or 4 miles away. It was commented that the fans had been in existence for 10 years and had been installed in order to reduce the risk of grinder's disease affecting the workers, considered in chapter 6. Shuttleworth was awarded damages of one shilling.<sup>155</sup>

Conflicts also arose between employer and employee. Walter Darvill, apprenticed to Mr Cocker was sentenced to 21 days imprisonment at Bakewell Petty Sessions for running away.<sup>156</sup> Mary Wiggett, a foreman packer for Cook and Spencer was charged with recurrent stealing from the firm in 1860.<sup>157</sup> In 1871 Frederick Powers and James Bagshaw were charged by Cook and Co for absenteeism at Bakewell Petty Sessions resulting in costs of 19s being awarded to each defendant.<sup>158</sup> However, instances of the employer seeking redress from his employees for absenteeism were relatively few and far between and not amounting to an attempt to control labour using the law as argued by Marc Steinberg.<sup>159</sup> In fact, there were more instances of employees seeking recompense from their employer. Between 1883 and 1889 there were numerous cases heard at Bakewell Petty Sessions against Robert C. Cook for non-payment of wages. Godfrey Biggin, for example, applied on five separate occasions to the court to secure his due wages and on each occasion he was accompanied by a dozen or so co-complainants.<sup>160</sup> Some cases were settled out of court. This state of affairs must have caused considerable worry and inconvenience to the workers and their families and also reflects the chaos and possibly cash-flow difficulties within the Cook manufactory at that time.

Despite employer/employee disputes examples of extreme loyalty were found. Joseph Lilleman, already mentioned, worked for Robert Cook's company in many guises from

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<sup>155</sup> *SARI*, 15/8/1840, p. 7.

<sup>156</sup> *Derby Mercury*, 18/6/1856, page 8.

<sup>157</sup> *Derby Mercury*, 17/10/1860, page illeg.

<sup>158</sup> *Derby Mercury*, 6/12/1871, page 2.

<sup>159</sup> Steinberg, M., *England's Great Transformation: Law, Labor and the Industrial Revolution* (Chicago, 2016).

<sup>160</sup> DRO, D232/1/1-3



the age of 7 years until his death in 1895 at the age of 69 and reached the status of manager.<sup>161</sup> Though even he found it necessary to resort to the court in October 1888 to secure his wages of £9. 15s.<sup>162</sup>

Religion and politics were important ‘factors in the Victorians’ search for personal and social identity’ and possessed the potential for division as well as unity.<sup>163</sup> Politics had hitherto been the preserve of the landed gentry but both occupied the needle mill owners a good deal in Hathersage. Non-conformism and entrepreneurship were often associated and it has been argued that religion significantly influences business practices and decisions.<sup>164</sup> It is not surprising that the Cockers were of that inclination. Buxton suggests that brothers Thomas and Jonathan Cocker joined the Wesleyan group and that Thomas became a preacher in 1792.<sup>165</sup> The first preaching plan of the Bradwell circuit was instituted in 1813 and contained 9 local preachers of whom ‘S. Cocker’ was one.<sup>166</sup> Certainly the Cocker family contributed generously and frequently to the Bradwell funds: Mr Cocker (*Thomas?*), S. Cocker (*Samuel, b. 1790, son of Thomas*) and J. Cocker (*Jonathan*), as well as Mr Ibbotson, and again S. Cocker, H. Cocker (Henry, son of Thomas) and Mrs J. Cocker (*Jonathan’s wife, i.e. Nancy*).<sup>167</sup> The Darvil family, also small needle manufacturers were Wesleyans and John Darvil was a preacher in 1862.<sup>168</sup> The Cockers contributed significantly to the building of the Methodist chapel at Thornhill.<sup>169</sup> Henry was a Methodist preacher in 1824 but in the

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<sup>161</sup> *SARI*, 24/1/1895, p. 7.

<sup>162</sup> DRO D232/1/3 #758

<sup>163</sup> Trainor, R., *Black Country Elites: The Exercise of Authority in an Industrial Area, 1830-1900* (Oxford, 1993), p. 175.

<sup>164</sup> McFarlane, D., ‘Religion and business: identifying relationship gaps and influences’, *Culture and Religion Review Journal* (2011), pp. 94-105.

<sup>165</sup> Buxton, *Hathersage*, p. 99.

<sup>166</sup> Evans, S., *Bradwell: Ancient and Modern* (London, 1912), p. 102.

<sup>167</sup> Wesleyan Methodist Missionary Society Report, 1818, pp. 31 and 55 respectively.

<sup>168</sup> Evans, *Bradwell*, p. 102.

<sup>169</sup> Evans, *Bradwell*, p. 104.

1840s was a churchwarden at the parish church.<sup>170</sup> Joseph Robert Cocker, who had worked at the Atlas Works all his life, latterly managing it, was second preacher on the Bradfield Circuit of the Wesleyan Conexion and also chairman of the Hathersage Polling District as a Liberal.<sup>171</sup> His son, John Armstrong Cocker was president of the Castleton Liberal Club.<sup>172</sup> Hathersage was predominantly Liberal in the latter nineteenth century.<sup>173</sup> Robert Cook, on the other hand was Roman Catholic. He may have been a late convert as David had his children were baptised in the Protestant church.

Unfortunately, payroll lists have not survived as it would be interesting to note whether there was any sectarian selection in the labour force of the Cook and Cocker factories. The only clue comes from examining the list of 35 individuals who claimed at court unpaid wages from Robert Cook and Co between 1886 and 1888.<sup>174</sup> Of these 11 were identified in the Roman Catholic baptismal registers, 1822-1872. The total number of Catholic baptisms recorded between 1822 and 1872 was 435. This compares with 401 in the Anglican Church. This suggests that there were similar numbers of Catholics and Anglicans in Hathersage but there is no evidence of Catholics preferentially choosing Cook as an employer

### **A Note on Proto-industrialization and the Development of the Industrial Revolution**

Having outlined the enduring occupations in the Hope Valley and Hathersage in particular, it is possible to make an initial assessment as to whether the introduction or growth of metal crafting in any way fits with concepts of proto-industrialization. The hypothesis as proposed and developed by Franklin Mendels and others is rather specific and is not universally applicable to every example of early industrialization in

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<sup>170</sup> Buxton, *Hathersage*, p. 100.

<sup>171</sup> *SARI*, 4/10/1887, p. 2.

<sup>172</sup> *SARI*, 15/12/1887, p. 3.

<sup>173</sup> *SARI*, 10/4/1880, p. 3 and 29/5/1891, p.6.

<sup>174</sup> DRO D232/1/2-3.

Britain.<sup>175</sup> While it is appropriate to discuss those aspects which are relevant to Hathersage one might be impressed by how little the Hathersage narrative aligns with the general theory of proto-industrialization.

A modernising agrarian economy furnished increasing yields of grain and other food-stuffs and at the same time released labour for developing inorganic processes. The relationships between population growth, family structure, economic growth, exports, wealth and the rate of technological development are less clear cut. The factory system occurred relatively late in the industrial revolution with the notable exception of textile mills so that a considerable volume of manufactured goods, particularly for home consumption, was fabricated in the domestic arena or small rural workshops. Rural manufacture was however, well established long before the industrial revolution and played an important role in expanding the economies of Britain and Europe. It would be misleading to promote proto-industrialization as an *essential* precursor of the factory system.

David Landes argues that *capitalism*, that is, ‘an economic system based predominantly on private ownership and the use of capital for the production and exchange of goods and services with the aim of earning a profit’, is distinct from medieval feudalism which approximated to *self-sufficiency*.<sup>176</sup> Whether we acknowledge underlying capitalist features of feudalism or not, the transition of the economy and way of life to a predominantly capitalist society has been labelled ‘proto-industrialization’ following

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<sup>175</sup> Coleman, D., ‘Proto-industrialisation: a concept too many?’, *Economic History Review*, 36 (1983), pp. 435-48.

<sup>176</sup> Landes, D. (ed.) *The Rise of Capitalism*, (New York, 1966), p. 1. Landes does concede that few, if any, estates were truly self-sufficient and that certain essential items were traded. Indeed substantial trade across the globe is now known to antedate the medieval period by many centuries. While acknowledging that the primary aim of the medieval estate was to sustain the lord and his household and that the peasants were bound by a host of obligations, Landes does not go so far as to include feudalism as an early example of capitalism. Even invoking a paternalistic concern for peasants does not help to distinguish between medieval and industrial capitalism for there are several examples of industrialists going to considerable lengths to ‘look after their workforce’. The crucial change was the loss of the labourer’s sovereignty over ‘when’ and ‘where’ he or she worked at any particular time which became increasingly eroded as the industrial revolution proceeded. From the macro-economic viewpoint the prime betterment associated with the advancement of capitalism was the explosion of export markets both in extent and quantity.

the publication of Mendels' study of Europe prior to the industrial revolution.<sup>177</sup> Proto-industrialization refers to a phase when production of tradable commodities such as textiles, leather goods, tools and household items took place in cottage workshops manufactured by family members, where there was a balance between agrarian and manufacturing activity, and where that balance tipped progressively towards manufacturing.<sup>178</sup> Such units of production required little capital investment for tools and material stocks which were minimal. At the same time, certain activities which required larger fixed capital investment were carried on in specialised structures such as flour mills and metal smelting houses owned directly or indirectly by the lord of the manor. Perhaps significantly, these activities also required significant power input supplied by wind or water. L. A. Clarkson pointed out that it was erroneous to suggest that Mendels was the first to appreciate the development of a dual family economy as a precursor of full industrialization.<sup>179</sup> Joan Thirsk had already established that farming had been closely related to craft or industrial activities and that these dual occupations were mostly confined to pastoral areas.<sup>180</sup>

Although proto-industrial or cottage industry does appear to have developed in areas of high population density and/or land of poor agricultural quality, rather than where there was a surplus of good land, it is not easy to determine which came first. This is illustrated by two studies. In the Kent Weald there is evidence that proto-industrialization stimulated immigration which led to a rise in population.<sup>181</sup> By contrast in the Zurich Oberland the evidence is that high population density preceded

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<sup>177</sup> Mendels, F.F., 'Proto-industrialization: The first phase of the industrialization process', *The Journal of Economic History*, 32, (1972), pp. 241-161.

<sup>178</sup> In some circumstances industrialization stalled or even reversed and the locality de-industrialized.

<sup>179</sup> Clarkson, L.A., *Proto-Industrialization: The First Phase of Industrialization?* (Basingstoke, 1985), pp. 13-14.

<sup>180</sup> Thirsk, J., 'Industries in the Countryside', in Fisher, F.J. (ed.) *Essays in the Economic and Social History of Tudor and Stuart England* (Cambridge, 1961), pp. 70-88. See also Hey, D.G., 'A dual economy in South Yorkshire', *Agricultural History Review*, 17 (1969), pp. 108-19.

<sup>181</sup> Zell, M., *Industry in the Countryside: Wealden Society in the Sixteenth Century* (1994, Cambridge, 2004), pp. 233-234.

industrialization.<sup>182</sup> A number of factors might favour a change from a predominantly agrarian economy to one where waged labour in manufacturing dominated, and some of these are listed in table 3.2. Different features operated more strongly than others at diverse locations. Each locality was unique except that the process of the industrial revolution subtly but critically involved an intensification of capitalism.

Industrial activity was thought to have begun in the countryside, first in areas of poor soils where farming was of a pastoral nature, predominantly in the north and west of England. In the seventeenth and eighteenth centuries as the population expanded often in combination with partible inheritance customs, farms became too small to support a family and additional income had to be sought.<sup>183</sup> Gay Gullickson agreed that the crucial factor was the existence of a landless or land-poor population.<sup>184</sup> However as mentioned above, Zell has shown that dual economies with cloth manufacturing were well established in the Kent Weald in the sixteenth century in the absence of land shortages.<sup>185</sup> Clearly, the process was more complex.

Two significant characteristics of a proto-industrial lifestyle were that labour was cheap and production flexible. It should be stressed that the cost of labour was in reality immeasurable, in that several members of the family contributed variable time to their craft, not curtailed by the need to travel or by the needs or desires of any other person, as Clarkson noted.<sup>186</sup> Those craftsmen and artisans working in the countryside usually held a quantity of land and were therefore part-time farmers. They had the ability to vary their time commitment between farming and craft production according to the seasons, weather and demand for their products. Craftsmen working in towns may not have had significant amounts of land and by necessity their wages were somewhat higher.

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<sup>182</sup> Braun, R., *Industrialization and Everyday Life* (1960, Cambridge 1990).

<sup>183</sup> Thirsk, J. *The Rural Economy of England* (London, 1984), pp. 217-233.

<sup>184</sup> Gullickson, G., Agriculture and cottage industry: redefining the causes of proto-industrialization, *J. Economic History*, 43 (1983), p. 849.

<sup>185</sup> Zell, *Industry in the Countryside*.

<sup>186</sup> Clarkson, *Proto-Industrialization*., p 19.

**Table 3.2.** Important contributors to the conversion of an agrarian economy to a predominantly manufacturing economy where waged labour is the norm.

	Favours agrarian economy	Favours conversion to manufacturing and waged labour
Agriculture	Fertile land. Land surplus	Poor soil. Small mixed farms
Population growth	Stable	Rising
Raw material for manufacture (coal/iron)	Remote	Locally available
Potential markets	Remote	Nearby
Transport Links	Tenuous	Nearby road & rivers (later: canals, railways)
Landholding and Inheritance	Primogeniture	Partible, Gavelkind.
Availability of capital		Required for factories
Seigniorial authority	Strong	Weak

Rab Houston and Keith Snell begin their critique of proto-industrialization as follows:

‘Proto-industry occurred in the countryside amongst peasant farmers and semi-proletarianized workers in need of an economic supplement.’<sup>187</sup> Thirsk opens her essay with a specific example where in Dentsdale, partible inheritances led to that situation.<sup>188</sup>

A similar situation pertained in the Zurich Oberland, mentioned above, where extreme poverty in areas where there was little restriction of incoming indigent migrants, created fertile ground for exploitation by merchants providing out-working.<sup>189</sup> David Hey examined the area of Ecclesfield to the west of Sheffield where a dual economy was common with one in seven or eight households having a smithy. He used Hearth Tax and post-mortem inventory evidence to support his view that such areas were not poor or inferior to purely agricultural areas. ‘Many cutlers and nailers were more prosperous

<sup>187</sup> Houston, R. and Snell, K.D.M., ‘Proto-industrialization? Cottage industry, social change and industrial revolution’, *Historical Journal*, 27 (1984), p. 473.

<sup>188</sup> Thirsk, ‘Industries in the Countryside’, p 70.

<sup>189</sup> Braun, *Industrialization and Everyday Life*, pp. 18-35.

than the husbandmen, and could occasionally rank with the yeomen.’<sup>190</sup> These examples further illustrate the variability and complexity of the process of industrialization.

It is easy to understand how the small farmer slipped from self-sufficiency to being a landless, waged labourer. As a small farmer he would have crafted essential tools and necessary utensils, obtaining his raw materials from local markets, financed by selling some of his crafted and organic products. In times of bad harvests for example, it was appropriate to manufacture rather more articles to exchange for additional food at inflated prices. While this process was almost certainly universal, particular industries became concentrated in specific areas.<sup>191</sup> For example, West Yorkshire became well known for woollen textiles, the West Midlands for metal working and Bedfordshire and Hertfordshire for straw plaiting and lace-making. At a later phase merchant-capitalists grasped the opportunity to supply raw materials and to buy the product directly in order to sell on in more distant markets. Superficially, this was advantageous to the craftsman who was spared the necessity of travelling to a local market and had access, be it indirectly, to a wider market. Access to more distant markets stimulated demand which otherwise would have stagnated at a level required to satisfy local requirements. The trap was that while the merchant initially offered an increasing outlet for produced commodities, less time was available to grow food and there was a temptation to sell land to more committed farmers. The merchant-capitalist then had it in his power to exploit the cheap labour for maximum profit to himself while minimising remuneration for the craftsman. The next logical step was to pay piece-work converting the craftsman into a wage-earner and by demanding more and more from the craftsman who progressively relinquished his freedom to choose between farming and commodity production. This process is part of that termed ‘proletarianization’.

The variations described above seem to support a model of a multifactorial genesis of industrialization. Theoretically, the first stage of industrialization was inherently unstable in that the part-time craftsman could progress to a full-time, wage earning

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<sup>190</sup> Hey, D., ‘A dual economy in South Yorkshire’, *Agricultural History Review*, 17 (1969), pp. 108-19; Hey, D., *The Fiery Blades of Hallamshire, 1660-1740* (Leicester, 1991), Hey, D., *The Rural Metalworkers of the Sheffield Region* (Leicester 1972).

<sup>191</sup> Hudson, P., *Regions and Industries* (1989, Cambridge, 1993).



worker at the mercy of a middleman, or he could return to subsistence farming. Alternatively, he or she might maintain a dual family economy. A small number of artisans made the jump and became successful merchants in their own right though there are more examples than detailed explanations as to how this may have occurred. Samuel Stone of Bilston, the son of a buckle maker and described as a 'japanner' in 1719 was said to be worth between 8 and 10 thousand pounds twenty years later.<sup>192</sup> Clarkson points out that the process was not linear or unidirectional. At one time a craftsman might be self-employed (in modern terms) and a wage earner at another, or even both at the same time.<sup>193</sup>

The literature is dominated by the industrialization of the textile industry but more relevant to the present study are two regions where rural metal-working was the major industry. In the West Midlands and Birmingham area, nail making, lock making and edge tools dominated.<sup>194</sup> In the Sheffield area, scythe making, nail making and cutlery contributed to the expansion of the steel industry in the town.<sup>195</sup> Both regions had extensive trade with America and it was this which appears to have been instrumental in increasing involvement of merchants in London and Birmingham ironmongery.<sup>196</sup> In these areas in particular, the second stage of industrialization where production became concentrated in factories proceeded but the process was patchy and some communities 'slipped gently into obscurity'.<sup>197</sup> This begs the question: why? One common feature associated with failure to convert to a fully industrialized state appears to be the failure to survive competition in the market place.<sup>198</sup> Again, this seems rather simplistic and fails to answer the question adequately. Was it a matter of chance that industrialization did not proceed or was there a choice and an informed and deliberate decision either on

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<sup>192</sup> Rowlands, M.B., *Masters and Men* (Manchester, 1975), p. 150.

<sup>193</sup> Clarkson, *Proto-Industrialization*, p. 23.

<sup>194</sup> Rowlands, *Masters and Men*.

<sup>195</sup> Hey, *Rural Metalworkers*.

<sup>196</sup> Court, W.H.B., *The Rise of the Midland Industries, 1600-1838* (1938, Oxford, 1954).

<sup>197</sup> Clarkson, *Proto-Industrialization*, p. 27.

<sup>198</sup> Clarkson, *Proto-Industrialization*, p 37.

the part of the merchant-capitalists or the community as a whole? Other economic variables such as production costs (availability of power and raw materials) and distribution costs (distance and available transport to outlets) were, no doubt, significant factors. These questions will be explored further in the conclusions with reference to the complete disappearance of the wire-drawing and needle-making industry in Hathersage. As Clarkson suggests, it is most unlikely that any explanation could be applied universally to the process of de-industrialization. In the concluding paragraphs of Hudson's summary of proto-industrialization, citing many examples, she reasons that the pre-existing nature of the locality had variable effects on the extent to which proto-industrialization affected subsequent demographic social and economic outcomes.<sup>199</sup> With this in mind, Hudson calls for the rigorous investigation of industrialization in future studies.

‘to analyse the inter-related nature of the factors in the environment of industrial regions. How manufacturing locked in with the agrarian base through the seasons and between regions; how the institutional environment of landholding, inheritance practices, the distribution of wealth, the nature of local and central government, and the role of urban centres were all crucially linked in providing the ether of expanding commerce and industry. Above all, the proto-industry debate has properly integrated the study of the family and households, gender and generation relationships, personal life, motivations and aspirations, demography and work regimes.’<sup>200</sup>

This is a heavy academic remit, not least because the probability of sources surviving to provide evidence in all the areas mentioned by Hudson for any particular region or community, are often small indeed. The above quote does, however, succinctly describe the approach aspired to in the present study. Later, Hudson emphasises the regional nature of industrialization though the definition of *region* remains tantalizingly vague.<sup>201</sup> By necessity, regions are defined in diverse terms, for example, finance,

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<sup>199</sup> Hudson, P., ‘Proto-industrialization in England’ in Oglivie, S. and Cerman, C., (eds) *European Proto-industrialization* (Cambridge, 1996), p. 65.

<sup>200</sup> Hudson, P. ‘Review of L A Clarkson, Proto-industrialization: The first phase of Industrialization?’, *Economic History Review*, 39 (1986), pp. 307-8.

<sup>201</sup> Hudson, P., ‘The regional perspective’ in Hudson, P, (ed.) *Regions and Industries* (1989, Cambridge, 1993), pp. 5-38.

markets, administration or transport where boundaries are not coterminous. As Clive Lee observes, information is seldom available on a prior defined regional basis, a notable exception being the census data.<sup>202</sup> For these reasons, many community and regional studies, including the present one, depend heavily on demographic data.

A principal characteristic of proto-industrialization, we have seen is the development of dual economies within a region of pastoral agriculture. Hathersage is set on poor soil and farms were characteristically small and mixed, suggestive of small profits. Evidence for dual occupations is sought within the non-agricultural occupations in the late eighteenth and early nineteenth centuries. There is evidence that one or more villagers might have been involved in lead smelting at the Callow Field cupola worked by William Cooke until the 1820s. It cannot be determined if this was Cooke's only occupation. Similarly, the Walton family produced malt at the malt kiln near Hathersage Hall in the late eighteenth century.<sup>203</sup> A few individuals were involved in brass button making and textiles. Evidence for the latter is represented by the old calico works which later became the Victoria Needle Works of Tobias Child depicted in figure 3.15.<sup>204</sup> Potential occupations for a dual family economy were principally stone quarrying, button making and metal working.

Surviving documentation which includes occupational data is absent for Hathersage inhabitants prior to entries in the parish registers after the early 1800's.<sup>205</sup> Further, multiple occupations are rarely listed though can sometimes be inferred. The earliest metal workers are therefore missed in the examination of previous employments of men employed in the metal industry and dual occupation is almost impossible to detect. Notwithstanding, of the 445 males who from available records were at some time involved in the metal industry in Hathersage it was feasible to determine the previous employment of more than two-thirds. For the vast majority of these, 88 per cent, metal

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<sup>202</sup> Lee, C., 'Regional structure and change' in Langton, J. and Morris, R., *Atlas of Industrializing Britain, 1780-1914* (London, 1986), pp. 30-33.

<sup>203</sup> The following occupations are also mentioned in the baptism register from 1813 to 1820: joiner, carpenter, glazier, saddler, tailor, cordwainer, weaver, butcher, carrier and paper-maker.

<sup>204</sup> For an older photograph of the calico works: Buxton, *Hathersage*, p. 92.

<sup>205</sup> Chapman, C., *Pre-1841 Censuses and Population Listings in the British Isles* (1990, Dursley, 1998).

work was their first paid employment. This is apparent in table 3.3. The growing workforce of needle-makers and wire-drawers was of young recruits new to paid work. A small number, 38, had been previously employed in a wide variety of occupations, though non-specific labouring predominated. Nearly three times as many first-time workers were the sons of men who were or had been working in the industry than those with fathers pursuing other occupations.

**Table 3.3.** Previous occupations of 445 workers in the Hathersage needle-making factories, during the nineteenth century.

Was first job in metal working?	Number of workers	Father a metal worker (Y)	Father not a metal worker (N)	Ratio Y:N
No	38	7	12	0.6:1
Yes	267	130	47	2.8:1
Not determined	140			

Sources: CEBs, parish baptism and marriage registers.

In this chapter evidence has been presented for the Hathersage area showing that during the nineteenth century the two major occupations were farming and stone quarrying. In the early part of the century there was a small brass button manufactory. A calico works, also a minor contributor, was housed in a shed which later became The Victoria Works. Further up the Hope Valley there was a textile factory and tin mining. A major east-west transport link passed through the village but this was confined to road traffic. The initiation and expansion of factory-based metal working was largely staffed by the sons of existing workers without any significant diminution in the numbers employed in other employment sectors.

## Chapter 4. Industrialization, and its Effect on Family Structure and Behaviour.

In this chapter the lives of Hathersage inhabitants are examined throughout the nineteenth century. During this time the village was transformed from pastoral agriculture with a long tradition of fashioning millstones to a smoky industrial township more akin to those found in Birmingham or Sheffield. In the absence of records written at the time the historian is reliant on static and episodic demographic data.<sup>1</sup> This should not deter enquiry as the historiography already provides a wide variety, both of geographical location and demographic variables, on which is conjured an image of life in pre-industrial England and up to 1851.<sup>2</sup> None yet concern the needle-making and wire-drawing industry in Derbyshire.

The primary sources used in this study are the CEBs of the Victorian decennial censuses supported by parish records, both Anglican and Roman Catholic. Additional evidence from wills and probate records, voters' lists and other miscellaneous material is incorporated where appropriate. Having shown how the factory workers are identified, a basic demographic description of the community is presented. Household structure and composition will then be considered. The way in which these characteristics changed through the nineteenth century will be discussed, placing considerable weight upon kinship. Marriage, more precisely the means to establish a new and independent family unit, has been regarded as an indicator of wealth.<sup>3</sup>

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<sup>1</sup> No factory records or personal accounts are known to exist apart from a short phrase reported in the local press and a few letters of Joseph Cocker which will be referred to later. The Nineteenth-century British Library Newspapers archive has been searched from 1800 to 1900 for entries relating to 'Hathersage'.

<sup>2</sup> Wall, R., Robin, J., and Laslett, P., *Family Forms in Historic Europe* (Cambridge 1983), Reay, B., *Microhistories: Demography, Society and Culture in Rural England, 1800-1930* (1996, Cambridge, 2002), Levine, D., *Family Formation in an Age of Nascent Capitalism* (London, 1977), Robin, J., *Elmdon: Continuity and Change in a North-west Essex Village, 1861-1964* (Cambridge, 1980), Anderson, M., *Family Structure in Nineteenth-century Lancashire* (Cambridge, 1971).

<sup>3</sup> Wrigley, E. A., and Schofield, R., *The Population History of England, 1541-1871* (1981, Cambridge, 2002), pp. 356-450.

Accordingly, this is viewed throughout the period. Two other important aspects of community life will be analysed and discussed in the following chapter, those of women's employment and care of the elderly.

It is proposed to relate demographic changes within the township to the growth and decline of the wire and needle-making manufactories in Hathersage and here rests the first difficulty. There are no extant records as to when the industry began and levels of production or profits in subsequent years.<sup>4</sup> The numbers employed have been used as a proxy for production. This is deemed to be valid as significant mechanization which might have resulted in an increase in per capita output during the nineteenth century, was virtually absent. The methods used to manufacture needles remained unaltered apart from the power source used to turn the grinding wheels and stampers, and the various devices used to reduce dust inhalation.<sup>5</sup> In the 1851 and subsequent censuses we can be fairly confident that the number of metal workers recorded represent the Hathersage workforce.<sup>6</sup>

### Estimation of Workforce

In figure 4.1 the number of male heads of house employed within the metal industry is plotted together with the number of those heads with children reported as five years old or younger. The proportion of workers with young children was fairly stable until 1891. (The subsequent declivity is symptomatic of an ageing workforce of a dying industry, unrelieved by young recruits.) In order to extend the estimate of the workforce backwards towards the beginning of the century, use is made of the Anglican parish

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<sup>4</sup> Two documents relating to the business of Robert Cook after the closure of the factory, WLY 1009/94 and WLY 1009/95 are believed to be all that survives.

<sup>5</sup> A stamper was a machine used to punch two adjacent eyes into the middle of a piece of wire pointed at both ends. The wire was then split between the eyes to produce two rough needles.

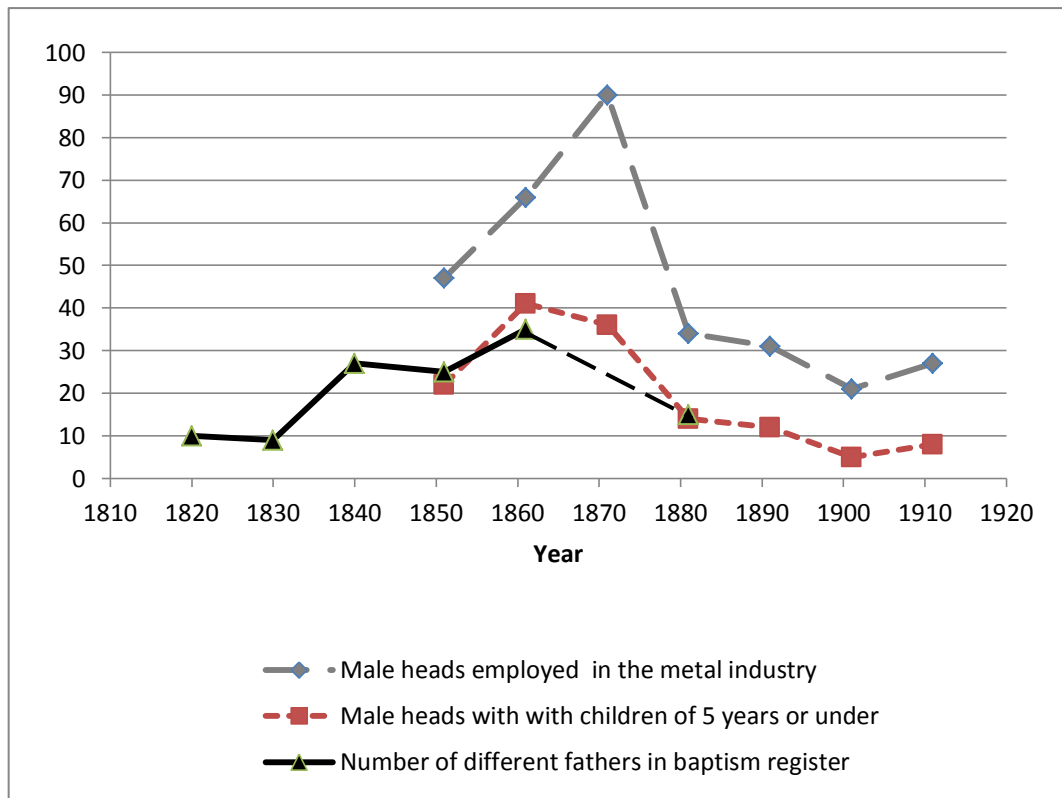
<sup>6</sup> It is likely that very few metal-workers came from surrounding villages. For example, examination of the census for Bamford, the nearest village, included no metal-workers. This may not have been true in 1901 and certainly in 1911, after the factories had closed, the few remaining metal-workers in Hathersage worked in Sheffield. No distinction is made between factory owners and employees. In the early part of the century especially, owners would normally have been hands-on.

baptism register where after 1813 the occupation of the father was recorded.<sup>7</sup> The number of different fathers working in the metal industry was counted for five-year periods chosen to coincide with the ten-year intervals of the censuses. This is roughly equivalent to the numbers of workers with young children after 1851. Figure 4.1 shows that where this line overlaps between 1850 and 1860 there is a close approximation, providing justification for using the baptism registers for this purpose. The metal workers in the early years of the Hathersage industry mentioned in the baptism register were all wire-drawers, many with the name of Cocker supporting the view that the industry grew from the Cocker family around 1800. The data represented in figure 4.1 suggests a relatively steady rise of production with a peak between 1860 and 1870 followed by a rapid decline virtually complete by 1881, then maintaining a relatively low level until 1900-10. This pattern is reflected in the remainder of the demographic indices. It is worth noting that the rapid decline of metal working in Hathersage took place a few years later than in Long Crendon where it was virtually complete by 1861. It is suggested that diversification into making umbrella parts provided a temporary respite.

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<sup>7</sup> The occupation of the father is not recorded in the Catholic baptism resister.





**Figure 4.1.** Estimating the number of workers in the Hathersage wire and needle-making industry.

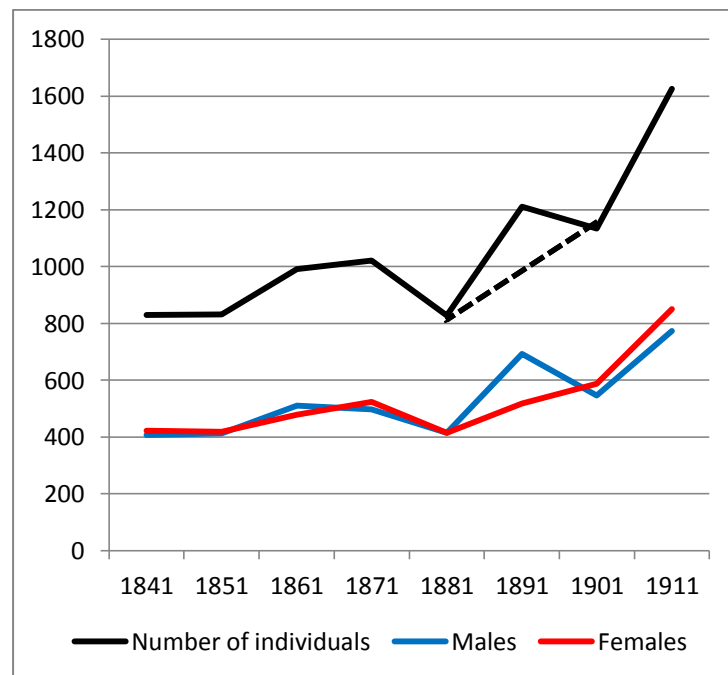
Note: The dotted lines represent the number of metal-working male heads and the number of these with children of 5 and under in the CEBs, 1851 to 1911. The continuous line is an estimate of the number of male heads with children of 5 and under based on baptism registers using 5 year samples, e.g. 1816-1820. Occupations were not recorded in the register between 1862 and 1874.

## Population and age structure

The population of Hathersage rose during the nineteenth century like many other townships in England, as demonstrated in figure 4.2. There are three features which merit comment. The first phase of growth, though modest, from 1841 to 1871, mirrored the fortunes of needle-making. This was followed by a short period of decline back to early nineteenth century levels. From 1881 to 1911, growth was more rapid and progressive. Expansion was achieved by in-migration.<sup>8</sup> It will be noted also, that a

<sup>8</sup> The evidence from this assertion is indirect but based upon a number of observations. The mean age at death estimated from the age at burial changed little between 1813 and 1910. The average number of children produced from a sample of 594 families fell from 6 per couple in 1800 to just over 3 per couple in 1890. Male age at first marriage rose from 24 years in 1800 to 28 years in 1900. The proportion of inhabitants born outside Hathersage rose considerably in the latter part of the nineteenth century, see below.

secondary peak, affecting only the male population, occurred around 1891. The sudden rise in the population after 1881 was not related to metal-working at all but to the sudden and temporary influx of navvies and stone masons working on the Totley railway tunnel. Many were housed in a group of temporary wooden huts built in Padley Wood, others as lodgers in the village. This event produced a number of transient discontinuities in the village demography and vital statistics. The continued rise in population after completion of the railway is related to the considerable easing of the journey to Sheffield, making it practical to live in the Derbyshire countryside while working in the city. The number of males and females, apart from 1891, were never significantly disparate, though females outnumbered males by 8 to 9 per cent from 1901. We will see in chapter 7 this followed a preponderant male outmigration and an adverse male life expectancy.

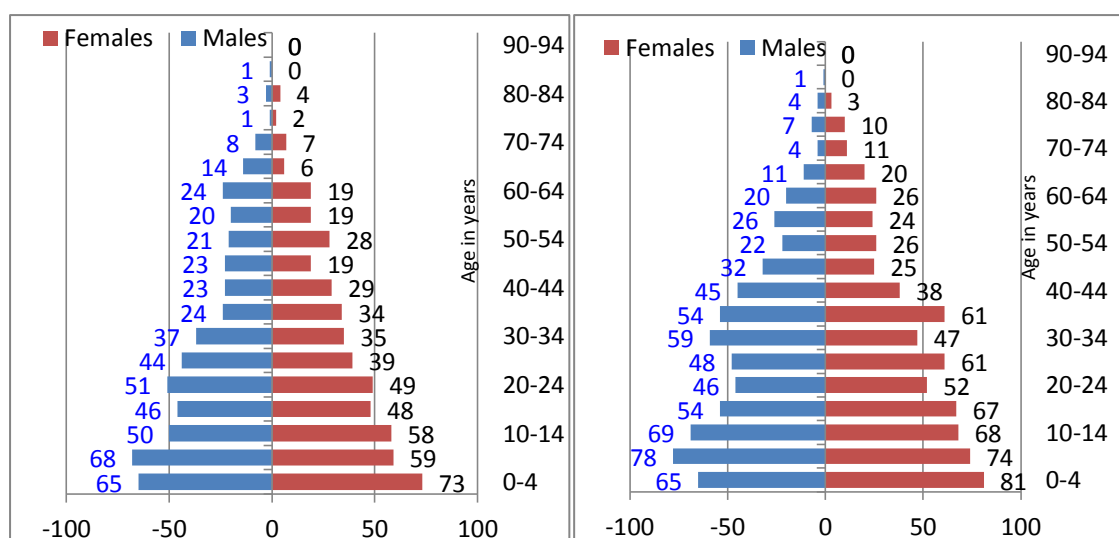


**Figure 4.2.** Population of Hathersage, 1841-1911.

The dotted black line represents the course of growth excluding railway workers.

Source: Census CEBs.

The age profile in 1851 shown in figure 4.3 is characteristic of a young population which had become more mature by 1901. The similarities in the numbers of over 70s might result from either static mortality or elderly migration. This will be explored further in due course.



**Figure 4.3.** Age-sex profile of Hathersage population in 1851(left) and 1901(right).  
Source: CEBs 1851 and 1901 for Hathersage.

## Birth Origin

Studying birth origins within a residential area can provide a host of information which can be quantified and compared with other communities. First, the degree of stability can be assessed: that is, how integrated it is with surrounding communities, or how isolated it is. This quantity may vary over time associated with social or technological change. Secondly, birth origins may highlight a previously unrecognised connection with a distant settlement. The pathway may be related to trade in raw materials, finished products or labour, or may represent a channel for the exchange of cultural or intellectual ideas. The place of birth of whole populations is only available from 1851 onwards in the national census, and no published work is known. There has been some interest in using surnames for these purposes and a few surveys published.<sup>9</sup>

Up until 1871, some 60 per cent of Hathersage inhabitants were native to the village and a further 20 percent had been born within Derbyshire. This pattern changed abruptly in the 1870s when both Derbyshire-born and Hathersage-born denizens reduced by a fifth. After 1891 Yorkshire people, of whom half were from Sheffield

<sup>9</sup> Redmonds, G., 'Surname heredity in Yorkshire', *Local Historian*, 10 (1972), pp. 171-7, Fox, W., and Lasker, G., 'The Distribution of Surname Frequencies' *International Statistical Review*, 51 (1983), pp. 81-87, Parkin, H., 'The Fourteenth-Century Poll Tax Returns and the Study of English Surname Distribution', *Historical Methods*, 48 (2015), pp. 1-12.

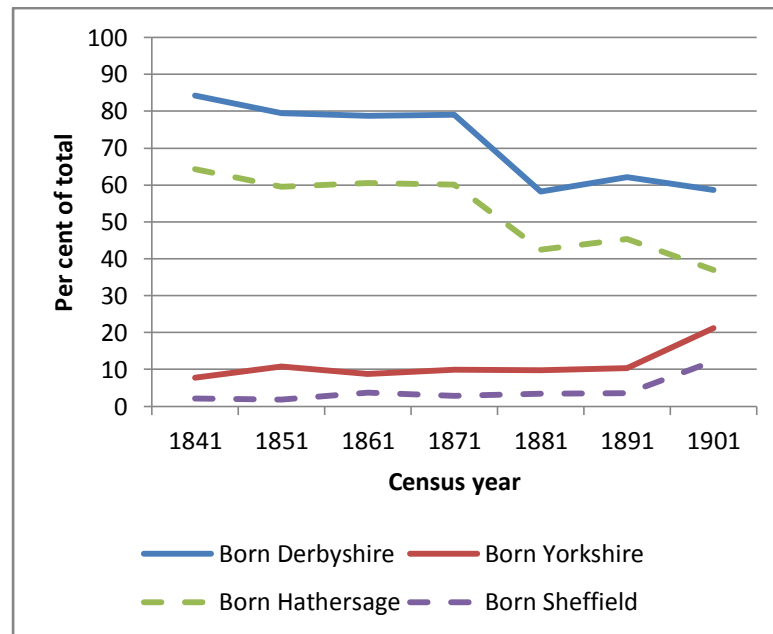
alone, began to move into Hathersage as clearly demonstrated in figure 4.4. Almost certainly, the increase in Yorkshire-born villagers was associated with the opening of the railway link between Hathersage and Sheffield. The reduction in proportion of natives coincident with the decline of the needle-making industry suggests mass outmigration and will be explored in chapter 7.<sup>10</sup> The magnitude of the change, from 60 percent to 40 percent within a decade, might be expected to change the dynamics of the community significantly but this aspect is difficult to investigate.

Meanwhile, the proportion of inhabitants born in Cheshire, a county bordering Derbyshire but with no known specific links with Hathersage, increased from 0.6 and 1.3 percent between 1851 and 1901. The proportion of inhabitants born in Worcestershire and Warwickshire varied between 1.4 and 1.8 per cent with the exception of 1871 when 4.3 per cent (55 individuals) of Hathersage villagers had been born in these more distant counties. Villages straddling the Worcestershire/Warwickshire border were the main centre of needle-making in England at this time and provided the initiator of one needle-making factory in Hathersage, so it is easy to understand why men from this area might be found working in the Hathersage workshops. The sudden but transient rise around 1871 was co-incident with a brief period when the factories diversified into the production of umbrellas. This also attracted umbrella-makers from Birmingham.<sup>11</sup>

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<sup>10</sup> The reduction in Hathersage-born residents is most marked between 1871 and 1881 where the actual number fell from 600 to 320. By 1901, there had been a partial recovery to 425.

<sup>11</sup> In the 1861 census for Hathersage there were 21 workers engaged in umbrella-making, 15 had been born in Hathersage. The Birmingham umbrella-makers arrived between 1863 and 1870 and made up 7 of the 49 engaged in umbrella-making in 1871. 24 were Hathersage natives. By 1881 only 7 umbrella-workers remained.



**Figure 4.4.** Birth origins of Hathersage residents during the nineteenth century.  
Source: CEBs.

## Kin, families and households

The study of household structure in past times has been used as an indicator of social attitudes, social pressures on communities and as a basic demographic descriptor.<sup>12</sup> Most have used cross-sectional methods, that is, noting the household structure at a given instant using a single census, often for 1851. The alternative is to conduct longitudinal studies in a single community using sequential censuses or a unique detailed log of household changes.<sup>13</sup> Aggregated data is presented such that general trends emerge from the ‘noise’ of individual families. These patterns are mostly common-sense conclusions. For example, the family size is likely to be highest from 8 to 17 years into the marriage; nuclear families are most likely to be joined by parents in the early years and married children and grandchildren in the latter years.<sup>14</sup> More

<sup>12</sup> Anderson, *Family Structure*, Laslett, P. and Wall, R. (eds), *Household and Family in Past Time* (1972, Cambridge, 1974), Quadagno, J., *Ageing in Early Industrial Society* (London, 1982), Janssens, A., *Family and Social Change: The Household as a Process in an Industrializing Community*, (Cambridge, 1993).

<sup>13</sup> Hunt, E, 'Household size and structure in Bassingham, Lincolnshire, 1851-1901', *LPS*, 75 (2005), pp. 56-74, Janssens, *Family and Social change*.

<sup>14</sup> Janssens, *Family and Social change*, p. 87 and pp. 81-2 respectively.

interesting perhaps, was Anderson's finding that the inclusion of kin was more common in industrial Preston than rural areas, countering the notion that industrialization would disrupt close kinship links. Other evidence for industrialization accentuating rather than weakening kin-links is given by Steven King.<sup>15</sup> An alternative explanation for kin being more commonly in urban households might be that in rural areas families were relatively close geographically to kin while not living under the same roof. Migration to industrial centres overstretches these ties. One way of maintaining a close relationship was co-residence.<sup>16</sup>

'Kinship' is that often unseen force which binds individuals or families for the purpose of mutual support and benefit and predominantly exists between consanguinal relations. Such forces may be intermittent and of variable strength modulated by distance and circumstance. Kinship ties, once thought to be loose in English society on account of the ubiquity of the nuclear family as opposed to complex families more common in south-east Europe, are now accepted as central to the ecology of communities.<sup>17</sup> Upon marriage, a man would take on his wife's kin as his own, the principle of incorporation. Naomi Tadmor used the much quoted diaries of Ralph Josselin to illustrate how his 'son-in-law' mutated into his 'son'.<sup>18</sup> Hathersage provides its own example in the Cocker letters (see below). At a time when second marriages were common due to the early death of a spouse, the principle of incorporation could become quite intense.<sup>19</sup> Examination of working-class diaries and pauper letters have demonstrated that contemporary everyday use of the word 'kin' may have extended beyond blood relations and those acquired by marriage. It may have included unrelated household members such as servants and apprentices who might have lived-in for an appreciable time and even sat at the same table with the host family. Certainly they were often

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<sup>15</sup> King, S., 'The English protoindustrial family: old and new perspectives', *History of the Family*, 8 (2003), p. 22.

<sup>16</sup> Reay, *Microhistories*, pp. 156-175.

<sup>17</sup> Levi, G., 'Family and kin - a few thoughts', *Journal of Family History*, 15 (1990), pp. 567-578, King, S., 'Forme et fonction de la parenté chez les populations pauvres d'Angleterre, 1800-1840', *Annales*, 65 (2010), pp. 1147-1174.

<sup>18</sup> Tadmor, N., *Family and Friends in Eighteenth-century England* (Cambridge, 2001), p. 133.

<sup>19</sup> *Ibid*, pp. 134-5.

integral parts of the household economy.<sup>20</sup> Even neighbours and fellow workers may be included, sometimes called ‘fictive kin’ by historians and anthropologists.<sup>21</sup> Will Coster draws attention to individuals whose patronage was formed through ceremony such as god-parents and membership of guilds or unions.<sup>22</sup> Even without re-marriage affinal kin links could become extensive and strong, to enhance business and sometimes cause distress. In Hathersage, the Cocker family, wire mill owners, was linked by marriage to the Ibbotson family on at least five occasions. One of the Ibbotson businesses was the paper mill which supplied brown paper to the Cockers for the wrapping of needles. An extract from a letter written by Joseph Robert Cocker to his unmarried sister Hannah in Hathersage illustrates both the use of relationship terms and the relationships with affinal kin.

‘I am much concerned to hear of **Brother's** leg breaking out again. I hope however, that with care all will soon be well - he ought to live well but I feel assured **Sister** would skin a mouse and pine her husband to please the **Ibbotsons** - however peace be with them - No parting with **Maria** on any account’<sup>23</sup>

At this time, Joseph’s blood brother, John, was dead and Hannah was his only surviving sibling. A further point deserving mention concerns the practice of young people seeking employment, often as servants, in the households of perhaps more distant kin. Due to surname difference such arrangements are often difficult to detect.<sup>24</sup> This is thought not to be a source of error in the present study due to the small size of the population.

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<sup>20</sup> Laslett, P., *The World We Have Lost* (1965, London, 2005), p. 3.

<sup>21</sup> Gaunt, D., ‘Kinship: Thin red lines or thick blue blood’, in Kertzer, D. and Barbagli, M. (eds), *Family Life in Early Modern Times, 1500-1789* (London, 2001), p. 283.

<sup>22</sup> Coster, W., *Family and Kinship in England, 1450-1800* (2001, London, 2006), p. 40.

<sup>23</sup> Written at the Commercial Hotel Glasgow, May 7th 1848. ‘The Cocker Letters – Hathersage’ Eunice and Ron Shanahan published at <http://places.wishful-thinking.org.uk/DBY/Hathersage/CockerLetters.html>. (20/3/2013).

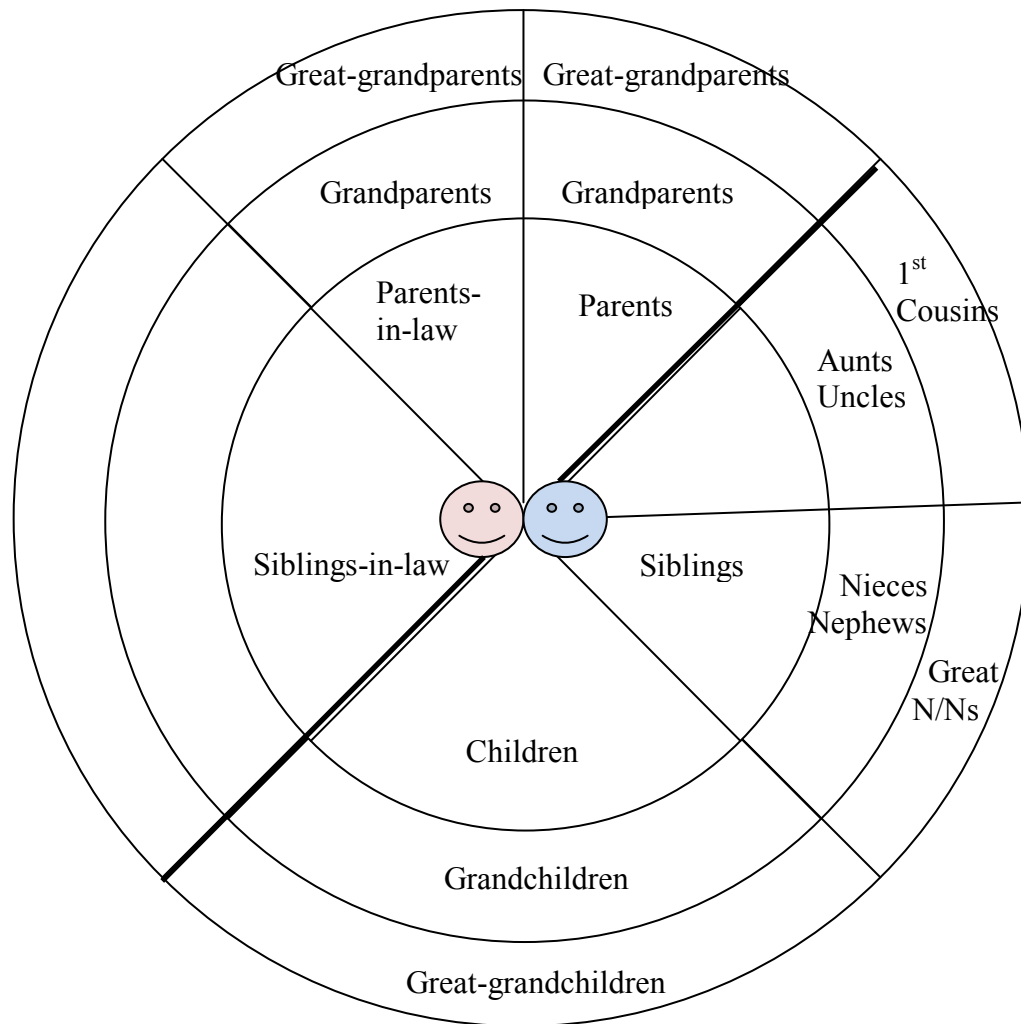
<sup>24</sup> Cooper, D. and Donald, M., ‘Households and ‘hidden’ kin in early nineteenth-century England: four case studies in suburban Exeter, 1821–1861’, *Continuity and Change*, 10 (1995), pp 257-278.



In the current work kin is restricted to the more conventional meaning depicted in figure 4.5. Kin relationships mentioned in nineteenth-century census records are commonly confined to first and second level kin. Third level kin relationships within households, such as cousins, great-grandparents and great-grandchildren were rare occurrences in nineteenth-century communities. Care has to be exercised in order to establish whether aunts, for example, are associated with the male or the female component of the couple at the centre of the household as the term ‘in-law’ is usually reserved for first level affinal kin. Marriage partners of children are referred to as son- or daughter-in law but sometimes, step-children are also so assigned. In this scheme second cousins would be defined as fourth level kin and more distant and fictive kin could be allocated to the fifth level.<sup>25</sup>

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<sup>25</sup> King, S., ‘Verwandtschaft’, in F. Jäger (ed.), *Enzyklopädie der Neuzeit* (Stuttgart, 2014).



**Figure 4.5.** Conventional 'kin' demonstrating three levels of closeness.

Families containing other than first and second level kin are rare in the nineteenth century. In over 9300 relationship references in the Hathersage censuses, there is one mention of a great-grandmother, two of great-granddaughters and five of cousins.

Levi suggests that the poor often chose god-parents from a higher social level, presumably in the hope of patronage.<sup>26</sup> Such a practice was not prevalent in Hathersage, though identification of god-parents is confined to the Roman Catholic community, where their names are included in the baptismal register. John, a wire-drawer, and Millicent Crossland chose Charles Sherriffe, a merchant, as god-father to their daughter Lucy in 1826 and George, an umbrella furniture maker, and Julia Burrows selected the

<sup>26</sup> Levi, 'Family and kin', p. 572.

local schoolmistress as god-mother to her son William in 1871. However, the usual practice in the Hathersage Catholic community was for the god-parents to be chosen from various aunts and uncles of the child.

The relatively small nuclear family consisting of two parents and their children appears to have been the norm in pre-industrial England from the 1550s to the 1820s.<sup>27</sup> Intermittently other family members were taken into the household: extensions forward in the form of grandchildren and backwards in the form of parents. Less commonly, sideways extensions by way of siblings and further, aunts and uncles or even cousins occurred.<sup>28</sup> Gregory King in 1696 observed that the household economies of the majority of common households ran on a subsistence footing.<sup>29</sup> Any adverse event, whether extrinsic such as a bad harvest or intrinsic such as illness or death of an adult, might plunge the family into poverty.<sup>30</sup> These acute stresses were superimposed upon the 'family poverty cycle' proposed by Rowntree where a family was particularly at risk of poverty while the children were under working age and again during later years when strength declined and infirmities appeared.<sup>31</sup> Acute poverty demanded assistance either from kin or the wider community. Co-residence offers one such solution though this might have been reluctantly sought and temporary.<sup>32</sup> Alternatively, support might

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<sup>27</sup> Laslett, P., *Family Life and Illicit Love in Earlier Generations* (Cambridge, 1977), p.47.

<sup>28</sup> Complex families (either extended or multiple) are common in other countries such as Russia and Italy. (Laslett, P., 'Family, kinship and collectivity as systems of support in preindustrial Europe: a consideration of the 'nuclear-hardship' hypothesis', *Continuity and Change*, 3 (1988), pp 158-161.) It is not clear how, when or why this came about but Laslett proposes that four social conventions maintain the nuclear structure. First, that each child should leave upon marriage; second, that a child should only return when in trouble but at the invitation of the parent; third, that when the parent (rarely, parents) was unable to live independently they might join the household of a child but only upon invitation; and fourth, similar principles applied to other relatives. In other words, co-residency with kin was a last resort.

<sup>29</sup> King, G., *Natural and Political Observations and Conclusions upon the State and Condition of England* (1696), in Barnett, G. (ed.), *Two Tracts by Gregory King* (Baltimore, 1936).

<sup>30</sup> Smith, J., 'Widowhood and ageing in traditional English society', *Ageing and Society*, 4 (1984), p. 439.

<sup>31</sup> Rowntree, B.S., *Poverty: A Study of Town Life* (London, 1902), p. 137.

<sup>32</sup> The prevalence of co-residency in England appears to be low in the nineteenth century. However, if episodes of co-residency were of short duration, the ten yearly censuses may underestimate the frequency of occurrence. Janssens' work in Holland using a continuous

be given in the form of food or money but such actions by kin and neighbours rarely leave a trace. Where sustenance was provided under the poor law a record may be found in the overseers' account books but none survive for Hathersage. Laslett developed his 'nuclear hardship hypothesis' by emphasizing the importance for the stressed individual's or family's awareness of the existence and location of their kinsfolk and their ability or willingness to provide.<sup>33</sup> He suggests that before the twentieth century kinship resources may not have been readily to hand for a significant number of people, though this is based upon computer models rather than empirical studies. It will be shown in the following chapter that in Hathersage at least, for most elderly people, there were kin were residing within the confines of the village.

Salient questions focus on the relationship between industrialization, social attitudes and the care of the elderly, particularly the elderly poor. By tabulating the agents involved in the constitution of a complex household, it becomes immediately obvious that such formations are multifactorial and idiosyncratic. Examples of such considerations are to be found in table 4.1. If we are to fully understand household structure it is necessary to study the detail of individual family units and their relationship with their internal circumstances and their environment. In practice this is virtually impossible. However, by applying selective filters, occupational for example, it may be possible to make some generalizations relating to particular groups of people, always mindful that every family was different and made its own choices.

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record of household changes suggests a much higher frequency. It is not clear if the differences are geographical or whether her methodology, which is not applicable to England, might reflect a more universal truth. Janssens, *Family and Social Change*.

<sup>33</sup> Laslett, 'Family, kinship and collectivity', pp 157-8.

**Table 4.1.** Agents involved in the formation of complex households.

<b>Intrinsic Factors</b>	<b>Extrinsic Factors</b>
Marriage age: earlier marriage might be more likely to be associated with co-habiting with parents early in the marriage or, conversely, later.	Availability and capacity of housing: the number of rooms, perhaps indicative of wealth, would influence the number of servants, possibly children and other relatives less fortunate.
Life-cycle point (duration of marriage): short duration was usually associated with children; long duration with parents.	Health and social ability of children: extra help might be required to look after chronically sick children and this might be provided by siblings.
Fertility: an infertile couple might be more likely to accept siblings or second degree relatives.	Family solvency: always a factor unless the relative was able to support themselves.
Personal Health: poor health of the wife might encourage a sibling or parent to come into the household, especially if there are children.	Economic/bodily health of parents and other kin. Sometimes co-habiting relatives were being cared for by their hosts.
	Inheritance obligations: particularly relevant in farming where a son would often be responsible for the farm and expected to manage it while the father, though infirm, remained in residence.
	Occupational constraints: some occupations required co-residence, for example boarding schools and care institutions.

If one factor prevailed consistently in a particular group then its effects might have become a characteristic of that group, though it does not follow that all members of the group would have behaved in the same way. For example, the family households of the small farmers of Hathersage tended to retain their children for longer than other occupational groups. Their children married later, and one son in particular, though not necessarily the eldest, would stay in the household after marriage and eventually become the designated head. The father, if he survived, remained in the household as a ‘retired farmer’. George Hickinson, for example, came to the 20 acre Broadhay Farm as an agricultural labourer between 1830 and 1834. Between 1842 and 1846 he became ‘the farmer’. His youngest son, also George, worked on the farm, married in 1869 but continued to live in the household. By 1881, young George had taken over the headship and his father remained in the household until he died in 1890. Young George was still at Broadhay in 1911. Sometimes, a child had to wait a long time to inherit the

farm. John Littlewood was born in 1825 but remained a ‘farmer’s son’ until 1878 when all but one of his 7 children had left home.

The centrality of kin relationships is recognised in European studies.<sup>34</sup> In later chapters, the importance of kin in the history of Hathersage and in particular the development of needle-making factories will become increasingly apparent.

## Household size

The most elemental measurement of family structure is that of mean household size (MHS).<sup>35</sup> Peter Laslett points to the persistently low value (4.75 from the late sixteenth to the late nineteenth century) as indicative of the consistent paucity of complex households. MHS depended primarily upon mortality and fertility; the number of co-resident never-married children being the major contributor.<sup>36</sup> Laslett and Wall provide estimates of MHS for 100 different places between 1574 and 1821 from various sources.<sup>37</sup> After 1851 when census data becomes widely available, MHS can be computed with a high degree of accuracy. Post-1850 data suggest that it was not until 1891 that the MHS began to fall consistently. This is considerably later than in other western countries experiencing the economic, social and demographic changes associated with the industrial revolution. In France, for example, the MHS had already

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<sup>34</sup> For example, Johnson, C. and Sabeian, D. (eds), *Sibling Relations and the Transformations of European Kinship, 1300-1900* (New York, 2011), p. 2.

<sup>35</sup> There has been a discussion concerning the identification of a household from the CEBs particularly in relation to lodgers. It is sometimes unclear as to whether a lodger, particularly if accompanied by conjugal kin, represents a separate household. See, for example, Schürer, K. and Mills, D., ‘Family and household structure’ in Mills, D. and Schürer, K. (eds) *Local Communities in the Victorian Census Enumerators’ Books* (Oxford, 1966), pp. 281-4. In practice, whether lodgers shared food with the host family or lived separately within the same house is of little matter to the present study. In either case the host family had clearly made the decision to take in an outsider, nearly always unrelated, and almost certainly for economic reasons. Further, reference to table 4.2 demonstrates that number of lodgers was small. The situation where a farmer and his wife shared a farm with a married son and his family is less clear. The building might have been arranged such that they had separate entrances and facilities. In functional terms they might have been separate households.

<sup>36</sup> Laslett, P. ‘Mean household size in England since the sixteenth century’ in Laslett, P. and Wall, R. (eds) *Household and Family in Past Time* (1972, Cambridge, 1974), pp.125-6.

<sup>37</sup> *Ibid.* pp. 130-131.

fallen to below 4 by 1880.<sup>38</sup> In England Nigel Goose found variations in the townships of Berkhamsted in Hertfordshire in 1851 from 4.36 to 5.10 with a mean of 4.83.<sup>39</sup> Figure 4.6 suggests that there may be considerable variation from place to place and the national figures and those for Hathersage might suggest that industrialization did not significantly affect MHS, consistent with Laslett's observation.<sup>40</sup> The rise of Hathersage MHS in 1871 coincides with the peak of the needle industry and that of 1891 is explained in part by the erection of wooden huts in Padley Wood which housed a family and up to 8 boarders associated with the construction of the railway.

Overall the decline of the MHS in Hathersage amounted only to 1.8 per cent per decade. In Chute (Wiltshire) MHS was generally rising and at Bassingham (Lincolnshire) falling progressively throughout the period.<sup>41</sup> For Chute at least, the rise can be explained by gentrification. Although there had been two great houses in the village for many years, the later part of the nineteenth century was marked by the arrival of several wealthy personages accompanied by a host of servants.<sup>42</sup> Enid Hunt confirmed that the falling household size was associated with an increasing proportion of couples having fewer children.<sup>43</sup> She also found that tradesmen, farmers and professional heads often had the larger households. Clearly, household size depends heavily upon the age structure of the community and the occupations of the inhabitants. Many authors regard farmers and agricultural labourers as belonging to different socio-economic classes, the latter rarely possessing servants. In Hathersage, at least, several

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<sup>38</sup> Laslett, 'Mean household size', p 139.

<sup>39</sup> Goose, N, *Population, Economy and Family Structure in Hertfordshire in 1851. Vol. 1. The Berkhamsted Region* (Hatfield, 1996), p. 61.

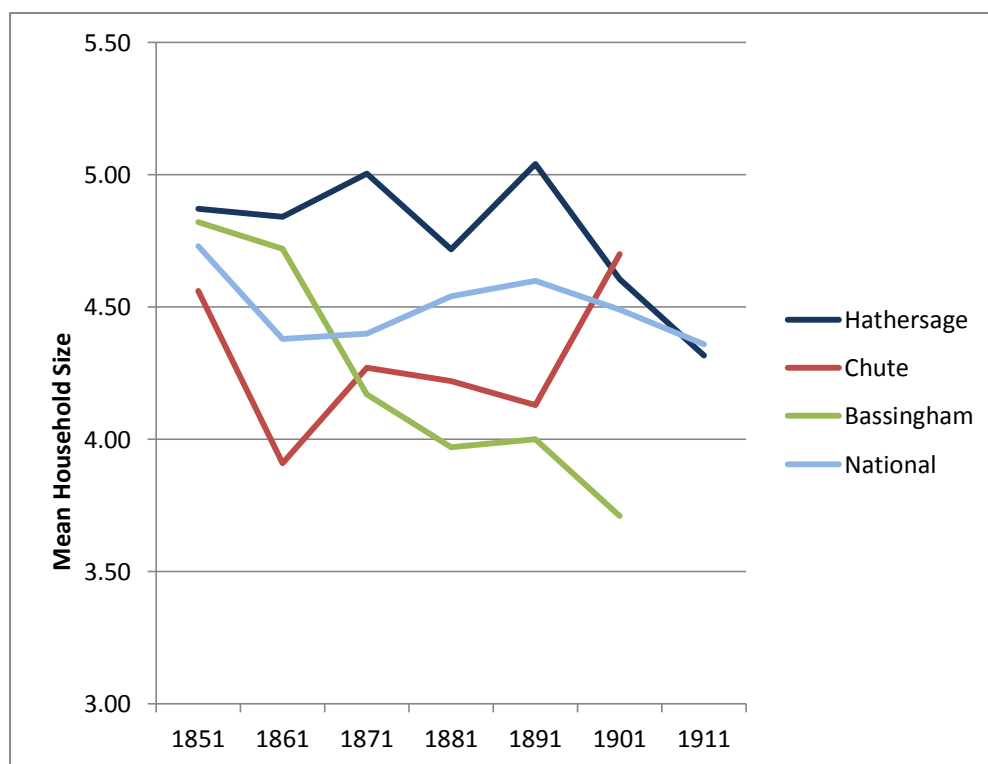
<sup>40</sup> Laslett, P., 'Size and structure of the household in England over three centuries. Part 1', *Population Studies*, 23 (1969), p. 200.

<sup>41</sup> Hunt, 'Household size and structure', p. 61.

<sup>42</sup> The multi-focal village of Chute in southern Wiltshire is used as a comparator on several occasions in this study. An agricultural village which changed little during the nineteenth century, Chute was slightly smaller than Hathersage but had shared a number of characteristics. The nearest market town was Andover, some 8 to 10 miles, which was the nearest rail link. It was the subject of a previous study of migration by this author so a wide variety of original data is readily available.

<sup>43</sup> Hunt, 'Household size and structure', pp. 62-63.

agricultural labourers became farmers and one or two farmers ended their days as general labourers, a fact making social-economic class differentiation problematic.<sup>44</sup> Nevertheless, a difference is demonstrable. In 1871 when the MHS in Hathersage was 5.0, the value for farmers was higher (5.9) than for agricultural labourers (4.4), partly due to the farmer's children remaining to assist on the home farm. In Hathersage, farmers outnumbered agricultural labourers by more than 2 to 1 and only half of the farmers included servants, with an average of 1.9 servants per household.<sup>45</sup> The farming practice here was to farm predominantly with family labour.



**Figure 4.6.** Mean household size for three communities during the second half of the nineteenth century.  
Sources: Hathersage and Chute, CEBs; Bassingham, Hunt, 'Household size', p. 61; national, Laslett, *Household and Family*, p. 138.

<sup>44</sup> An example is of George Dickinson mentioned earlier in this chapter. Another, Alexander Elliott came to Hathersage between 1841 and 1851 as an unmarried agricultural labourer, tenanted three farms towards the end of the century; his descendants still occupy Toothill Farm today. Occupational changes in response to employment opportunities within Hathersage will be discussed more fully in chapters 6 and 7.

<sup>45</sup> Always with the caveat that an unknown number of general labourers may have worked on farms.



## Household Composition

Having established that MHS in Hathersage mirrored the national pattern it is logical to explore household composition in more detail. This was done for each census from 1851 to 1911 and a summary is presented in table 4.2. The figures represent the number of households (expressed per 1000 households) which included the specified category of persons. It is a measure of the propensity of a household to take in such an individual as opposed to the number of any category of person in the community. The total number of kin other than children of the head, at 268/1000 Hathersage households in 1851, compares with 49/1000 in Chute, 80/1000 in Berkhamsted (both agricultural areas) and 307/1000 in Bassingham. The number of servants (176/1000) is also higher than Goose's series (53/1000) and Chute but lower than Bassingham (263/1000).<sup>46</sup> There appears to be a considerable difference between the two southern and the two northern localities. Regional aggregated data also suggests a lower propensity to accommodate kin in the south.<sup>47</sup> Further observations are required to explain any possible north-south divide. Unfortunately all the figures quoted in the literature are local or regional snapshots rather than a time series in a single locality, so little can be concluded, other than that there are geographical and temporal variations.

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<sup>46</sup> Goose, *Population economy, Berkhamsted*, p. 70, and Hunt, 'Household size, Bassingham', p.71.

<sup>47</sup> Wall, R., 'Regional and temporal variations in the structure of the British household since 1851' in Barker, T. and Drake, M. (eds), *Population and Society in Britain 1850-1980* (London, 1982), table 1, p. 91. Further figures presented by Wall for the twentieth century suggest a developing east/west split where complex households were less common in the eastern half of the country such that they were least frequent in the south east.

**Table 4.2.** Number of Hathersage households including non-nuclear individuals, by relationship, as a percentage.

	Census Year						
Households with:	1851	1861	1871	1881	1891	1901	1911
Married children	3.7	5.4	3.5	5.1	2.4	3.8	3.1
Unmarried children	69.4	67.1	72.15	65.7	69.4	66.7	64.3
Son/daughter-in-law	2.3	3.9	3.2	3.7	1.7	2.8	3.1
Parents	5.6	1.9	4.3	5.1	0.3	3.4	3.3
Grand-children	8.8	12.0	8.7	12.5	7.9	8.3	5.3
Nieces & nephews	3.7	7.0	5.9	5.1	5.8	4.1	4.7
Siblings (including any spouses)	7.9	7.8	5.9	6.9	5.8	8.3	5.5
Aunts, uncles & cousins	0.9	0.8	0.4	0.9	0.3	1.7	1.3
Total kin (excluding conjugal children)	<b>26.9</b>	<b>29.5</b>	<b>22.4</b>	<b>27.3</b>	<b>18.9</b>	<b>22.7</b>	<b>19.5</b>
Servants & apprentices	17.6	18.2	16.1	14.8	16.2	18.56	18.4
Lodgers & boarders	13.4	11.2	11.4	8.3	20.3	14.4	13.1
Visitors	3.2	3.9	2.8	5.1	7.6	4.8	7.1

Notes: Heads and wives are not shown in the table. Heads form the denominator, but not all heads are male, some are the mothers of the children. Distant relations, being very few, are included with 'aunts, uncles and cousins'; 'visitors' include boarding school pupils.<sup>48</sup> Grandchildren include a single great-grandchild, apprentices and servants are combined, the former being small in number averaging under five in each census and making up a 10 – 15 percent of the total.<sup>49</sup>

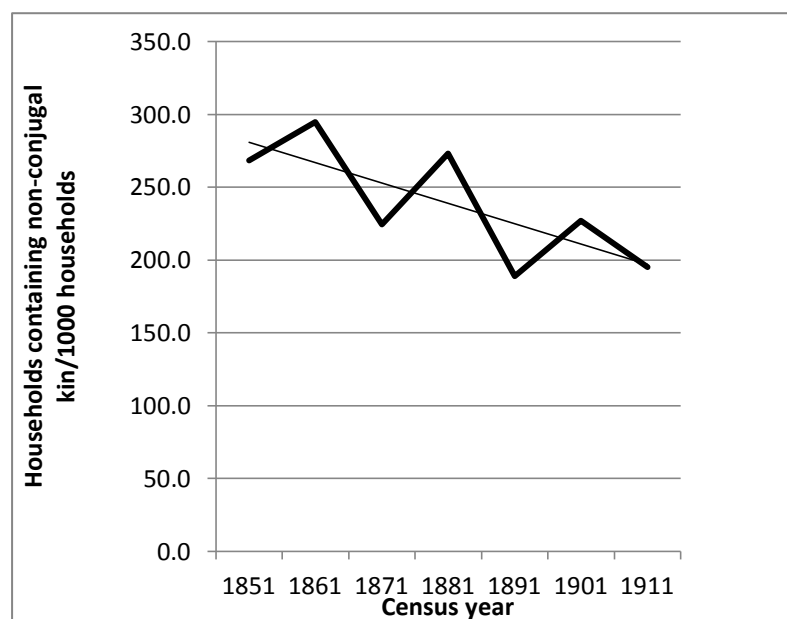
Source: CEBs for Hathersage.

In Hathersage, for all categories of kin including ever married and unmarried children, there was a slight fall in the tendency of households to include kin over the period 1851 to 1911. The greatest declines were for parents and grandchildren, both exceeding seven per cent per decade. The one exception was in the category of aunts, uncles and cousins which rose by 12 per cent per decade: but the numbers were small and it would be rash to attribute significance to this finding. Overall, the reduction in households incorporating co-resident kin, other than conjugal children, was six per cent per decade,

<sup>48</sup> The reason being that visitors will not be discussed as a category while lodgers and boarders will be analysed further, pupils being a special case. The sudden increase in visitor containing households in 1891, raises the question as to whether some 'visitors' may in fact be 'lodgers'.

<sup>49</sup> The apprenticeship system had declined considerably by the nineteenth century; see, for example, Coster, *Family and Kinship*, p. 55. In Hathersage the numbers of apprentices declined from nine in 1851 to only one in 1881. In the twentieth century this trend reversed and there were 7 apprentices in 1911.

as shown in figure 4.7. The tendency to include servants remained stable, and boarders and lodgers increased by nearly four per cent per decade. Logically, there is an inverse relationship between the likelihood of a household containing lodgers and the chance of including kin.<sup>50</sup>



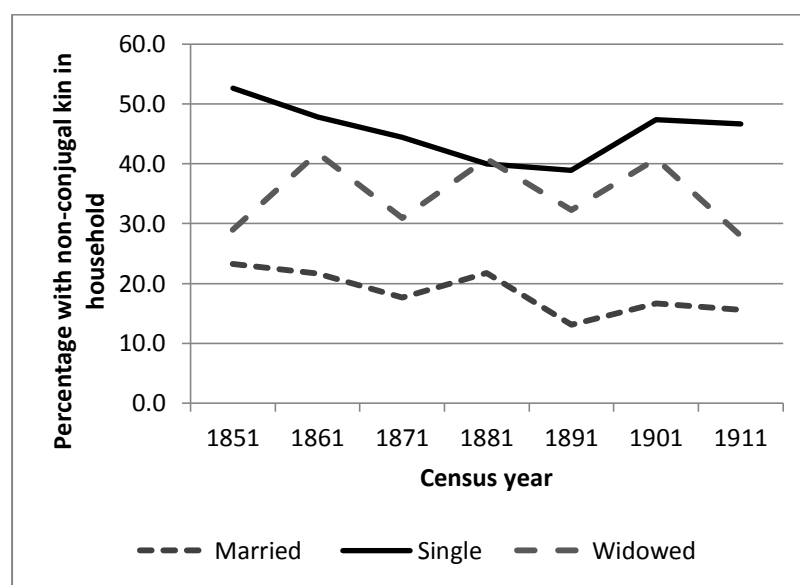
**Figure 4.7.** The declining propensity for households to include non-conjugal kin, Hathersage, 1851 to 1911.  
Source: Table 4.2.

Most categories of kin appeared in too small numbers to allow changes over time to be observed. Two, however, merit further comment. First, unmarried conjugal children per household showed an initial increase from 3 in 1851 to 3.2 in 1871 and then a progressive fall to 2.5 per household in 1911. Such an observation is in line with national figures for the decline in fertility during the period. Secondly, the number of lodgers per household rose sharply from an average of close to 1.5 to over 2.7 per household in 1891. As mentioned previously the Padley Wood huts contributed to this but where workers were lodged in the village there were characteristically 2 or 3 lodgers per household where previously only one was accommodated. Visitors and lodgers also increased over the period by an average of over 10 per cent per decade. The numbers of lodgers peaked sharply in 1891 constituting nearly 11 per cent of the

<sup>50</sup> Hinde, P., 'Household structure in rural England, 1851-1881: a multivariate analysis', *History and Computing*, 2 (1990), p. 202.

village population, falling back to under six per cent by 1901. A similar increase in lodgers was noted in Atcham (Shropshire) in 1961 associated with railway construction.<sup>51</sup>

Figure 4.8 adds the dimension of the marital status of the household heads with co-residing non-conjugal kin. This suggests that a minor change in behaviour occurred in both single and married heads rather than the widowed. It could be argued that if the supply of kin looking for a home was reducing over time then widows might be keener to offer a placement as she/he might have more to gain from the relationship in the form of companionship and practical help.



**Figure 4.8.** Proportion of heads whose households included non-conjugal kin by marital status of the head, Hathersage, 1851-1911.  
Source: CEBs.

The proportion of households with co-resident kin other than conjugal children found by Janssens for Tilburg in the Netherlands was between 10 and 20 per cent, but her figures relate to married couples so should be compared with the lower line in figure 4.8.<sup>52</sup> Overall in 1851, 26.8 per cent of Hathersage households contained non-conjugal

<sup>51</sup> Hinde, P., 'Household structure, marriage and the institution of service in 19th century rural England', *LPS*, 35 (1985), p. 43.

<sup>52</sup> Janssens, *Family and Social change*, p.70.

kin, slightly higher than the 23 per cent found in the urban communities of Preston, Lancashire.<sup>53</sup> The proportion in Chute was 22.5 per cent in 1851. Although geographical variations are apparent they appear to be small.

Single heads, mostly male, often co-resided with sisters, though seldom parents. Nieces and nephews also featured as co-residents and in 1911, 6 out of 14 kin containing households headed by unmarried heads included them. Married household heads were just as likely to live with grandchildren as parents. The households of widowed heads were most likely to include unmarried children with grandchildren the next most frequent, followed by a variety of other relations. The age of the head is a crucial determinant of the likely relationship with co-residents. Clearly, grandchildren will be a feature of older heads, and parents of the younger and middle-aged heads. Other differences are less explicable.

We might expect variations to tell us more about family living, but the sheer complexity of an individual's life militates against the formation of a comprehensive understanding. A multitude of factors might come into play when the possibility of cohabitation with kin is considered. Where an unmarried or even married child lives in the household of the parent, failure to leave home might be the root cause, but second degree kin are likely to be new entrants often brought in following a crisis. Unrelated cohabiters are more likely to be part of a business arrangement. Rarely are the details available to the historian: autobiographical accounts, valuable as they are do not provide quantitative data on a community scale. As well as individual prejudices, social attitudes vary over time. Even these are complex in that there may be national, regional and local influences on the social acceptability of taking in lodgers, for example.

An attempt was made to uncover any trends or tendencies to cohabit with kin and non-kin in Hathersage during the latter part of the nineteenth century. Two censuses were chosen for analysis, 1851 and 1891, such that the 21-30 year olds in 1851 are the same cohort as the 61-70 year olds in 1891. This methodology reduces the error imposed by intrinsic variations in attitudes towards sharing a house with kin while preserving social

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<sup>53</sup> Anderson, *Family Structure*, p.44. Indeed the Hathersage figure is higher than several other English studies quoted in Anderson's footnote 4, p.204. (York, 22; Northampton, 15; South Shields 14; Oldham 21; Nottingham, 17; Radford 15 per cent though these are not necessarily 1851 figures.)

and economic influences. The results are presented in figure 4.9, where for each category of co-resident the frequency of inclusion is plotted against the age of the male married head. The first four tiles suggest that between 1851 and 1891 there had been little change in the propensity to include grandchildren, unmarried children and servants or aunts/uncles/cousins, though the number in the latter group is very small. The prevalence of grandchildren increased with the age of the head as did the inclusion of servants in the household, as might be expected. Aunts, uncles and cousins seem to feature in the youngest households. Unmarried children progressively left the parental home, though a significant number of older heads still had unmarried children in their home. This amounted to around half of 60 plus year old heads. The next four tiles suggest a change in behaviour during the second half of the century, though the numbers are somewhat smaller. Married children, with or without their spouses, and parents appear to have developed a reluctance to live with a vertically related head. Interestingly, the number of siblings co-residing in later life had increased by 1891 so it is possible that married couples who did not have a home of their own began to live in the households of their siblings rather than their parents. The fact that parents no longer lived with their children may be related to improving non-family support for the elderly allowing them to live in their own homes.<sup>54</sup>

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<sup>54</sup> An alternative explanation is that elderly needing care resided in the workhouse. In the case of Hathersage this does not appear to have been the case (see chapter 5).

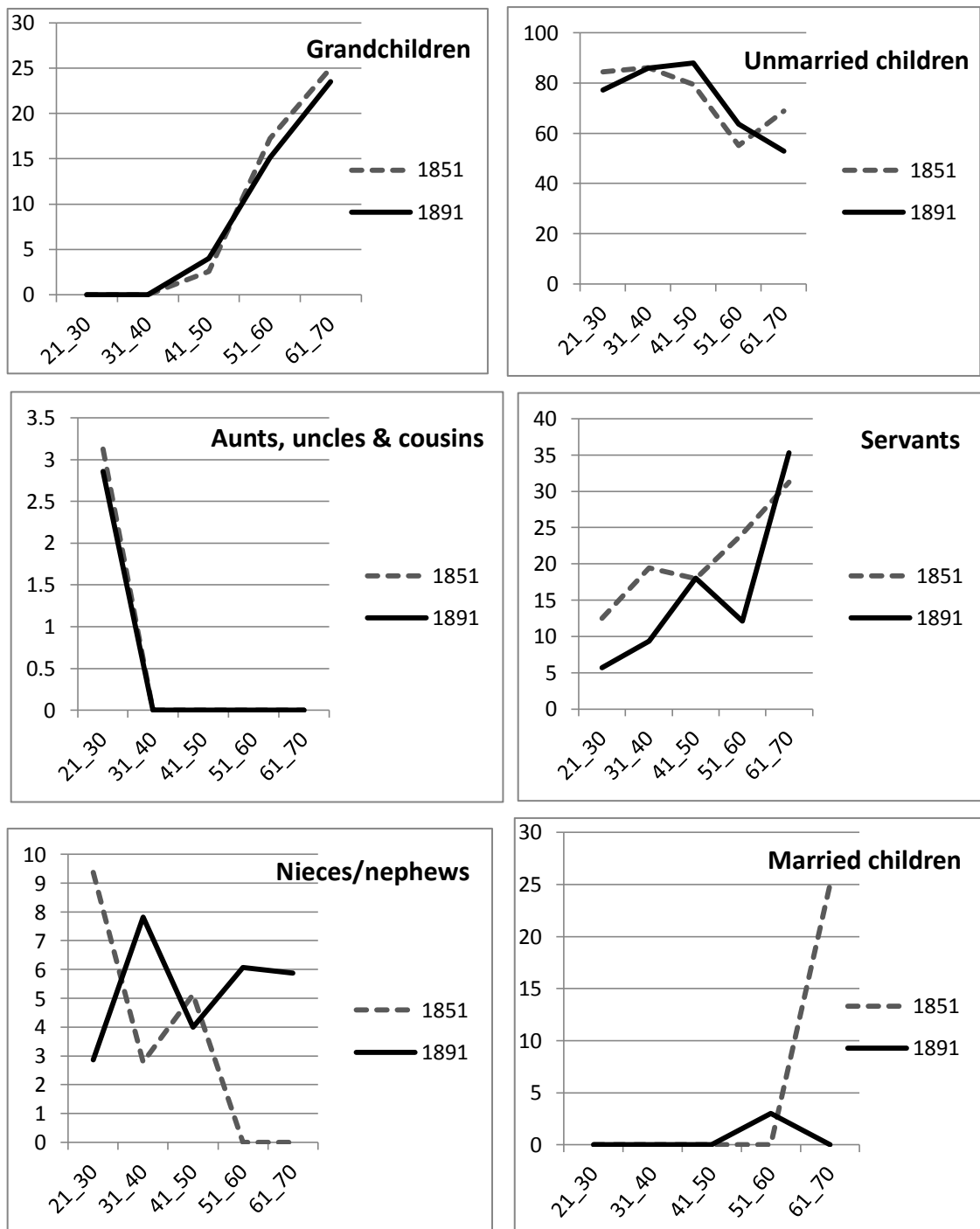
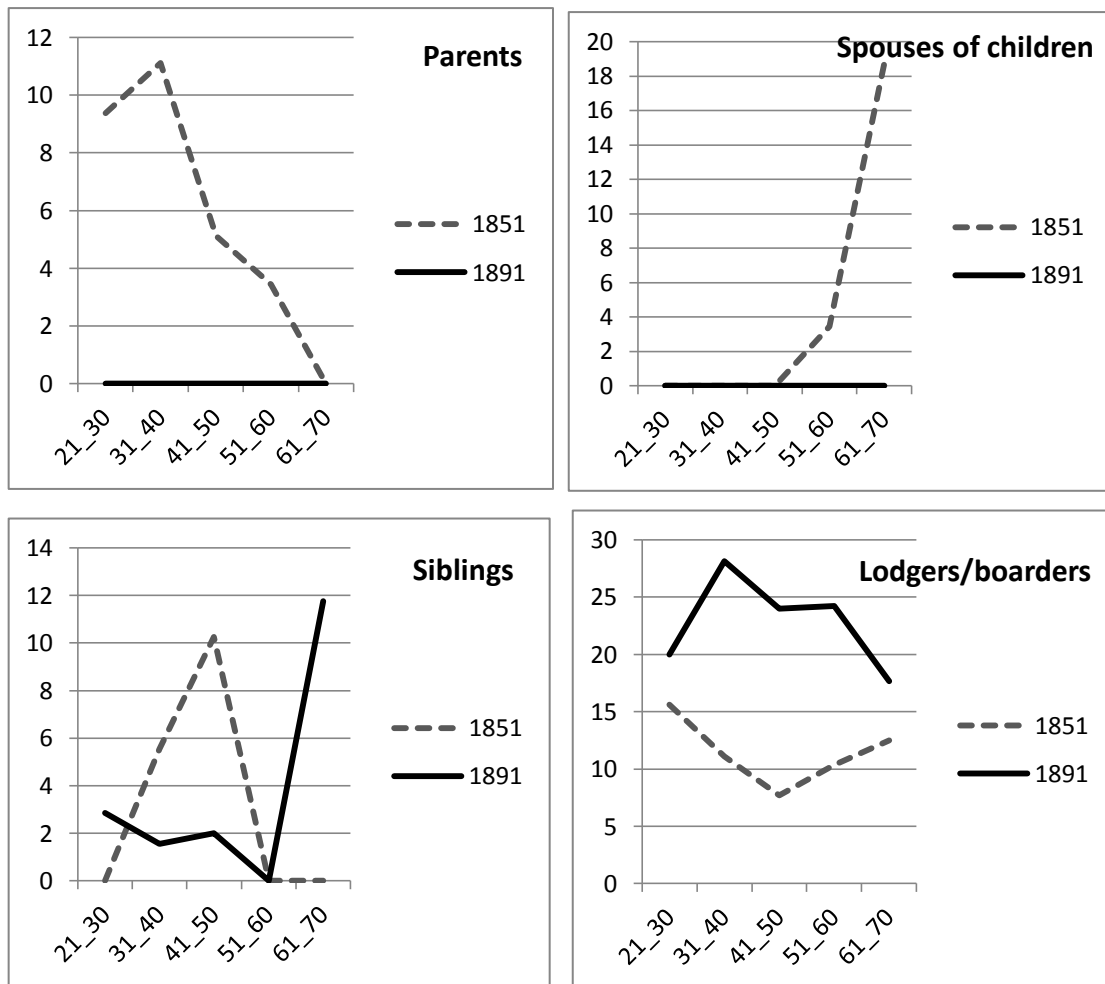


Figure 4.9 continued on following page.



**Figure 4.9.** The prevalence of categories of co-residence in households headed by married males in 1851 and 1891 as a function of the age of the head.

Note: The vertical axis is the proportion (per cent) of households including the specified category. The horizontal axis represents the age of the head in years.

Source: CEBs.

There is no evidence that any of these changes can be related to the health of the wire/needle industry though the building of the railway in the early 1890s surely stimulated provision of accommodation for lodgers and boarders. In 1851 lodgers were more prevalent at the beginning and end of the host's married life where it may be expected that the number of children in the household would be fewer than in middle years. Thus house space is likely to have been a prime contributor in the decision to take in a lodger. In 1891, heads of all ages were more likely to have a co-residing lodger than in 1851 and more so in the middle years of marriage. By this time, much of the needle industry had dwindled so it is possible that households were particularly eager to embrace the opportunity of a little more cash. Unfortunately a similar study at a



different English location has not been identified in the literature so that a comparison is not possible.<sup>55</sup>

No attempt has been made to correlate numbers of kin with socio-economic status, primarily because numbers are small. Goose did not find any relationship except for farmers who had higher numbers of kin and more servants than agricultural labourers.<sup>56</sup> Similar observations were made for Hathersage for reasons already evinced.

The broad view obtained by aggregation of all Hathersage families is that family structure remained remarkably constant throughout the 60 years 1851 to 1911, with the exception of a coincident reduction in the number of children and grandchildren which almost wholly accounted for the observed 12 per cent reduction of household size. This was despite the rise of factory-based metal working and its subsequent disappearance and an influx of middle class families from Sheffield. This compares with a 7.8 per cent decline nationally.

Grandchildren in complex households were the largest category of kin in 1871 as table 4.2 shows. In all only 20 out of 255 (7.8 per cent) households included one or more grandchildren. 10 of 55 households (18.2 per cent) headed by a widow contained grandchildren, but in only one of these were the married parents of the child also present. Households with married heads were less likely to include grandchildren; 10 out of 181 did so (5.5 per cent) and in 3 cases married parents were present. Thus widows were 3 times more likely to include grandchildren in their households. Coincidentally grandchildren living with one grandparent were also 3 times more likely to be without their parents. In all instances, where there were several grandchildren in the household they shared a common parent. In other words, grandchildren of different children were not members of the grandparent's household at the same time, at least at the time of the census.

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<sup>55</sup> The majority of other scholarly work on household composition and size was carried out in the 1970's and 1980's before easy access to census material for more than a 50 year span would have been available. Although often quoted this work has not been updated and expanded since, representing an opportunity for further study.

<sup>56</sup> Goose, *Population economy, Berkhamsted*, p. 73.

For 1871, an attempt was made to identify parents and their life histories to determine the possible cause of these children not being in a nuclear family. In two cases, where children had been born in Birmingham and Redditch, a positive identification of parents was not achieved. In the remainder it was possible to determine the circumstances which made the co-residency a practical option and these are tabulated in table 4.3. The most common identifiable cause of grandchildren co-residing with a grandparent(s) was illegitimacy. In some cases the mother was not traceable and in others was found in service away from Hathersage. The numbers are too small to allow meaningful analysis in Hathersage but Andrew Blaikie noted that in 1881 Dumfriesshire while 96 per cent of legitimate children lived with their parent(s), nearly 80 per cent of illegitimate children lived with their grandparent(s).<sup>57</sup> In most cases, grandchildren either continued in the grandparent's household or returned to the parent's home, typically after remarriage, and their subsequent life appeared to be similar to those who spent their childhoods in a nuclear family.

**Table 4.3.** Probable causes, or major contributing factors leading to grandchildren being included in the household of a grandparent.

Cause Category	Number	Comments
Illegitimate	7	Usually cared for in maternal parent's home but one child was in the paternal parent's home
Co-residing families	4	1 daughter, 3 sons and their spouses. Farmers.
Death of either parent	4	Circumstances complex in some cases
Temporary family stress	2	Large families, housing /financial stress
Marital break-up	1	Both parents living independently
Unidentified	2	Cause not discernible, parents not identified
Total	20	

## Marriage in Nineteenth-century Hathersage

In England before 1850, and probably Western Europe as a whole, a first marriage was contracted relatively late in life, around 27 or 28 for men and a couple of years earlier for women. This state of affairs pertained up until the middle nineteenth century and

<sup>57</sup> Blaikie, A., 'A kind of loving: grandparents and the rural economy of north-east Scotland, 1750-1900', *Scottish Economic and Social History*, 14 (1994), pp. 54-55.

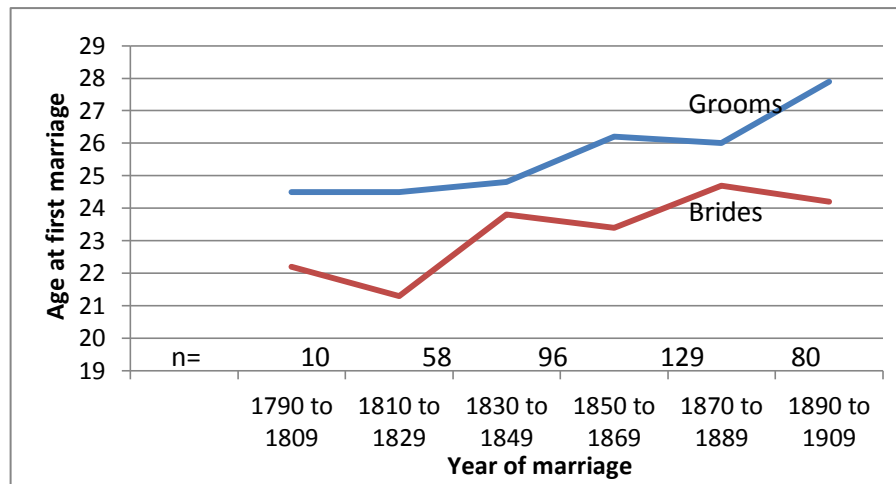
for several centuries before.<sup>58</sup> Laslett, on the other hand suggested that marriage age was actually falling for the hundred years prior to 1850.<sup>59</sup> Crafts made calculations for the age at marriage for women in 1861 for all English counties and concluded that for Derbyshire the mean was 24.0 years and for other counties ranged from 23.0 to 25.8 years.<sup>60</sup> However calculated, these average figures are likely to mask considerable local variations, as the decision to marry is complex. It is these causal factors which are of most interest and tell us more about the community but which are virtually impossible to determine. For Hathersage, 403 first marriages between 1790 and 1909 were analysed where the age of both bride and groom were calculated from several sources rather than just an age reported in the marriage register. Using 20 year periods, a progressive rise in the groom's age was observed as portrayed in figure 4.10. Females were on average 2.3 years younger, though the range was wide; from a groom being 41 years older than his bride to one being 24 years younger. The rate of increase in the average bride's age was more erratic than that of grooms. For the period around 1861 the mean age of the woman at marriage was close to Crafts' estimate. The marriages included in figure 4.10 are a heterogeneous sample; only 20 per cent of couples were both born in Hathersage and in a further 23 per cent one party was a native. It is unlikely therefore, that factors intrinsic to Hathersage were important in producing this increase in marriage age. Further, many of the marriages were not solemnized in Hathersage so that further analysis would result in sub-group numbers being too small to yield significant results. While it is clear that first marriage age of men was rising significantly during the nineteenth century, it would be rash to speculate as to the reasons while it is reasonable to assume that the observation was not confined to Hathersage, or even Derbyshire.

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<sup>58</sup> Gaskin, A., 'Age at first marriage in Europe before 1850', *Journal of Family History*, 3 (1978), pp. 23-33, Goody, J., *The Development of the Family and Marriage in Europe* (Cambridge, 1983), p. 129, Wrigley, E.A., Davies, R., Oeppen, J. and Schofield, R., *English Population History from Family Reconstitution, 1580-1837* (Cambridge, 1997), pp. 166-171.

<sup>59</sup> Laslett, *The World We Have Lost*, p. 161. (Figure 2).

<sup>60</sup> Crafts, N., 'Average age at first marriage for women in mid-nineteenth-century England and Wales: a cross-section study', *Population Studies*, 32 (1978), pp. 21-5.



**Figure 4.10.** Age at first marriage for 403 marriages from 1790 to 1909 of Hathersage inhabitants.<sup>61</sup>

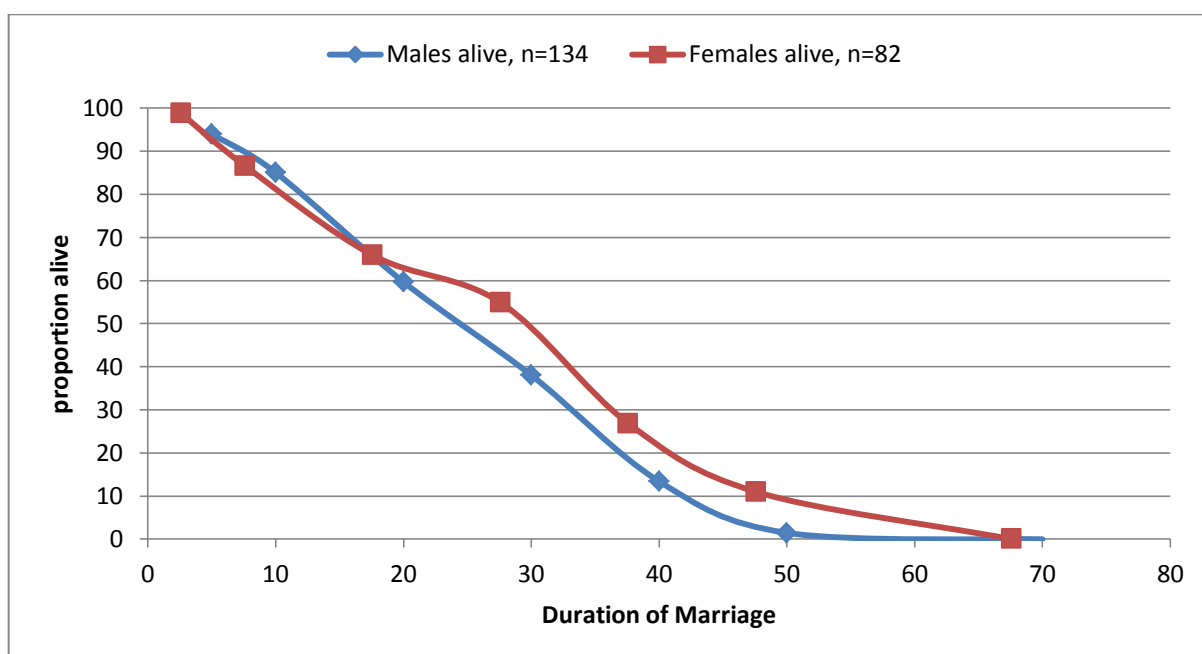
The main demographic effect of a rising marriage age is a reduction in family size as observed earlier. This is partly explained by the decreasing female fertility with age, manifest by increasing birth intervals, and partly due to the shortening of the duration of marriage, assuming a static life expectancy. Marriage may be terminated by male or female partner. It might be expected that there may be an excess of early female deaths associated with childbirth, especially the first, and that male deaths might be dominant in later years, due to occupational morbidity and longer life expectancy of women.<sup>62</sup> Using 216 marriages initiated between 1790 and 1910 which had been terminated by death before 1910, survival curves for males and females are plotted in figure 4.11. The female curve has been shifted 2.4 years to the left to correct for the fact that males were on average 2.4 years older than their brides. The curves show that in the early years of marriage, up to 18 years, it was only marginally more likely that the wife died before her spouse.<sup>63</sup> After 20 years of marriage the male partner was more likely to die first.

<sup>61</sup> The marriage may not have taken place in Hathersage and the parties may have originated elsewhere but in all cases both parties were part of the community and their birth and marriage dates were reliably documented.

<sup>62</sup> Superficially, using 'duration of marriage' as a denominator is equivalent to 'length of life'. However, it is subtly different in that the population is limited to those who actually marry, and for most couples, includes the reproductive process.

<sup>63</sup> This is expected as 216 marriages might yield between 600 and 800 children. Between 1856 and 1860, for example, maternal mortality was 4.6 per 1000 births so that no more than 4 of the marriages represented in figure 4.11 would be anticipated to involve a maternal death. See: Schofield, R., 'Did the mothers really die? Three centuries of maternal mortality in the world

The importance of losing a husband to the family unit, especially in economic terms, has been emphasised by Laslett.<sup>64</sup> Metal grinding was a high-risk occupation associated with severe and life-shortening disease of the lungs. Duration of marriage is a less appropriate measure of mortality than life-span as not all metal workers were married.<sup>65</sup> It is perhaps interesting to note that needle-workers (other than grinders), wire-drawers and stone workers might expect 25 or 26 years of marriage and grinders a little less (21 years) but all significantly less than the average of 34 years expected by agricultural workers of all sorts. The owners and managers of the needle works fared little better at 28 years, though their number in this series was small at seven. This observation can be explained by the fact that these managers were from a similar background to their employees, and were almost certainly ‘hands-on’, especially in their younger days.



**Figure 4.11.** Average survival of an intact marriage in nineteenth-century Hathersage.

This chapter first described how it was possible to estimate the number of men involved in wire-drawing and needle-making using CEBs and baptism registers, in the absence of

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we have lost’ in Bonfield, L., Smith, R.M. and Wrightson, K. (eds), *The World We Have Gained* (Oxford, 1986), pp. 231-260.

<sup>64</sup> Laslett, *The World We Have Lost*, p. 115-116.

<sup>65</sup> See chapter 6 for further discussion of ‘Grinders Disease’.

contemporary workforce figures. Figure 4.1 suggests that the industry grew from a low base between 1830 and approximately 1871 and had undergone a rapid slump by 1881 from when it entered a phase of slower, yet progressive decay. As well as the fortunes of metal-working, the opening of the railway in 1894 was expected to have an effect upon demographic characteristics.

A modest increase in population was noted up to 1871 followed by a definite decline: events which can be associated with the rise and fall of the metal industry. The temporary increase in the 1880s was associated with railway construction and a further rise as the twentieth century dawned with the new transport link with Sheffield. The change in the age profile of the community was modest but suggestive of outmigration of young families. Birth origins of the inhabitants were remarkably constant until 1871, some 60 percent being native to Hathersage. With the decline of needle-making this proportion fell though it was not until the railway opened that an influx of Sheffield people became significant.

Mean household size increased up to 1871, decreased over the next 10 years only to recover before experiencing a sustained fall from 1891. It is tempting to suggest that the reduction after 1871 was associated with slump in needle-making but there is also a similarity to the national trend. Reduction of fertility, which was progressive, appeared to be the main contributor with the exception that railway construction was associated with a significant but temporary rise in the number of lodgers. Marriage age rose throughout the eighteenth century in Hathersage, as it did in England as a whole and did not appear to be influenced by the industrial activities in the township.

# Chapter 5. The Elderly, Women and Children of Hathersage

The relationship between defined groups of people within a community may reveal stresses within that community. In this chapter three particular groups, children, women and the elderly who through history have been particularly sensitive to socio-economic changes within society are studied. Changes in behaviour are sought that might be associated with industrialization and de-industrialization. Questions are asked of the demographic data in an attempt to deepen the understanding of the Hathersage community throughout the nineteenth century.

## The Elderly

The elderly as a distinct group became the subject of considerable attention in the last twenty or thirty years, primarily because of the rapidly increasing proportion of those aged 65 or over in modern Britain. This was of course, the delayed effect of declining fertility and increasing life expectancy that took hold in the early twentieth century.<sup>1</sup> Major contributors to the debate have been Pat Thane, David Kertzer, Margaret Pelling and Richard Smith.<sup>2</sup> The majority of print space is given to the early modern period and the twentieth century, the nineteenth century almost being dismissed as a transitionary period. We have already seen that parents were included in 14-17 percent of households containing non-conjugal kin. Elderly parents, particularly if widowed, often represent the elderly in *care receiving* mode while the presence of grandchildren in the household may indicate elderly *providing care*. Anderson found in Preston that

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<sup>1</sup> Fertility had varied between 3.6 and 6.2 births per mother between 1541 and 1871 with subsequent variations in the proportion of elderly. Indeed the first two-thirds of the nineteenth century represented a low in the elderly component. The high ratio of retired to working experienced today is unprecedented, however. (Smith, R., 'The structured dependency of the elderly as a recent development: some sceptical historical thoughts', *Ageing and Society*, 4 (1984), pp. 413-4.)

<sup>2</sup> Thane, P., *Old Age in English History: Past Experiences, Present Issues* (2000, Oxford, 2005), Kertzer, D. and Laslett, P. (eds), *Ageing in the Past: Demography, Society and Old Age* (London, 1995), Pelling, M. and Smith, R. (eds), *Life, Death and the Elderly* (London, 1991).

grandmothers were more prevalent in households where mothers worked in a factory, compared with where mothers did not work. This suggested a conscious recruitment of a grandmother for a role in childcare.<sup>3</sup> The truth is that the historian often cannot evaluate the balance between giving and receiving in many relationships, only that there was some mutual benefit. Old people specifically benefit from the presence of children.<sup>4</sup> The distinction between care giving and receiving is related to whether the parent joined the family of a child, or whether the child even if married, never left the parental home.

Before examining the Hathersage data it is necessary to lay down some definitions and consider how community-based welfare of the elderly functioned in the nineteenth century. An official retirement age was not acknowledged until 1908 when a non-contributory state pension was introduced, payable from the age of 70 years. Indeed the term 'retirement' was seldom used in official documents, being uncommon in the 1851 census for example, where it was predominantly applied to the professional classes.<sup>5</sup> In the 1851 census for Hathersage a single entry for a 'retired excise officer' is to be found. 'Retirement' was first applied as a separate category in the 1881 census.<sup>6</sup> Subsequently the term became more widely employed such that in the 1911 census 14 individuals were so described, ranging from a road labourer to a works owner/manager, and not all were over the age of 65 years. This suggests that even in 1911 the adjective was more to do with occupation than age. Prior to 1908, the age of retirement was determined by financial substance, health and inclination of the individual. Hathersage farmers, particularly, worked well into old age, a characteristic of farmers noted by Thane.<sup>7</sup> In order to facilitate quantitative comparison an arbitrary age is required and 65 years appeared to be appropriate, being that generally used in demographic indices

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<sup>3</sup> Anderson, M., *Family Structure in Nineteenth-century Lancashire* (Cambridge, 1971), p. 142.

<sup>4</sup> 'Old People's Home for Four-Year-Olds', Channel 4 Documentary, BBC, 1 August 2017.

<sup>5</sup> Thomson, D., 'Age reporting by the elderly and the nineteenth century census', *LPS*, 25 (1980), p. 21.

<sup>6</sup> Thane, *Old Age*, p. 279.

<sup>7</sup> Thane, P., 'The history of the provision for the elderly' in Jerome, D. (ed), *Ageing in Modern Society* (London, 1983), p. 191.



of 'aged dependency ratio' and 'ageing index'.<sup>8</sup> In the following cross-sectional analysis of the elderly of Hathersage, the age reproduced in the CEBs has been taken as the actual age defined as those, either male or female, reporting an age of 65 years or above.<sup>9</sup> Scepticism of recorded ages is widespread: the elderly in particular have been accused of ignorance, poor memory and general unreliability. Such aspersions were declared unfounded by David Thomson whose investigations found that in general over 80 percent of recorded ages were consistent within a year over a period of 30 years, and that in general discrepancies were not more common in the elderly.<sup>10</sup> Tillott makes specific mention of Hathersage where he could identify a third of the 1851 population in the following census. There, 60 percent the ages corresponded exactly and a further 28 percent were only a year adrift.<sup>11</sup>

Accepting that many able-bodied men in the nineteenth century worked beyond the age of 65 years and in the absence of any documentary evidence of formal retirement, an occupation recorded in the CEBs has been taken to signifying some degree of gainful employment.<sup>12</sup> The receipt of out-door poor relief is occasionally recorded in the CEBs where 'pauper' or 'parish pauper' appears in the occupation column, but absence cannot be taken to imply that no relief was given. Individuals not in receipt of relief by virtue of having a private income are usually described as 'annuitants', 'landed-proprietors', 'private means' or another similar term. A further theoretical uncertainty arises in assessing the households of the elderly concerning the identification of servants, in that

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<sup>8</sup> Rowland, D., *Demographic Methods and Concepts* (2003, Oxford, 2006), p. 86. Government agencies often differentiate between males and females, especially in the twentieth century, using the earlier age of 60 years for women despite their longer life expectancy on reaching 60 years. For a detailed discussion see: Roebuck, J., 'When does old age begin? The evolution of the English definition', *Journal of Social History*, 12 (1979), pp. 416-28.

<sup>9</sup> That is to say that an individual's age has not been checked against baptism registers, except where family histories have been quoted in the text.

<sup>10</sup> Thomson, 'Age reporting', pp. 18-19.

<sup>11</sup> Tillott, P., 'Sources of inaccuracy in the 1851 and 1861 censuses' in Wrigley, E.A. (ed.) *Nineteenth-century Society* (Cambridge 1972), pp. 107-8.

<sup>12</sup> It is possible that people hung on to an occupational description while not being very active in their employment or receiving much reward. See, for example, Thane, *Old Age*, pp. 280-1.

kin were often functionally servants though they have been recorded in the census as 'niece', for example.<sup>13</sup>

In the absence of a system of state pensions, individuals who could not work and had no accumulated wealth, were reliant upon poor relief provided by the parish. The wording of the Poor Law Act of 1601 implied that parents and grandparents were responsible, subject to their ability, for the maintenance of their needy children and grandchildren. Children also had an obligation to their parents but not to their grandparents.<sup>14</sup> The Poor Law Act fell short of insisting that the children, whether married or not, should take their elderly parents into their homes. Although such stipulations were recorded it was 'decidedly not a universal pattern'.<sup>15</sup> Thane suggests that to do so would have been an act performed out of affection, duty or charity though clearly this is conjecture.<sup>16</sup> The 1601 Act, with significant modifications in 1834, remained in force until its repeal in 1948, with additional amendments. Throughout, reconciling poverty in the elderly population was dependent upon the local operation of the law.<sup>17</sup> For the early modern period it is generally assumed that as infirmity progressed, the elderly first looked to

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<sup>13</sup> Anderson, M., 'Mis-specification of servant occupations in the 1851 census: a problem revisited', *LPS*, 60 (1998), pp. 58-64. See also: Cooper, D. and Moira Donald, M., 'Households and 'hidden' kin in early nineteenth-century England: four case studies in suburban Exeter, 1821-1861' *Continuity and Change*, 10 (1995), pp 257-278.

<sup>14</sup> Thomson, D., 'The welfare of the elderly in the past', in Pelling, M. and Smith, R. (eds), *Life, Death and the Elderly* (London, 1991), p. 195-6.

<sup>15</sup> Laslett, P., *Family Life and Illicit Love in Earlier Generations* (Cambridge, 1977), p.177.

<sup>16</sup> Thane, P., *Old Age in English History: Past Experiences, Present Issues* (2000, Oxford, 2005), p 122.

<sup>17</sup> The responsibility for poor relief had previously rested with the parish but from 1834 a Poor Law Commission operated and in 1848 this became the Poor Law Board. The 1834 Act also set up regional Poor Law Unions with elected Boards of Guardians which covered a variable number of parishes. The effect was to reduce the ability of the parish overseer to make his own decisions which in individual cases may have prevented the timely and efficient use of resources, the potential benefit of which required local knowledge and discretion of the overseer. However, local decisions continued to be made and this may contribute to the wide variations in the indoor /outdoor relief ratios between different Unions, see for example: Hunter, D., 'Making ends meet: household survival strategies in the East Riding in the mid-nineteenth century', *The Local Historian*, 40 (2010), pp.20-28. See also: Snell, K.D.M., *Parish and Belonging: Community, Identity and Welfare in England and Wales, 1700-1950* (Cambridge, 2006), pp. 296-306.

their own resources, then to their kin and only in the last resort applied for community relief via the poor law.<sup>18</sup> During the eighteenth century, per capita expenditure on poor relief increased by a factor of 6 and at the same time charitable giving expanded, especially in the towns.<sup>19</sup> Lawrence Stone believed that at the end of the eighteenth century, old people began to lose respect and that the increasing numbers of almshouses and the rise of poor relief were symptomatic of a declining willingness of children to look after their parents.<sup>20</sup> The building of almshouses was stimulated by a variety of motives, not all entirely altruistic. Religious organizations, such as the Catholic 'Sisters of Nazareth', provided an alternative to the workhouse for both Protestants and Catholics and by the end of the nineteenth century, there were 36 such houses throughout the country.<sup>21</sup> The nineteenth century also saw the growth of friendly societies like the Manchester Unity of Oddfellows which had spread into Yorkshire by 1820. Indeed, Martin Gorsky in his study of Parliamentary Answers and Returns concluded that Derbyshire had the second highest Friendly Society membership by county with an estimated 67 percent of families covered in 1803 (based on 1801 population figures).<sup>22</sup> The density of Friendly Societies was found to be greatest in industrial and mining areas. On several occasions prior to 1834, Parliament had discussed the possibility of compelling workers to contribute to such societies as a means of sparing the parish system but that never happened.<sup>23</sup> These organisations flourished after the 1834 Poor Law Amendment Act, perhaps in anticipation of hard times to come. Typically, societies paid sickness benefit and a death grant of between £7 and £10, which more than covered the cost of a decent funeral, estimated at a little

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<sup>18</sup> Thomson, 'Welfare of the elderly', p. 178.

<sup>19</sup> Goose, N. 'The English Almshouse and the mixed economy of welfare: medieval to modern', *The Local Historian*, 40 (2010), p. 11.

<sup>20</sup> Stone, L. *The Family, Sex and Marriage in England, 1500-1800* (London, 1977), pp. 59-60.

<sup>21</sup> Mangion, C., 'Faith, philanthropy and the aged poor in nineteenth-century England and Wales', *European Review of History*, 19 (2012), pp. 515-530.

<sup>22</sup> Gorsky, M., 'The growth and distribution of English Friendly Societies in the early nineteenth century', *Economic History Review*, 51 (1998), pp. 494-5.

<sup>23</sup> Hennock, E., *The Origin of the Welfare State in England and Germany, 1850-1914: Social Policies Compared* (Cambridge, 2007), p. 144-5.

under £6 in 1870.<sup>24</sup> Friendly societies never replaced or even compared with parish relief in terms of coverage. It was calculated that 12.5 percent of workers contributed in 1872, rising to 22 percent in 1911.<sup>25</sup>

In general, the nineteenth-century decline in domestic, as opposed to factory, production reduced opportunities for older people to contribute to their own upkeep. In some instances, this resulted in a loss of autonomy. At the same time, there was a modest increase in life expectancy, which for some might lengthen the time without children (empty nest). Additionally, manufacturing processes became more skilled as industrialization progressed. Factory owners possibly viewed older people as less adept at mastering new machines so vacancies might be filled by younger, possibly more adaptable and educated people.<sup>26</sup> Even in agriculture the number of unskilled jobs declined.<sup>27</sup> (Counce, however, reflects that the increased skills applied more to the construction of farm machinery than work on the land.<sup>28</sup>) Movement of production into the factory, increased mechanisation and growing skill requirements might have resulted in the elderly losing status in society.<sup>29</sup> Laslett suggests that the concept of respect for the elderly, at all periods, may be more manifest in literature and poetry than in real life.<sup>30</sup> He also points out that the wealthy were more able to command respect than the poor; being elderly did not always equate to destitution.

The nineteenth century was a period of changing fortunes and attitudes and it is appropriate to summarise the changes clearly described by David Thomson.<sup>31</sup> The

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<sup>24</sup> Hennock, *Origin of Welfare*, p. 170.

<sup>25</sup> *Ibid*, p. 172.

<sup>26</sup> Thane, *Old Age in English History*, pp. 275-6.

<sup>27</sup> Quadagno, *Ageing in Early Industrial Society*, pp. 3-25.

<sup>28</sup> Counce, S., 'Mechanisation and society in English agriculture: the experience of the north-east, 1850-1914', *Rural History*, 17 (2006), pp. 23-45.

<sup>29</sup> Quadagno, *Ageing in Early Industrial Society*, p. 11.

<sup>30</sup> Laslett, P., *A Fresh Map of Life: The Emergence of the Third Age* (London, 1989), pp. 135-6.

<sup>31</sup> Thomson, D., "'I am not my father's keeper': families and the elderly in nineteenth-century England", *Law and History Review*, 2 (1984), pp. 265-86. Thomson's thesis has received some

wages of manual labourers doubled between the 1850s and 1905 and at the same time the total number receiving poor relief in England and Wales fell from 57.4/1000 in 1850 to 26.1/1000 in 1905.<sup>32</sup> Thomson's analysis of Ampthill in Bedfordshire suggests that during the first three quarters of the nineteenth century, most elderly people (over the age of 70 years in his study) received outdoor relief virtually automatically. He found that once granted, payments were rarely withdrawn and were made irrespective of the living arrangements, for medicines, special diets and nursing care. Moreover, in some cases the value of that relief was some 70 to 90 percent of an average agricultural wage. Legal obligations of the family to contribute towards the support of elderly people under the 1601 Poor Law Statute only extended to monetary contributions and were effectively confined to unmarried sons and daughters. Where a dispute arose, it was usually the responsibility of the Poor Law officials to prove that the potential donor had sufficient means to make such payments. Unsurprisingly, such petitions were very rarely granted, sums were minimal and magistrates did not pursue defaulters energetically.

The Poor Law Amendment Act of 1834 opened a debate regarding the provision of outdoor relief and there was a significant downward pressure on annual expenditure, though initially the elderly may often have been exempt from the effects. From the 1860s onwards, the Local Government Board and the 'Crusade Against Out-relief' had a significant effect on Poor Law Union contributions effecting a 25 percent decrease in

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strong criticism, notably by Hunt (Hunt, E., 'Paupers and pensioners: past and present', *Ageing and Society*, 9 (1989), pp. 407-430.) though there has been some support from Snell and Millar using a different group of recipients and a different locality. (Snell, K.D.M. and Millar, J., 'Lone parent families and the welfare state: past and present', *Continuity and Change*, 2 (1987), pp. 387-422.). When applied to the working class more substantive support for Thomson's assertions, using official Poor Law Union returns, are to be found in: Boyer, G. and Schmidle, T., 'Poverty among the elderly in late Victorian England', *Economic History Review*, 62 (2009), p. 253. This is not the place to enter into a detailed discussion on the validity of Thomson's work but merely to highlight the possibility that for the ordinary working family, old age did not automatically equate to poverty. The controversy vividly highlights the dangers of extrapolating locality studies to national or regional levels and Thomson points to marked regional and occupational variations. To some extent each locality has the potential to deviate widely from the mean while evolving in the milieu of national, regional and local government, not to mention the influence of individuals and geography.

<sup>32</sup> Williams, K., *From Pauperism to Poverty* (London, 1981), Table 4.5, pp. 158-163. This figure varied across the country, being greater in London and urban areas and generally lower in rural areas.

the 1870s and a further 11 percent fall in the 1880s.<sup>33</sup> Part of the aim of the campaign was to re-establish the moral concept of family responsibility for the elderly. This resulted in a pruning of pension lists and a rapid rise in the number of prosecutions of both men and women for failing to support their elderly relatives. Poor Law Unions were effectively able to write their own rules of relief and frequently used the threat of removal to a workhouse as a means of pressurising relatives to contribute. The term 'moral liability' became common currency and extended to both relations and 'friends'. The Cambridge Union illustrates the efficacy of this strategy where at the end of the nineteenth century 'Poor Law pensions were paid in Cambridge to less than one-quarter of the proportion of elderly persons that they had been paid to in the 1870's and much of the reduced public expenditure was now recouped from relatives.'<sup>34</sup>

In practice, the relationship between the elderly and the Poor Law altered significantly in the latter half of the nineteenth century. If these changes had an effect on social behaviour, one might hope to observe some modification in the household structure in Hathersage between 1851 and 1911.

Having reviewed the literature in general terms we now turn to the situation in Hathersage which was part of the Bakewell Poor Law Union. This included 50 parishes in the White Peak area. The Bakewell workhouse was opened in 1841 with a capacity of 200 inmates. In addition, there were two almshouses, one in Bakewell and one in Cromford.<sup>35</sup> In 1851 the Union had 128 residents of whom 28 were over the age of 60 years. By 1901 there were 161 residents, 75 being over 60 years of age.<sup>36</sup> Leivers also tells us that in 1851, 8.4 percent (9.3 percent in 1901) of the population covered by the Bakewell Union were over the age of 60 years and that 1.1 percent (2.4 percent in 1901) of these were accommodated within the workhouse or in almshouses.<sup>37</sup> In Hathersage,

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<sup>33</sup> Boyer and Schmidle, *Poverty among elderly* p. 253. Also see the account in Hurren, E, *Protesting about Pauperism* (Woodbridge, 2007).

<sup>34</sup> Thomson, 'Father's keeper', p. 282.

<sup>35</sup> Leivers, C., 'Housing the elderly in nineteenth-century Derbyshire: a comparison of almshouse and workhouse provision', *LPS*, 83 (2009), p. 57.

<sup>36</sup> *Ibid*, p. 59.

<sup>37</sup> *Ibid*, p. 62.

the proportion over the age of 60 years was slightly less than the Bakewell Union average, so it is neither unexpected nor significant that no Hathersage elderly were registered in the workhouse at the time of the 1851 or 1911 censuses.<sup>38</sup>

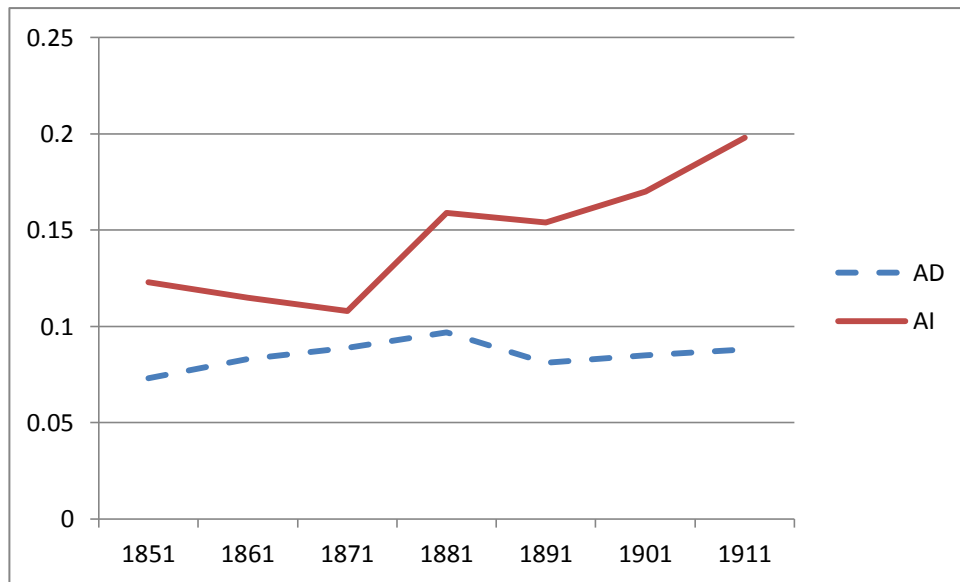
The proportion of those aged 65 years and over living in Hathersage increased gradually from 4.4 percent in 1851 to 5.8 percent in 1911. The figures for England were 4.6 percent in 1850 and 4.7 percent in 1900. Nationally, the increasing proportion of elderly resulted from rising longevity and falling fertility in turn partly following an increasing marriage age. However, the full effects did not become apparent until the second decade of the twentieth century.<sup>39</sup> In Hathersage, the proportion of elderly rose ahead of the national rate because of the outmigration of families as the wire mills closed and with the later influx of mature, child-poor families from Sheffield described in chapter 7.

Trends in the aged dependency ratio and ageing index are plotted in figure 5.1. This clearly demonstrates that while the community was becoming older during the latter part of the nineteenth century the potential dependency load on the community changed little. Also, the average age of Hathersage residents over the age of 65 years was virtually the same in 1911 as in 1851 at just over 72 years. The sharp rise in the ageing index from 1871 to 1881 may have resulted from accelerated outmigration of young families following the decline of the needle industry.

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<sup>38</sup> Unfortunately, nothing remains of the Bakewell Union registers and correspondence except for a series of minute books which concern themselves with housekeeping, staff and financial matters, appointment and working conditions of staff and arrangements for celebratory dinners for the guardians. Mention of inmates is virtually absent. D.R.O. D521/W/1/12-28. For an over-view of almshouses see: Goose, 'The English almshouse', pp. 3-19.

<sup>39</sup> Quadagno, *Ageing*, pp. 29-32.



**Figure 5.1.** Ageing index (AI) and aged dependency ratio (AD) for Hathersage, 1851-1911.<sup>40</sup>  
Source: CEBs for Hathersage and Outseats, 1851-1911.

As previously mentioned, determining the actual age of retirement is problematic. The accepted view is that men worked if they were able, this being especially true in agricultural occupations.<sup>41</sup> The Hathersage CEBs indicate that 89 percent of men over the age of 65 years and 24 percent of women were gainfully employed in 1851, falling to 76 percent and 12 percent respectively 1911.<sup>42</sup> These figures disguise the fact that during the 60 years from 1851 there had been virtually no change in the proportion of those declaring employment in the over 65 year olds, as presented in figure 5.2. An attribute of employment was virtually never associated with married women over the age of 65, particularly towards the end of the nineteenth century as has been observed previously.<sup>43</sup> On average 86 percent of married males worked and this slightly reduced into the twentieth century, as did the proportion of working widows who averaged 29 percent. The only meaningful change occurred in widowed males who

<sup>40</sup> AI=number of 65+ year olds/number of 0-15 year old and reflects the age structure of a community. AD=number of 65+ year olds/number of 15-64 year olds and is a ratio of the elderly to those of working age in a community.

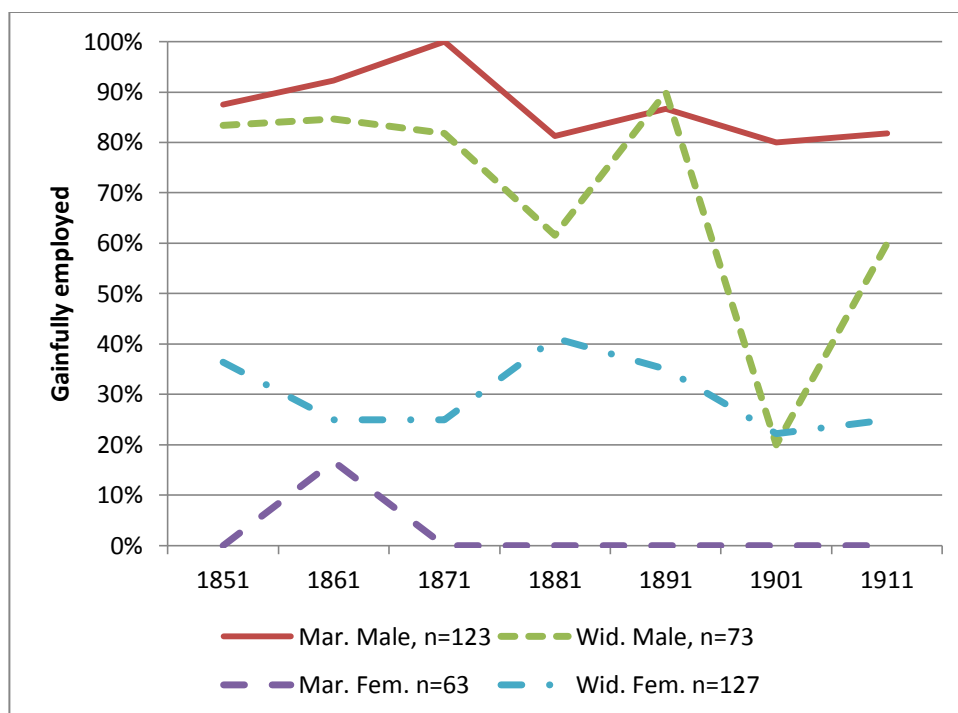
<sup>41</sup> Thane, *Old Age*, pp. 273-5.

<sup>42</sup> Some historian believe that women's occupations were hopelessly inaccurately and under-reported in the censuses: Hudson, P., *History by Numbers* (London, 2000), p. 14.

<sup>43</sup> Quadagno, *Ageing*, p. 63.



significantly worked less in the early twentieth century. These figures are similar to national figures quoted by Paul Johnson for 1881, when 73 percent of male and 18 percent of female elderly were in paid employment.<sup>44</sup>



**Figure 5.2.** Proportion of over 65 year olds engaged in gainful employment, Hathersage, 1851-1911.

Sonya Rose has studied the villages of Arnold and Brinsley in Nottinghamshire for the years 1851 and 1881 and obtained differing results from the two locations. In Arnold the percentage of elderly women working, both married and widowed, increased while in Brinsley fewer widowed women worked in 1881 than in 1851.<sup>45</sup> In 1881 Arnold, for example, nearly 65 percent of female widows were employed while in Brinsley only 20 percent were so described. While variations between townships reflect local conditions, principally the availability of suitable work and the attitudes of the poor law administrators, variations appear larger when such small numbers are involved. In Hathersage, the number of widowed women varied between 11 and 28 in each census and in the Nottingham villages between 2 and 13.

<sup>44</sup> Johnson, P., 'Old age and ageing in Britain', *Refresh*, 17 (1993), pp. 3-8.

<sup>45</sup> Rose, S., 'Widowhood and poverty in nineteenth-century Nottinghamshire', in Henderson, J. and Wall, R., *Poor Women and Children in the European Past* (London, 1994), pp. 278-9.

From these figures it would be reasonable to conclude that a high proportion of the elderly were not in need of physical or financial support, though it is impossible to assess what proportion were working out of sheer necessity or as a means of supplementing welfare, keeping active or pleasure. In 1851 only three males appeared not to have been employed. John Hodgson was the eldest working farmer at 87. In 1911 there were several males without occupational attributes (three aged 66 years) and the oldest employed man was Edward Winterbottom, an 81 year old road labourer. Edward had previously worked as an agricultural labourer, so he was not an example of a man who had lost his place in a skilled trade and gravitated to unskilled and low status casual employment. Life-cycle deskilling has been recognised since at least the end of the nineteenth century and examples of it occurred in Hathersage.<sup>46</sup>

It has been pointed out by Richard Wall that the elderly most likely obtained their daily subsistence from several sources. He also acknowledged that it is virtually impossible to determine these sources and the amounts involved.<sup>47</sup> Contributions would include small amounts of money or food from kin and neighbours, parish relief and employment, often irregular and part-time. It is generally agreed that reward from employment decreased in old age and was rarely sufficient on its own. This fact renders reliance on male wages as a proxy for living standards problematical.<sup>48</sup> Occupations recorded in CEBs give no indication as to the nature of the work nor the time spent in that employment. Indeed in some cases it is suspected that it amounted to virtually nothing, pride motivating the proffering of a past employment description.<sup>49</sup>

Household structure using a random sample from the 1851 National Census was analysed by Anderson. The elderly as a group were dismissed in the penultimate paragraph and only limited data can be drawn from that for comparison with the

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<sup>46</sup> Spender, J., *The State and Pensions in Old Age* (1892), quoted in Boyer and Schmidle, 'Poverty among elderly', p. 256.

<sup>47</sup> Wall, R., 'Relationships between the generations in British families past and present' in Marsh, C. and Arber, S., *Families and Households: Divisions and Change* (Basingstoke, 1992), pp. 63-64.

<sup>48</sup> Horrell, S. and Humphries, J., 'Old questions, new data, and alternative perspectives: families' living standards in the industrial revolution', *Journal of Economic History*, 52 (1992), p. 850.

<sup>49</sup> Thane, *Old Age*, pp. 271-186.

Hathersage population presented in table 5.1.<sup>50</sup> The figures given by Anderson for the proportion of elderly living with one or more children includes those living with a spouse, and was 44.6 percent for men and 46 percent for women. The figures given in table 5.1 adopt a hierarchy of potential carers in order of closeness: spouse, own children, other relatives, unrelated (servants, boarders or landlord) and lastly, living alone. Individuals are grouped according to the highest degree of closeness to the co-inhabitant.<sup>51</sup> Hathersage in 1851 does not appear to be very different to Anderson's national sample except that a smaller proportion of elderly lived with unrelated people.

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<sup>50</sup> Anderson, M., 'Households, families and individuals: some preliminary results from the national sample from the 1851 census of Great Britain', *Continuity and Change*, 3 (1988), pp. 421-38.

<sup>51</sup> This was done as many households were mixed. Some contained three generations, usually parent(s), child(ren) and grandchild(ren) sometimes with additional boarders and servants. Jean Robin in her study of the elderly of Colyton used 10 different groups of household content though it is unclear how she categorised households containing children, other relatives and servants, for example. (Robin, J., 'Family care of the elderly in a nineteenth-century Devonshire parish', *Ageing and Society*, 4 (1984), p. 508.) Interestingly, she did not attempt to compare the living arrangements of elderly who were never married with those who were widowed and those with a spouse. This characteristic would seem to be of paramount relevance, but the number of groups and subgroups would then have resulted in an unmanageable number of possible combinations. Indeed, the exact make-up of the household is essentially idiosyncratic depending not only upon the needs and resources of the elderly but also upon those of each individual member. In order to simplify the problem, a hierarchy of potential carers has been used in table 5.1 but even this does not take into account the marital status of the elderly person being considered in that 'without a spouse' might be single or widowed. One could argue that for some living with a spouse is little better than living alone, especially if one partner was severely infirm. In modern times, it has been shown that elderly who remain living with their spouse remain physically and mentally healthier than those living alone.

**Table 5.1.** Co-residents of 65+ year olds in Hathersage, 1851 and 1911.

Living with:	1851				1911	
	Male		Female		Male	Female
	Hathersage	National Sample*	Hathersage	National Sample*	Hathersage	Hathersage
Spouse	58.3	56.9	31.3	30.8	67.3	35.0
Own children	16.7		43.8		13.5	28.3
Other relative	12.5		12.5		1.9	13.3
Unrelated (servant, border)	4.2	23.6	6.3	31.6	17.3	15.0
Alone	4.2	4.6	6.3	8.8	0	8.3
Undetermined			6.3			
Number of individuals	23	195	17	250	52	60

Note: Where possible comparison with the national sample taken from the 1851 census is made. Actual numbers are expressed as percentages but the numbers are provided as these are small in 1851.

Sources: CEBs 1851 and 1911 census for Hathersage and Outseats. \*National sample from Anderson, 'Households, families and individuals', p. 436.

Another way of looking at the household make-up over time is to divide the elderly according to gender and marital status and compare the components of their household. This does not provide any insight into dependency but at least tells us, in general terms, how living arrangements had changed between 1851 and 1911. This is presented in figure 5.3.<sup>52</sup>

The impression gained by Barry Reay in his study of rural Kentish villages was that between 45 and 56 percent of elderly lived with their children or other kin (1851-1881) and 28 to 37 percent lived with a spouse or alone.<sup>53</sup> Thomas Sokoll from his Essex studies of Ardleigh and Braintree, tells us that the elderly poor were more likely to live

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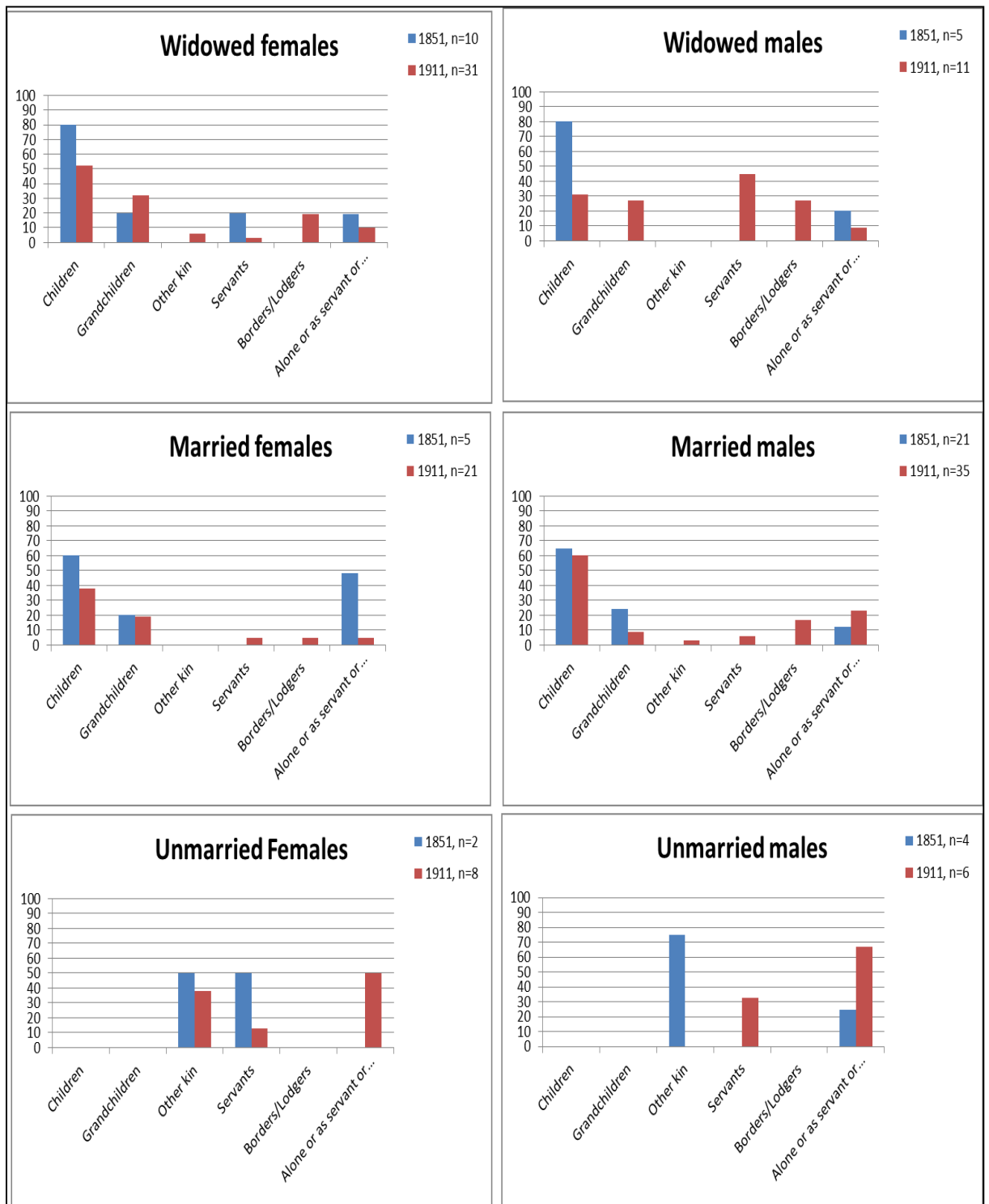
<sup>52</sup> As pointed out by Wright, in a household of elderly and children, one perhaps married with children and where the elderly person is nominally the head, there is no certainty that the headship means more than ownership of freehold or leasehold of the tenement. The head may be totally dependent upon one or more of the children. (Wright, S. J., 'The elderly and the bereaved in eighteenth-century Ludlow', in Pelling, M. and Smith, R. (eds), *Life, Death and the Elderly* (London, 1991), p. 124.

<sup>53</sup> Reay, *Microhistories*, p. 170.

in complex households and rarely alone.<sup>54</sup> In Hathersage, the number of census entries indicating poverty was very small, less than 10 across the period, but two of these, John Broomhead an 85 year old widow and Joseph Barnes a 78 year old widow, lived alone.

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<sup>54</sup> Sokoll, T., 'The household position of elderly widows in poverty', in Henderson, J. and Wall, R., *Poor Women and Children in the European Past* (London, 1994), p. 218.



**Figure 5.3.** Make-up of elderly households by gender and marital status for Hathersage, 1851 and 1911.

Note: The y-axis is the percentage of households of the specified elderly containing the specified relation. For example, in the top left hand chart, in 1851, 80 percent of widowed females lived with children and this had fallen to just over 50 percent in 1911.

Some general conclusions may be drawn from the six charts of figure 5.3. Most unmarried elderly relied on non-conjugal kin to share a home, often siblings but also nieces and nephews. Others lived alone or as lodgers/boarders in households of unrelated heads or as servants. There was an increasing tendency to the latter arrangement towards the end of the period, though the numbers were rather small to attach any significance to temporal changes. Unsurprisingly, there were broad similarities between widowed and married, males and females. In all four groups, there was an obvious preference or opportunity to live with children, though this decreased over time. The value of a methodology which views household structure at two separated points in time is limited in that it tells us nothing about the process involved in the production of those family structures. As Angelique Janssens puts it: 'The cross-sectional approach misses the essential processes that produce the particular manifestations of household composition as presented by the census.'<sup>55</sup> To some extent, the problems of cross-sectional analysis can be surmounted by longitudinal studies, that is, by following families through subsequent censuses. Not only is this method time consuming but also only allows the investigator snapshots at 10 yearly intervals. Much can happen in the 10 intercensal years. There is some merit in this procedure, however, in that other examples are available in the literature for comparison.

A cohort of all 60 to 69 year olds in the 1851 census was followed sequentially until their deaths or disappearance from records. The cohort consisted of 63 individuals; 39 were married, 16 were already widows and 8 were unmarried. All had died by the 1891 census. The average age of the 3 groups was similar as was the average age at death. Only 8 of the 63 individuals moved away from Hathersage, though it must be admitted that the 4 individuals lost to follow up may have represented emigrations. Of the unmarried group, 5 out of 8 lived with siblings in 1851 but during the subsequent 10 years, the group reduced to 3 and one of these was in Bakewell Union Workhouse. Of the widowed group, approximate one third were heads of households including conjugal children in 1851 and one third were in complex households, often of 3 generations. Only one was living alone. Children in the household remained a feature in later years as detailed in table 5.2.

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<sup>55</sup> Janssens, *Family and Social Change*, p. 50.

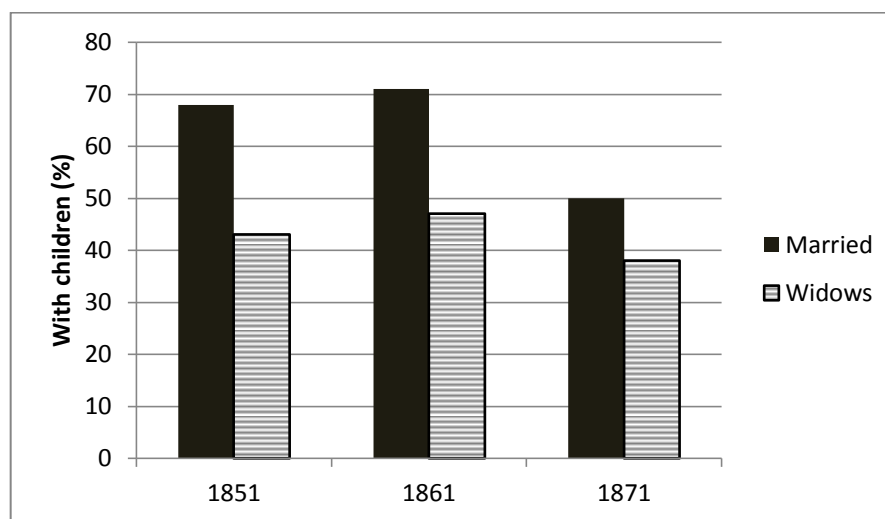
**Table 5.2.** Living arrangements from 1851 of a cohort of 60-69 year-old Hathersage residents.

		1851	1861	1871	1881
Unmarried in 1851	Lodger	3			
	With sibling	5	1		
	Complex household		1		
	Workhouse		1		
Widow in 1851	Living alone	1			
	Head with child(ren)	6	2		
	With sibling	1	2		
	Child with widow	1			
	Complex household	5	5	1	
	With other kin	1			
	Head with servant(s)	1		2	
	Head with grandchildren			1	
Couple in 1851	Couple with children	15	6		
	Widow with children		2	2	1
	Child with widow		1	1	
	Couple with grandchildren	1			
	Couple with servants/lodgers	8	1	1	
	Couple with complex households	9			
	Complex with widow		1		
	Couple with siblings	2			
	Couple alone	2			
	Couple as lodgers	2			

The married group of 41 contained 12 couples within the cohort. The remaining 17 had spouses less than 60 years of age in 1851. The living arrangements are tabulated in table 5.2. Again, co-resident children were an enduring feature. At all times, fewer households headed by widows contained children than married heads. This is shown in figure 5.4. If the purpose of a child living with a widowed parent was to support that parent, a higher proportion might be expected. On the other hand, if the parent was supporting the child, perhaps financially all-be-it indirectly by providing food and shelter, then one might expect to see a smaller proportion as found here. The fact that after 20 years (in 1871), the proportion of widows with children has decreased less than



the proportion of married couples with children, may suggest that the children consciously stayed longer with the widowed parent.



**Figure 5.4.** Proportion of Hathersage elderly living in households with conjugal children, 1851-71.

Note: The marital state is that at the time of the census.

Source: Census CEBs for Hathersage and Outseats, 1851-91.

The decreasing tendency to live with children appears to be widespread, even in the U.S.A.<sup>56</sup>

Most of the literature alludes to co-resident kin of the elderly being younger family members, usually children, supporting the parent either financially or practically. The implication is that the elderly, either widowed or unmarried and living alone, or as a married couple, were relatively unsupported. Such an argument cannot be sustained from the evidence presented here.

It cannot be assumed that an elderly person received support based on kin living within the same community. It is reasonable, however, to presume that some degree of care and attention might have been forthcoming. This is the only measure available to the historian to compare potential care pathways in a quantitative manner. Because the identification of kin can only be performed manually, it is only applicable to small communities or small samples. In this study, the elderly subject's own baptism and those of his/her siblings were obtained from the baptismal register. Male siblings were

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<sup>56</sup> Ruggles, S., 'Living arrangements and well-being of older persons in the past', [www.un/esa/population/publications/bulletin42\\_43/ruggles](http://www.un/esa/population/publications/bulletin42_43/ruggles) (viewed 7/7/2017).

picked out with ease from the census being studied. For female siblings, it is necessary to identify a marriage, either in the parish records or the national register of marriages, in order to obtain the family name in use. Children were identified similarly, initially from baptism register or previous censuses. Kin was thus limited to parents, children and siblings. The process is more difficult to perform with elderly originating from outside communities though similarities of names or birthplace can alert the investigator to kinship and large numbers of parish registers are available on [www.familysearch.org](http://www.familysearch.org).

To investigate kin links other than co-residence further, elderly heads (over 65 years of age) living in singleton households if unmarried or widowed, and duplex households if married, were identified and are tabulated in table 5.3. The total number of elderly remained around 50 until the end of the nineteenth century and then rose rapidly to twice that number.

**Table 5.3.** Elderly living alone or only with spouse, Hathersage. 1851-1911.

		1851	1861	1871	1881	1891	1901	1911
Heads without co-resident kin:	Never married	0	1	4	1	1	0	0
	Married, with spouse	1	0	3	6	4	5	11
	Widowed	2	2	0	5	4	4	5
	Total	3	3	7	12	9	9	16
	(Solitaries)	2	3	3	5	5	4	5
Population over 65 years		46	53	54	58	58	64	107
Ratio solitaries to total elderly (%)		4.3	5.7	7.4	10.3	15.5	6.25	4.7

Note: Solitaries may have been widowed or never married.

Source. CEBs for Hathersage and Outseats, 1851-1911.

The number of elderly heads living alone (solitaries) was relatively small making up typically less than 10 percent of the elderly population. In 1871 Hathersage, there were 3 elderly solitaries and none had kin living within the community, but this was unusual, as established in table 5.4. 6 of the 27 solitaries had never married, the remainder were widowed.

**Table 5.4.** Solitaries over the age of 65 years, Hathersage, 1851-1911.

	1851	1861	1871	1881	1891	1901	1911	Total
Number of solitaries	2	3	3	5	5	4	5	<b>27</b>
Ratio solitaries/total elderly (%)	4.3	5.7	7.4	10.3	15.5	6.3	4.7	
Solitaries (non-native)	0	1	0	1	2	2	2	<b>8</b>
Having children in village	1	1	0	3	3	1	3	<b>10</b>
Having siblings in village	0	1	0	0	1	0	0	<b>2</b>
Having no kin in village	1	1	3	2	1	3	4	<b>15</b>
Non-native and no kin	0	1	0	1	1	1	2	<b>6</b>

Note: The denominator of the ratio (line 2) is taken from table 5.2.

The number of solitaries who originated outside of Hathersage was very small, amounting to less than a third of the total solitaries and 2 or 4 percent of the total elderly. This compares with 40 percent of the Hathersage population of all ages up to 1871, and nearer 60 percent after that, as was shown in figure 4.4. Not surprisingly, non-native solitaries were one and a half times more likely to be without kin in the village than natives. The most frequently found kin were children but in two cases siblings were the geographically closest kin.

Neil Howlett in his study of Appledore (North Devon) found that 14 percent of his widows lived alone in 1851 and 1871. 79 percent lived with kin, though it appears that this figure included all ages. ‘Most of the 21 percent of those who were not living with kin’, he suggests, ‘probably had no surviving kin with whom they could live.’<sup>57</sup> The possibility of kin living close by seems not to have been addressed sufficiently to be sure.

The 21 observations of widowed elderly solitaries living in Hathersage between 1851 and 1911 represented 19 individuals. In 3 instances there was insufficient data in order to identify children or siblings, but in the remaining 16 a full assessment was possible. More than half (9), of the solitary widows enjoyed the presence of at least one child, usually married, in the village. 5 were natives and 4 had migrated into the village. Of the 7 who did not have identifiable kin in Hathersage, 3 were natives, a similar

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<sup>57</sup> Howlett, N., 'Family and household in a nineteenth-century Devonshire village' in Mills, D. and Schürer, K., *Local Communities in the Victorian Census Enumerator's Books* (Oxford, 1996), pp. 300-1.

proportion to the group having kin in the village. 3 of the kinless widows had never had children and 4 had no surviving children. One widow had children in Sheffield and another in a village near Nottingham. Interestingly, the group with surviving children had on average 6.2 children whereas the kinless group averaged 1.5 children. Thus having a large family increased the chance of having a child close by in later life.

## Elderly Widows

As has been mentioned above, the poor worked with an 'economy of makeshifts'.<sup>58</sup> Women were particularly liable to be forced into this position because they might suddenly be deprived of the superior providing capacity of a male partner. Thus, a widow, especially if isolated from her children (if she had surviving children), potentially belonged to one of the most vulnerable groups in society. In the second half of the nineteenth century, when there was downward pressure on welfare payments and the pickings from common land had been severely curtailed by enclosure, there were few options left. Penelope Lane describes the situation in Leicestershire where women might take in lodgers, do laundry for better-off neighbours or resort to criminal activities such as theft, passing counterfeit coin, fraud and even prostitution.<sup>59</sup> The commons of early nineteenth-century Hathersage were remote from the village and consisted of moorland, virtually devoid of trees and yielding very little fruit.<sup>60</sup> Prostitution is not an activity applicable to elderly widows and there is no evidence that petty crime was prevalent in Hathersage though offering lodging, charring and laundry work were regularly utilized to bring in a few shillings. Indeed, between 1803 and 1896 the local press reported only five Hathersage women before the magistrate for petty crimes and all were young and married. A further option to lift a widow from poverty

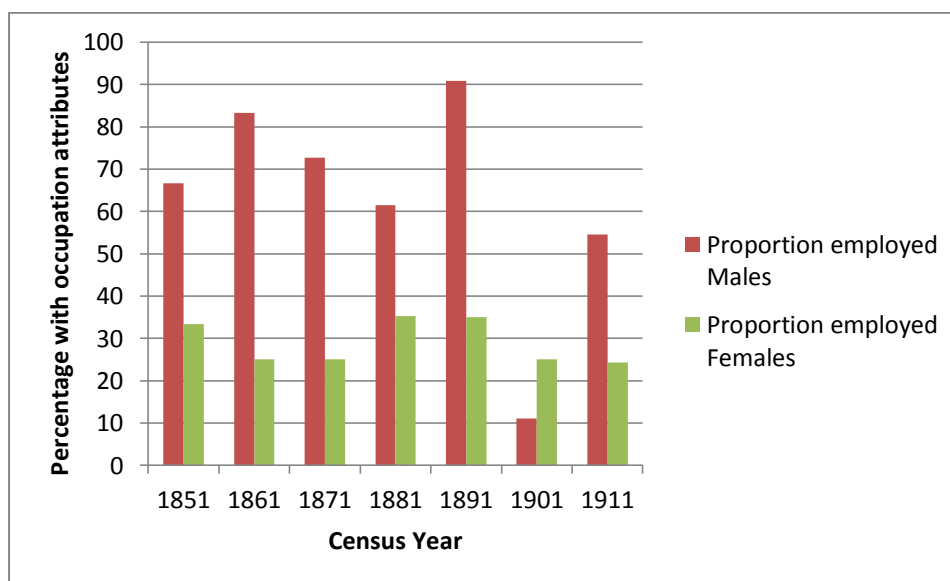
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<sup>58</sup> Hufton, O., *The poor in Eighteenth-century France* (Oxford, 1974), p. 109. See also King, S and Tomkins, A., *The Poor in England, 1700-1850: an Economy of Makeshifts* (Manchester, 2003). (Although both of these predominantly deal with the pre-industrial period.)

<sup>59</sup> Lane, P., 'Work on the margins: Poor women and the informal economy of eighteenth and early nineteenth century Leicestershire', *Midland History*, 22 (1997), pp. 85-99.

<sup>60</sup> Evidence for picking wortle berries (*Vaccinium myrtillus*, also known as myrtle berries, bilberries and blue berries) comes from Pearsall, W., *Mountains and Moorlands* (London, 1950), p. 81, Jefferies, R., *The Life of the Fields* (London 1908), p. 62, Hardy, T., *Return of the Native* (1878, Oxford, 2008), p. 312. Wortle berries were made into jam and jam tarts; Johns, Rev. C., *Flowers of the Field* (London, 1908), p. 180. Even above 2000 feet, bilberries grow, and at lower levels, blackberries and crab apples were available.

was to marry again. Working men with young children might be expected to be more desperate to recruit a replacement woman either as a wife or housekeeper. Despite these mounting pressures, when the employment of widows of all ages is considered, there was very little change in the proportion of widows or widowers, in paid employment over time, as demonstrated in figure 5.5. In this chart, the proportion of widowers in employment in 1901 is uncharacteristically low and may represent a whim of the enumerator. The proportion of widowers of all ages with a documented occupation remained high until the end of the nineteenth century. The obvious conclusion is that women were treated more leniently by welfare agencies, either family or parish. Nigel Goose presents data from Hertfordshire agricultural workers strongly supporting the notion that males were treated more harshly than elderly women by the overseers and were more likely to end up in the workhouse.<sup>61</sup>



**Figure 5.5.** Proportion of widowed elderly in paid employment as reported in the CEBs, Hathersage, 1851-1911.

Note: Average number of widow(er)s in each census = 29, average age for males 76.2, average age for females 72.9. There was very little variation in this average over time, SD = 1.6 and 0.9 respectively. Source: CEBs.

These observations suggest that widowed men were twice as likely to be in paid employment as their female counterparts. The fact that men were more likely to remarry upon the loss of a spouse has been mentioned above. The Hathersage

<sup>61</sup> Goose, N., 'Poverty, old age and gender in nineteenth-century England: the case of Hertfordshire', *Continuity and Change*, 20 (2005), pp. 351-84.

individual database included 207 nineteenth-century marriages terminated by the documented death of one partner and this provided the opportunity to explore further gender differences around widowhood. On 62 percent of occasions, the male was the first to die. There were some clear differences in the subsequent behaviour of males and females and some less substantive changes over time.

First, a woman who lost her husband due to death in her early twenties would expect to live nearly ten years longer than a man whose wife had died at the same age. This gender difference reduced as the age at bereavement increased, converging in the low 80s.

Secondly, the bereaved males tended to remarry earlier than the females, averaging 2.9 and 6.5 years respectively. These observations suggest that nineteenth-century Hathersage men were less able to tolerate widowhood than women were, though the reasons for this are less obvious. Widowhood was terminated by death or remarriage in an average of 8 years for men and 15.6 years for women. The data suggest that the period of widowhood shortened as the century progressed though the numbers are too small to be able to invoke statistical certainty. Thirdly, between 1851 and 1911 of the 35 widowers at the census following the loss of their wives, all but two were still living in Hathersage. Widows behaved differently in that 18 of the 43 had already moved away from Hathersage by the time of the next census.<sup>62</sup> This difference may be explained by the fact that men earned their living in Hathersage while women were not tied and if they subsequently took another partner would more likely move to his abode. Fourthly, widows were more likely than widowers to be found in the households of kin at the time of the census following the death of their spouse, (6.9 vs. 3.5 percent of those alive).<sup>63</sup>

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<sup>62</sup> All the widowers were traced until their death. 33 of the 128 widows were eventually lost to follow-up. That is, neither a subsequent marriage, death nor census entry could be identified. There are many reasons for such disappearances, common-law marriages, using aliases, unrecorded deaths and emigration being most common.

<sup>63</sup> Ideally, a fixed period of 1, 5 or 10 years following bereavement would have been used as a reference point to compare widows and widowers marital state, co-residence or mobility. However, if the bereavement took place in 1857, for example, none of these reference dates would fall in a census year, that being the only year when all these characteristics were recorded.

From the marriage database, we see that in nineteenth-century Hathersage, 25 percent of widowers remarried and 19 percent of widows. However, this is not comparable with the declaration by Wrigley and Schofield that mid-nineteenth century, 11 percent of all those marrying had been previously married.<sup>64</sup> Lawrence Stone noted a decline in the remarriages over time reaching about 15 percent in the eighteenth century.<sup>65</sup> Edwards examined marriage registers of 31 Shropshire parishes from 1754 to 1810 totally 6500 marriages. Just over 5 per cent of marriage contracts included a widow or widower, the latter being slightly more numerous.<sup>66</sup> Assessments using church marriage registers alone are subject to errors involving the inconsistency in the use and inclusion of the descriptor 'widow' and 'widower'. Further, they merely report the proportions of first and subsequent marriages. Much more can be gained from following the course of a series of first marriages as was possible in this study.

The longitudinal analysis of a cohort of 60 to 69 year olds in Hathersage in 1851 demonstrated that 68 percent of individuals lived with one or more of their children if married, but only 42 percent of the widowed did so. This is perhaps contrary to what might be expected from the care model but resembles the findings of Jean Robin for the Devonshire village of Colyton.<sup>67</sup> Neither of these studies enlightens us as to what might be going on in the families to cause the observed household structure and what outside influences were having an effect. Nor does it answer the question as to whether industrialization and/or changes in the poor law were instrumental in change. Indeed, in using cross-sectional data, discontinuities and continuities are likely to be missed.

From the foregoing, we can conclude that the clear majority of the elderly living in Hathersage had at least one kinsman in the village. In common with published material, the subject of study has been the elderly person and the question posed concerned the potential for a child, whether married or unmarried, to offer support to ageing parents.

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<sup>64</sup> Wrigley, E.A. and Schofield, R., *The Population History of England, 1541-1871; a Reconstruction* (1981, Cambridge, 2002), p. 259.

<sup>65</sup> Stone, L., *The Family, Sex and Marriage in England, 1500-1800* (1977, London, 1990), pp. 46-9.

<sup>66</sup> Edwards, W., 'Remarriage: some preliminary findings', *LPS*, 39 (1987), pp. 32-45.

<sup>67</sup> Robin, 'Family care of the elderly', pp. 505-516.

The usual measure for this potential is that of proximity, whether it is co-residence or living within the same community. It is possible to view the relationship from the point of view of the child. That is, how accessible was the parent, if care were needed, to the care-giving child. To explore such a possibility, male household heads native to Hathersage and with at least one child in the household, were selected from the 1881 census. Three were excluded who were over the age of 70 years and a further four were discarded because it was not possible to identify or establish the whereabouts of both parents.<sup>68</sup> This left 51 male heads, aged between 24 and 66 years. For each of these, the parents were known and either their deaths had been recorded or they could be identified in the UK 1881 census. One male head was widowed but all had one or more co-resident children.

In nearly half of cases (24) both parents were dead and all but one had died in Hathersage. In 14 percent (7) both parents were alive and living in Hathersage. In the remaining 39 percent one parent was alive (9 mothers and 11 fathers) and 7 of the mothers and 10 of the fathers were still living in Hathersage. Not surprisingly, the average age of the group with no surviving parent was higher though there was no significant difference between the average ages of men with one parent or both parents alive. One man of 56 years still had both parents alive.

4 of the 7 widowed fathers had remarried and only one of these lived outside of Hathersage at Hucklow less than 5 miles distant where he had moved prior to his first wife's death. 2 of the 7 widowed mothers had remarried and both had moved away; one living in Sheffield Park and the other in Stockport (Cheshire) in 1881. In all, for 24 of the 27 sons who had at least one parent alive, that parent lived in the same township. The living arrangements of widowed parents alive are tabulated in table 5.5. It will be seen that there was considerable variation. 2 fathers were living with married sons but the 4 widows who lived with children were designated as household heads. Of the 7 male heads who still had both parent alive there were 4 couples: 3 headed households with unmarried children in the parental home and one couple lived alone.

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<sup>68</sup> In two cases, the parents could not be identified in either census or parish records suggesting death before 1841, and in one case the father's burial was documented but no further trace could be found for the mother. In the fourth case, an illegitimate birth, the father was not identified, the mother subsequently married and moved to Handsworth, Staffordshire, where she was living in 1881.



The conclusions from this small survey are that half the married males born in Hathersage had no surviving parents and 1 in 7 had two. Of the surviving parents, half the widowed fathers had remarried but remained living in Hathersage and a quarter of the widowed mothers had remarried but had left the village. This is a similar pattern pertaining to first marriages where the bride is more likely to move to the groom's parish. Of the 14 parents living in Hathersage none lived alone. Not only did most live with at least one of their children (11), spouse (2) or lodgers (1), they also had the benefit of non-residing sons within the village. Such a picture is one of multiple potential care pathways. The phenomenon of a parent moving away from a community in which their children reside would appear to be a twentieth-century development related to mobility similar to the rise of solitary living. It can present considerable difficulties for the child left behind and deserves further investigation.

**Table 5.5.** Living arrangements of widowed parents of married male heads born and resident in Hathersage, 1881 census.

Marital status of widowed parent in 1881	Details of living arrangements	Mothers	Fathers	Notes
Widowed	Co-residing with married son, daughter-in-law and grandchildren		2	Additional son in village
Remarried	Head, with spouse		1	2 sons in village
Remarried	Head, with spouse		1	at Hucklow
Remarried	Head, with unmarried son		1	wife elsewhere (the family occupied 3 farms)
Remarried	Head, with spouse and unmarried children		1	
Widowed	Head with married son, daughter-in-law and grandchild		1	2 sons in village
Widowed	Head, with married daughter, 2 grandchildren	1		
Remarried	Wife, with 2 unmarried children from 1 <sup>st</sup> marriage, son and grandchild	1		In Sheffield
Widowed	Head, with married son, daughter-in-law and grandchild	2		
Widowed	Head, with 4 lodgers	1		2 sons in village
Widowed	Head, with married daughter	1		in Stockport (widowed x2)
Widowed	Head, with unmarried daughter	1		

Source: CEB, 1881 census for Hathersage and Outseats.

About half of the married sons had at least one parent living in the village. A result which is comparable to Wall's three communities study where he found the proportion to be between a quarter and a half.<sup>69</sup> As Young and Willmott observed, most people want to live near their parents, not *with* them.<sup>70</sup> Co-residency is not necessary to provide support. 'There are few functions which can be performed by a co-residing kinsman which he cannot perform equally well if he instead lives next door, or even up

<sup>69</sup> Wall, 'Relationships between the generations', p. 73.

<sup>70</sup> Young and Willmott, *Family and Kinship in East London* (1957, London, 2007), p. 20.

the street.<sup>71</sup> Dennis Mills examined the spatial geography of parents and children in Melbourn (Cambridgeshire) pre-1841 and concluded that when children married and set up a new household they purposely sought to reside close to their parents. The nearest child to the parental home was not necessarily the eldest, or even a son, however.<sup>72</sup> Both in Preston and Bethnal Green it seems that it was the norm for children to set up near their parents, and so it was in Hathersage. It is unfortunate that the numbers of subjects in this study are too small to be able to observe temporal changes associated with industrialization.

The way in which the elderly of Hathersage lived in relation to their kin and the way in which they coped with widowhood seems to be similar to other localities that have been reported in the historiography. There was, for example, a modest fall in the number of elderly in paid employment, more marked for women, as the twentieth century approached, though there was considerable variation from locality to locality.

Changes such as the age at which children leave home or marry, or the introduction of statutory pensions, have long-term effects on demographic measures such as the prevalence of multigenerational families. These long-term changes are modulated by shorter term effects caused by local circumstances and events. In Hathersage the proportion of elderly in the community rose ahead of the national pattern because of the migration of younger families as the needle-making manufactories flagged after 1861 and their replacement by child-poor families from Sheffield. There was a decline in the propensity for the elderly to live with their children as the nineteenth century progressed. This trend seemed to be universal, even noted in the United States of America.<sup>73</sup>

In Hathersage, most elderly either lived with their spouse or with one of their children. Very few lived alone. Despite this, the number of multigenerational households was small. Further, the impression has been gained, as there can be no certainty based on the

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<sup>71</sup> Anderson, *Family Structure*, pp. 56-7.

<sup>72</sup> Mills, D., 'The residential propinquity of kin in a Cambridge village, 1841', *Journal of Historical Geography*, 4 (1978), pp. 273-4.

<sup>73</sup> Ruggles, S., 'The decline of intergenerational coresidence in the United States, 1850-2000', *American Sociological Review*, 72 (2007), p. 965.

evidence available, that where a multigenerational household existed, it resulted from the child failing to leave the parental home rather than a parent joining the household of the child. These observations support the notion that the preponderance of nuclear families in Britain and Western Europe was not so much a matter of choice or custom but rather that the opportunity for multigenerational households was small. The first choice of the elderly was to live with kin. Being solitary or living in an almshouse, as an inmate or lodger was the last resort, contrary to Laslett's view that to live with kin was a situation of last resort.<sup>74</sup>

Solitaires only made up 10 percent of the elderly population in nineteenth-century Hathersage and over half of them had the benefit of kin within the community. Being kinless was the particular fate of those who had their roots outside the village. The secular change in solitary living was yet to begin.<sup>75</sup>

## Women's Employment

In pre-industrial England women were an integral part of the household economy. Not only did they have responsibility for providing food and caring for the children but also assisting their husband in his productive activities. In agriculture, they would help on the farm and if any manufacturing activity took place in the home then they worked at that too. If the male partner died then the widow could carry on the business, sometimes with the help of her children if they were old enough. She was permitted to take on apprentices, though in Oxford at least, mistresses were in a very small minority.<sup>76</sup> Women were no strangers to metal working. Marie Rowlands suggests that 'By the last decade of the eighteenth century (in the West Midlands) informed opinion believed that "nearly half the nailers are women and girls and children under 14 years of age"'.<sup>77</sup> The key point is that where the home was the unit of production, the family had control over what was done and when it was done, and this also allowed for flexibility

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<sup>74</sup> Ruggles, 'Living arrangements of old older persons'.

<sup>75</sup> Snell, K.D.M., 'The rise of living alone and loneliness in history', *Social History*, 42 (2017), pp. 2-28.

<sup>76</sup> Prior, M., *Women in English Society, 1500-1800* (London, 1985), pp. 108-110.

<sup>77</sup> Rowlands, M., *Masters and Men* (Manchester, 1975), p. 160.

in gender roles. The popular view is that opportunities for women's work were reduced by industrialization and gender roles became separated.<sup>78</sup> There is no doubt that the final phase of proletarianization, that is factory employment, removed freedoms relating to time and place and imposed the discipline of fixed hours, rate of work and pay. Of course, this was also true for men.

To be flexible during the industrialization process was a valuable attribute, and women adapted to many different and new tasks, though perhaps more through necessity than choice. In England and France, it appears that women did not participate in factory work in significant numbers, textile manufacture excepted. Rather they took on employment involving similar tasks to household work, that is, domestic service.<sup>79</sup> In areas where coal mining was the only source of employment however, women did work in coalmines.<sup>80</sup> In Hathersage paid employment opportunities for women were limited to domestic service, the needle manufactory, and to a lesser extent agriculture.<sup>81</sup> The majority of the literature on women's work has concentrated on urban areas, especially those concerned with textile manufacture. It is easy to formulate the view that this was the lot of all nineteenth-century women. Further, Scott and Tilly point out that such tasks were performed almost entirely by women and usually by young, unmarried girls. In the metal industry, operations that required precision and fineness of touch were often executed by women, and were advertised for women only.<sup>82</sup> In Hathersage, such tasks as japanning and needle-eying were performed entirely by women. Operations, such as wire-drawing and needle-pointing, were always carried out by men and others, such as needle-straightening, by either sex.

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<sup>78</sup> Honeyman, K., *Women, gender and industrialization in England, 1700-1870* (London, 2000), p. 17.

<sup>79</sup> Scott, J. and Tilly, L. 'Women's work and the family in nineteenth-century Europe', *Comparative Studies in Society and History*, 17 (1975), p.39.

<sup>80</sup> Honeyman, *Women, gender and industrialization*, p. 40 and 81-83. (Women had worked in Derbyshire lead mines for centuries, mostly ore crushing on the surface.)

<sup>81</sup> Agriculture differed from domestic service and factory work in that the workers were mostly family members of the farmer with the occasional living-in servant.

<sup>82</sup> Honeyman, *Women, Gender and Industrialization*, p. 39.

In the present study, evidence of women's employment and the nature of that employment have been sought from the CEBs. It is well known that there are considerable difficulties in using this source for this purpose. Edward Higgs, for example, has demonstrated the confusion that occurs in the designation of domestic servants who were kin.<sup>83</sup> He also shows that for women's employment in general there was considerable variation in how enumerators copied female occupations. In some cases, for example where the wife did not have an occupation, she was designated 'housekeeper'. There is a body of opinion suggesting that women's employment is likely to be under-reported.<sup>84</sup> However, this view is not universally accepted.<sup>85</sup> The Hathersage CEBs demonstrate some of these difficulties. There were several instances of a wife being allocated the occupation of housekeeper and the decision was made to discount these unless there was a clear indication that the housekeeping was performed outside the marital home. The term 'farmer's daughter' and 'farmer's wife' occurred only in 1881 and 1901 and were taken to indicate productive work on the farm. Prior to 1881, entries such as 'dairy work' were used in similar situations. In the 1851 census, farmer's wives were rarely given any occupational attribute. Confusion over servant or kin status did not appear to present a problem, however. Occasionally, a daughter was allocated a label of house servant and she was counted as being a domestic servant.<sup>86</sup> Most servants were clearly unrelated, or only distantly related to the household in which they worked. Thus, while appreciating that women's employment, especially if part-time, was under-reported to some degree in the Hathersage CEBs, it should be accepted

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<sup>83</sup> Higgs, E., 'The tabulation of occupations in the nineteenth-century census, with special reference to domestic servants' in Goose, N. (ed.) *Women's Work in Industrial England* (Hatfield, 2007), pp. 250-259. See also: Cooper and Donald, 'Households and 'hidden' kin', pp. 257-278.

<sup>84</sup> Higgs, E., 'Women, occupations and work in the nineteenth century censuses', *History Workshop Journal*, 23 (1987), pp. 59-80, Shaw-Taylor, L., 'Diverse experiences: the geography of adult female employment in England and the 1851 census', in Goose, N. (ed.), *Women's Work in Industrial England* (Hatfield, 2007), pp. 32-42.

<sup>85</sup> Anderson, M., 'What can the mid-Victorian censuses tell us about variations in married women's employment?' in Goose, N. (ed.), *Women's Work in Industrial England* (Hatfield, 2007), pp. 184-187.

<sup>86</sup> Anderson, M., 'Mis-specification of servant occupations in the 1851 census: a problem revisited', *LPS*, 60 (1998), pp. 58-64.

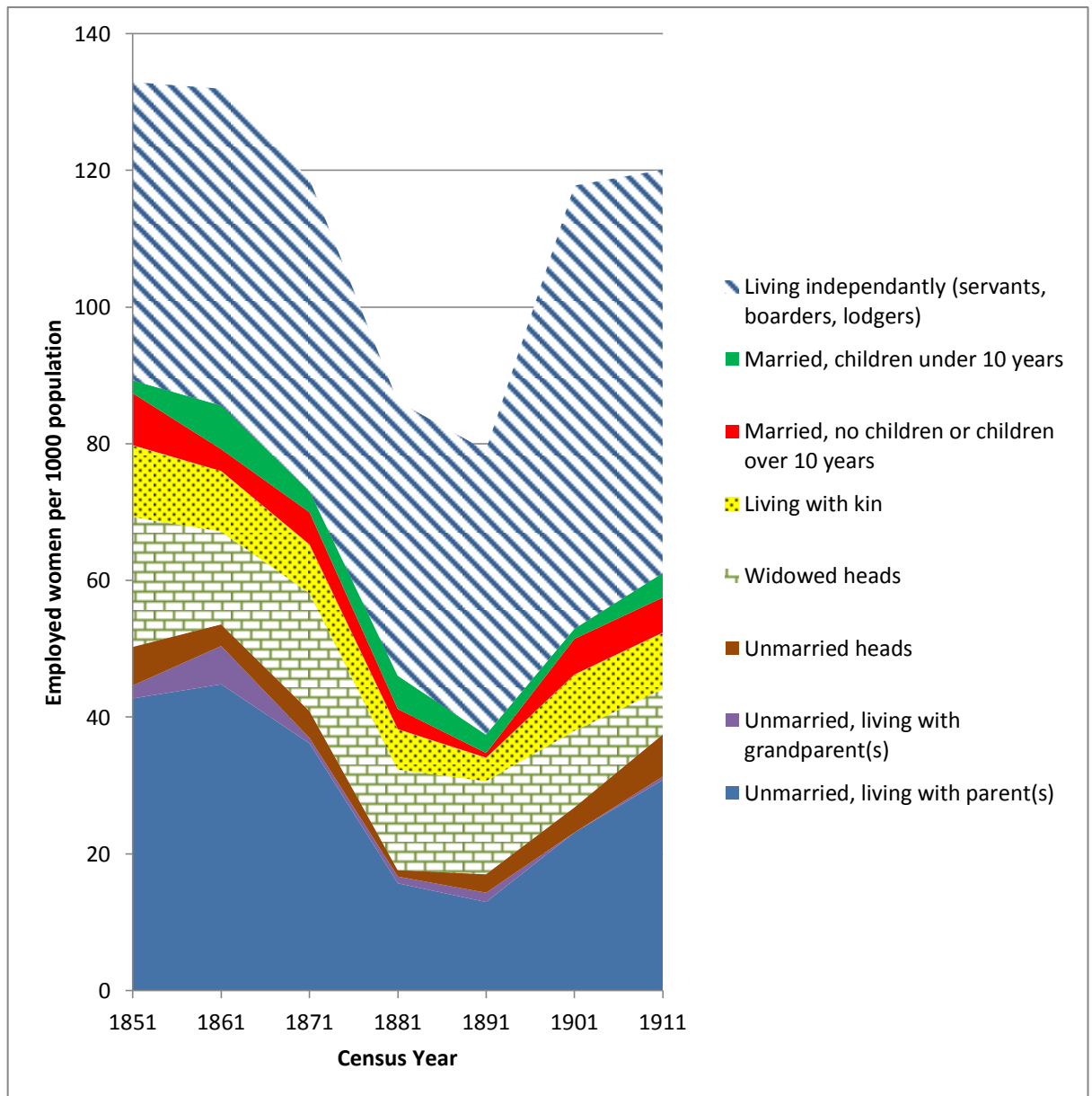
that there is no other record available that can be used for investigating jobs for women in this period in the way that follows.

In 1851, 32 percent of Hathersage women over the age of 20 were employed (26 percent of the total population). For the whole of Lancashire at the same time, 39.5 percent of women were employed, and 38 percent of them in the cotton industry.<sup>87</sup>

When comparing numbers of employed women over time, the choice of denominator has to be a compromise. Changes in school leaving age, age of retirement and age at marriage are all independent variables. For simplicity, the size of the village population was used. Figure 5.6 reveals that employment rates appeared to fall from 1861 until 1891 followed by a sharp rise, while failing to return to 1851 levels. It also demonstrates that the servant numbers did not decrease when over-all employment fell but further advanced in the latter part of the nineteenth century. The number of widows in employment fell progressively throughout the period but the major component of declining numbers was seen in the unmarried women and girls. This latter group is the same that predominated in the textile industry.

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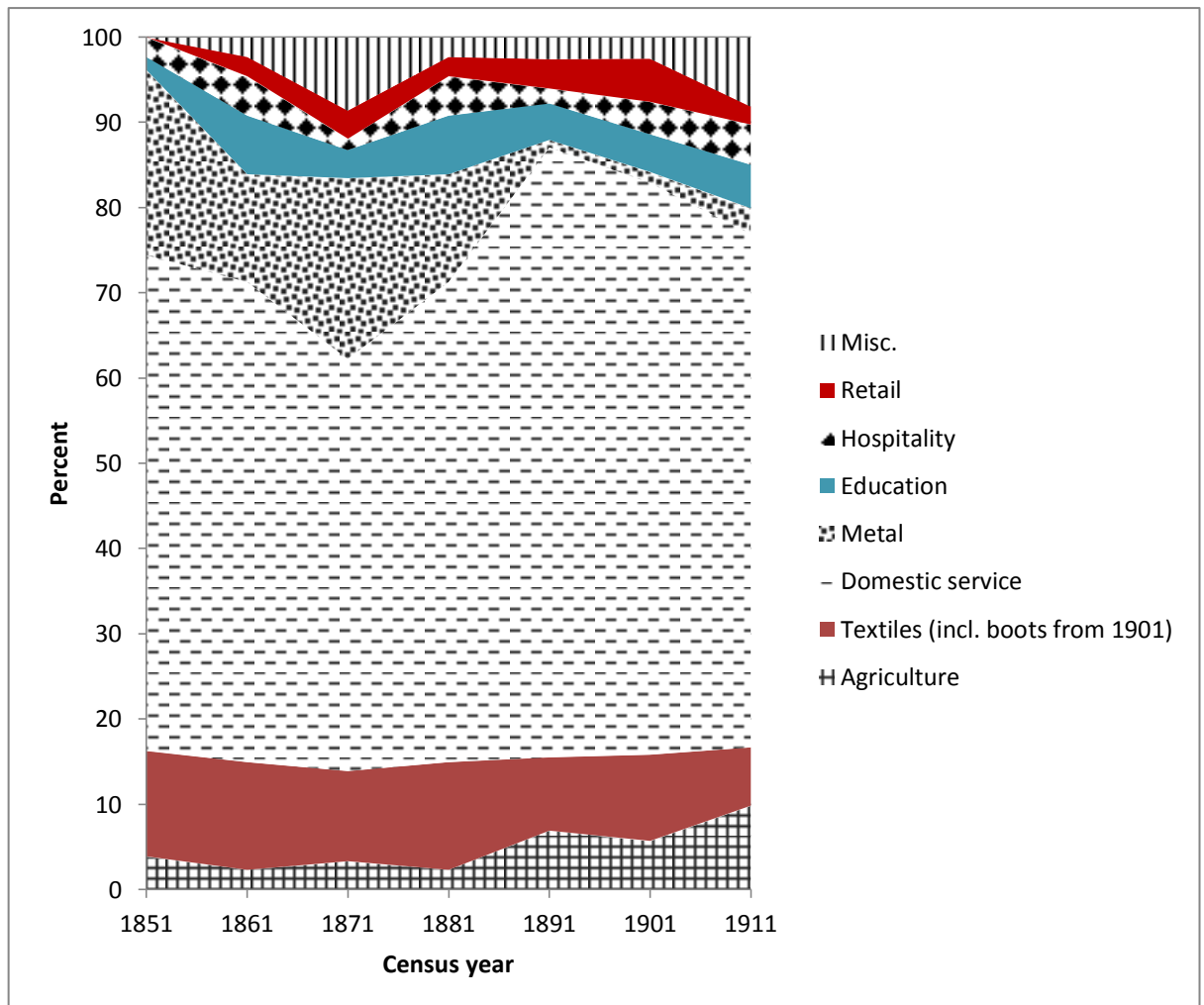
<sup>87</sup> Anderson, *Family Structure*, p. 22.



**Figure 5.6.** Household status of employed women in Hathersage, 1851-1911.  
Source: CEBs Hathersage.

Figure 5.7 depicts the numbers of jobs in various sectors of employment expressed as a proportion of the total number of positions held by women. It shows that domestic service was the most substantial occupation available for women in Hathersage throughout the period and it expanded with the decline in needle manufactory. Until 1891 metal-working provided a significant alternative, though even at its peak in 1871 only employed 31 women. The remaining sectors offered a small and less variable number of employment opportunities.



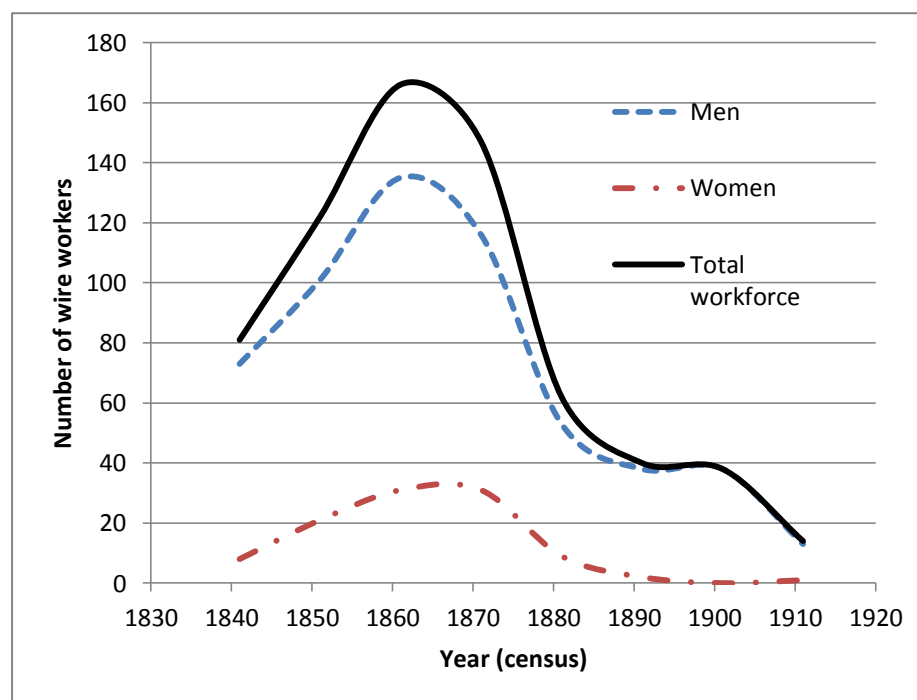


**Figure 5.7.** Categories women's occupations in Hathersage, 1851-1911.

Notes: 'Textiles' includes dressmaking and other clothing manufacture and latterly boot manufacture which began at the end of the century in Mr Ibbotson's High Street farm yard. 'Hospitality' includes working in the inns and lodging housekeeping. 'Retail' includes grocers and other shop-keeping. The rise in agricultural jobs after 1881 may be artefactual due to the enumerator's use of the term 'farmer's wife'. Source: CEBs.

The proportion of women working in the needle factories rose from 10 percent of the metal workforce in 1841 to 21 percent in 1871, subsequently falling to very low levels at the end of the century as the factories closed. This is graphically represented in figure 5.8 and detailed in table 5.6. Interestingly, the peak in female employees occurred after the number of male workers had begun to fall. This may have been an economic expedient assuming that women were paid less than men. Until 1871, the majority of the female workforce was young and unmarried, mostly living in the parental home. After 1871 young unmarried women virtually disappeared from the workforce. Employment of married women continued at 5 or 6 in each census until 1881 and the possession of small children was no bar. After 1881 very small numbers of women

were employed and were usually young. Women and girls were employed as needle-polishers, finishers, eye-drillers and packers. The majority of women needle-workers were born in Hathersage, though when female employment was at its peak in 1871, the native proportion fell to a half.



**Figure 5.8.** Number of men and women employed in the Hathersage needle and wire-drawing factories, 1841 to 1911.

**Table 5.6.** Women workers in the Hathersage needle factories, 1851-1911.

	1851	1861	1871	1881	1891	1901	1911
Married	6	7	5	6	1		1
Unmarried	15	22	25	3	1	2	5
Widows	5	3	1	2			
Average age	28.6	24.3	21.1	37.9			
Age Range	10-54	9-58	10-58	23-50	17	16-22	15-24

Source: Hathersage CEBs.

The decline in needle manufactory in Hathersage predominantly hit young unmarried women workers, which poses the question - what happened to them? Of 50 women who worked in the Hathersage needle factories, identified in any one census but not the following one, 14 were still in Hathersage, 10 had died and 18 were identified in other places, i.e. had migrated. 8 could not be located and it is reasonable to suggest that

these also represented migrations, though burial outside Hathersage was also a possibility. Only one was working in Hathersage ten years later. The methodology does not exclude a short period in a different occupation but migration appeared to be the favoured sequel to leaving the needle works.

Table 5.7 shows that the women folk of needle-workers were more likely to seek work in the needle factory than average and those of agricultural workers significantly less likely to do so. Stone and quarry workers were neutral in this regard.

**Table 5.7.** Occupation of fathers or husbands of women metal workers, Hathersage, 1861.

Marital status of female worker	Occupation of father or husband, percent			
	Metal worker	Agricultural worker	Stone worker	Other
Unmarried (daughter)	45.5	10.6	12.1	31.8
Married (wife)	56	4	12	28
(All male workers)	39	22	11	28

Anderson made three general observations in his Lancashire studies which can be compared with Hathersage data. First, that the wives of professional husbands did not work if widowed, secondly, that the lower the pay or status of the husband, the more likely the wife was to work, and thirdly, women worked less as they got older.<sup>88</sup> Any other result would be surprising.

Unfortunately there is but one example of a widowed professional and that is of Mary Moore, the wife of a General Medical Practitioner who died in February 1861. In the 1861 census, she is reported as being housekeeper to a surgeon and ten years later she was keeping a grocery shop in Hathersage.

To trial Anderson's second assertion, the 1851 census for Hathersage was chosen.<sup>89</sup> The numbers of inhabitants with higher social status and the numbers of all working wives

<sup>88</sup> Anderson, 'Variations in women's employment', pp. 190-193.

<sup>89</sup> As has been mentioned previously, women's employment is difficult to read in this census. This is because of the propensity of housewives to be inconsistently recorded as housekeepers and because the wives of farmers (who undoubtedly worked on the farm) are often recorded without an occupation.

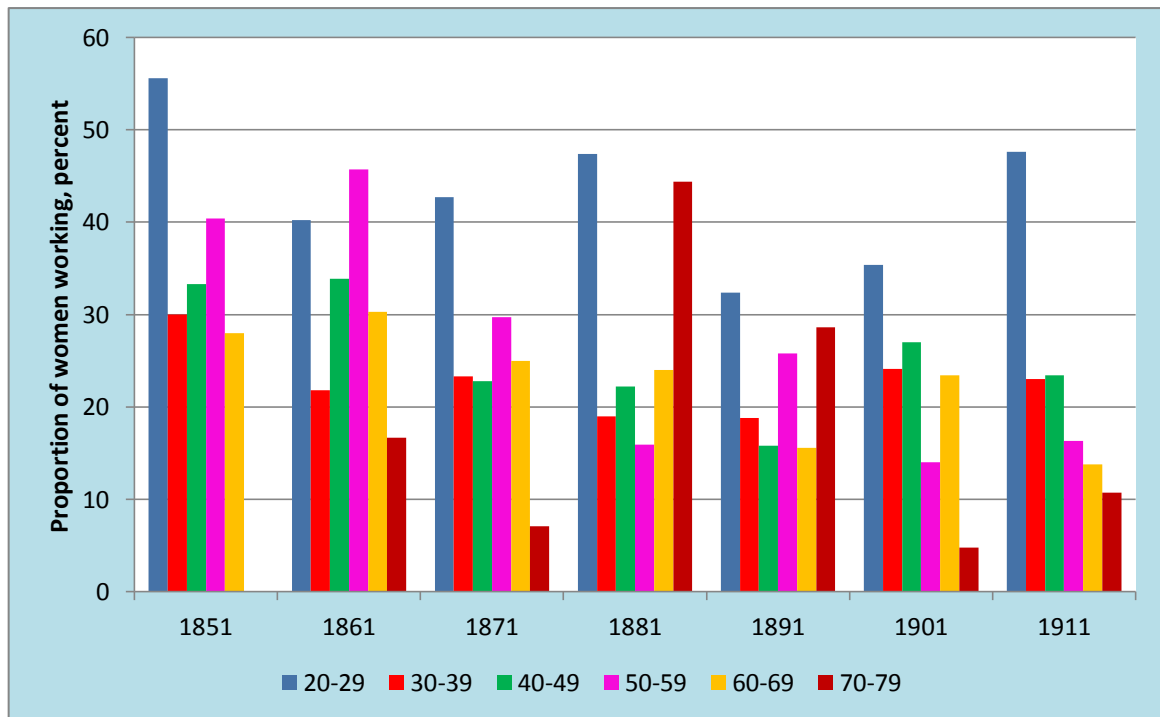
is very small making a valid assessment impossible. Nevertheless, the figures are presented in table 5.8.

**Table 5.8.** Numbers of working wives as a function of socio-economic status, Hathersage, 1851.

Husband's occupation	Married women	Working wives
Gentry, Professions, Clerics	3	0
Annuitants and income from property	3	1
Mill owners, shop keepers and office workers	10	0
Farmers	28	0
Craftsmen and labourers	113	8

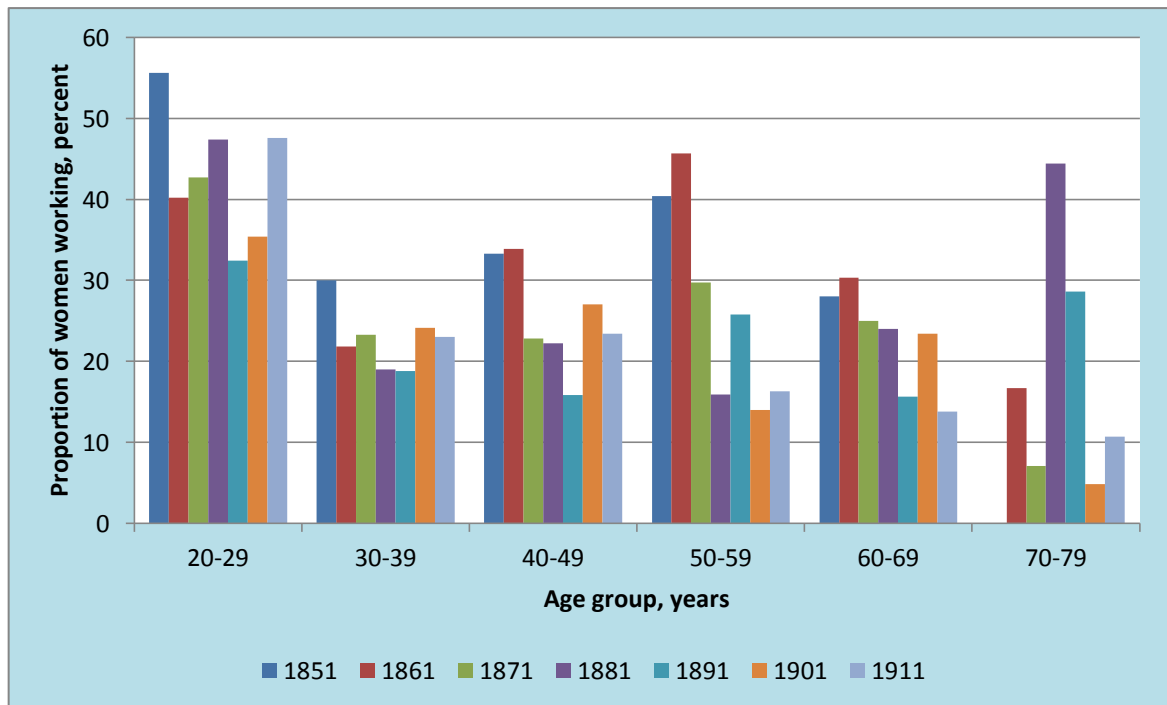
Source: CEBs Hathersage, 1851

Anderson's third assertion is easier to test with confidence. The proportion of Hathersage women of over 20 years of age working in six ten-year cohorts was calculated for each census. The number of women in each census varied from 287 in 1851 to 621 in 1911. The results are presented in fig 5.9. Anderson's description of women working less as they got older, was fulfilled in Hathersage only in 1911. Even in the 70-79-year-old group, there were significantly fewer women recorded as working in only 5 of the 7 censuses. Consistently throughout the second half of the nineteenth century women were more likely to be working in their twenties than any other time in their lives.



**Figure 5.9.** Percentage of women working in Hathersage, by age, 1851-1911.  
Source: Hathersage CEBs. Total number of observations = 2594.

Viewing the same data in a different way, figure 5.10 reveals continuity over time in the employment at all ages except for the ages 50-69, where there was a definite reduction in the proportion of women working as the century progressed. This data set indicates that an uncomplicated relationship between the proportion of women working and age is too simplistic. As the Hathersage wire industry declined, women appear to have held their position in preference to men. Old loyalties might have been called upon. This might explain the observation that in 1881 when fewer women were employed in the industry, several were in the late 60s and 70s.



**Figure 5.10.** Percentage of women working in Hathersage, by census year for six 10 year cohorts.

Source: CEBs.

In Hathersage there was a definite slump in the employment of women between 1861 and 1891 and this particularly affected young women. Servant numbers alone were maintained, and then increased towards the end of the century. Throughout, domestic service was the largest sector and metal-working was second, up until 1881. Most women working in the needle factories were unmarried and living at home, but after 1871 they disappeared from the work-place and the greater proportion migrated from the village, there being little alternative employment locally. Women were, in general, most likely to be working in the twenties and progressively less likely to work as they got older, and as the century advanced. However, neither reduction was dramatic.

## Employment of Children

The historiography of child labour in nineteenth-century England particularly reflects the large numbers employed in the textile industry. The down-turn in the latter half of the century was due to decline in both supply and demand.<sup>90</sup> Advancing technology

<sup>90</sup> Nardinelli, C, *Child Labour and the Industrial Revolution* (Indianapolis, 1990), pp. 153-4, Cruickshank, M., *Children and Industry; Child Health and Welfare in North-west Textile Towns during the Nineteenth Century* (Manchester, 1981).

required skills not attainable in young children, and rising wages reduced the need for child earnings. To this must be added the expanding education opportunities for children in the latter third of the century.

Before the industrial revolution, children were routinely employed on farms and as part of the family economic unit in the home, for example in spinning and weaving. Children were also apprenticed at an early age to extra-family masters who undertook to provide food, clothing and shelter within the master's home in return for the child's labour.<sup>91</sup> Apprenticeships were also brokered by parish overseers as a way of placing orphaned and other poor children in homes in a manner to be sparing of the parish ratepayers. Often such placements were blatant servitude with little instructional element intended. Such might have been the case when Ann Smilter of Hathersage, aged 7 years was apprenticed in November 1812 to the Rev. Edward Eyre until the age of 21 years as a 'menial servant'.<sup>92</sup> There were 16 parish apprentices between 1800 and 1827 in Hathersage. The ages were recorded in 9 cases and were between 7 and 14 years. The release age, defined in 6 cases, was 21 years, or for females, an earlier marriage would terminate the agreement without retribution. The proposed occupation was recorded in 11 cases; 3 were domestic servants, 4 related to agriculture and 2 were to be metal workers. In only 4 of the 16 instances could the apprentice be identified in the baptism register but for 3 of these children the father had died a few months beforehand. Acute poverty was clearly a significant factor in the decision to place a parish apprentice.

Counting the numbers of children in employment, or at school, in the nineteenth century is speculative, especially prior to 1841. It is generally agreed by historians that child labour became more prevalent during the industrial revolution; in the metal trades of the west midlands, for example.<sup>93</sup> In cotton mills, 13 percent of employees were

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<sup>91</sup> Snell, K.D.M., 'The apprenticeship system in British history: the fragmentation of a cultural institution', *History of Education*, 25 (1996), pp. 303-21.

<sup>92</sup> DRO, D1970/A/PO/8.

<sup>93</sup> Hudson, P, *The Industrial Revolution* (London, 1992), p. 124; Pinchbeck, I. and Hewitt, M., *Children in English Society*, Vol 2 (London, 1973), p. 400.

under 14 years of age in 1835.<sup>94</sup> Even after 1841 there were difficulties in counting. Reporting in the decennial censuses was erratic and policy varied from census to census. In Hathersage, for example, whereas in the 1891 census over 90 percent of children between the ages of 7 and 12 years were described as scholars, less than 20 percent were so described in 1901, and 61 percent in the 1911 census.<sup>95</sup> It is also assumed that employment of children was wilfully under-reported, but this presumption may be anachronistic, as employment was often not seen to be deleterious by contemporaries.<sup>96</sup>

In Hathersage, the proportion of children between the age of 7 and 14 years who were allocated an occupation rose to 15 percent in 1861 and then fell to between 3 and 6 percent for the remainder of the century as shown in figure 5.11. Apart from 1861, employment of children of 8 years or younger was rare, making up 2.1 percent of the 236 children identified from the 1841 to 1911 censuses.<sup>97</sup> The minimum age of employed children rose to 10 years before 1881, consistent with the passing of the Factory Act of 1878, which forbade the employment of children less than 10 years in factories and workshops. Occasionally, younger children were domestic servants. In Hathersage, two-thirds of employed children recorded in censuses were 13 or 14 years old. Comparative figures for child employment are surprisingly hard to find in the literature. Hugh Cunningham provides a county by county table for 5 to 9 year olds in 1851 ranging from 0.05 percent for Surrey girls to 21.5 percent in Bedfordshire.<sup>98</sup> Derbyshire returned a figure close to 2 percent for boys and girls alike. The corresponding figure for Hathersage was 3.8 percent for boys and girls combined but the numbers are too small to deserve distinction. Cunningham's figures for 10 to 14

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<sup>94</sup> Dean, P. and Cole, W., *British Economic Growth, 1688-1959 Trends and Structure* (Cambridge, 1969), p. 294.

<sup>95</sup> See also: Tillott, P., 'Sources of inaccuracy in the 1851 and 1861 censuses' in Wrigley, E.A. (ed.), *Nineteenth-Century Society* (Cambridge, 1972), pp.122-4.

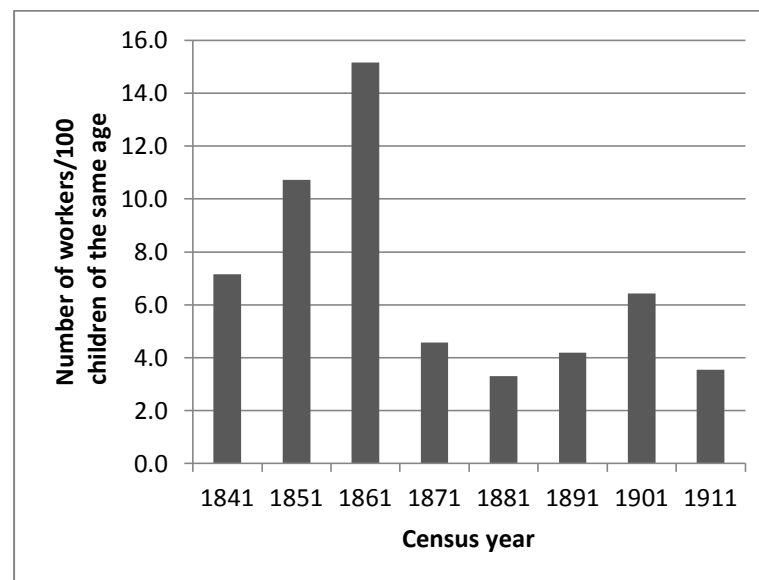
<sup>96</sup> Kirby, P., *Child Workers and Industrial Health in Britain, 1780-1850* (Woodbridge, 2013), pp. 45-7.

<sup>97</sup> The actual number of working children is likely to be at least twice this as the working life as a child is shorter than the 10 years between censuses.

<sup>98</sup> Cunningham, H, 'The employment and unemployment of children in England, 1680-1851', *Past and Present*, 126 (1990), p. 141.



year old boys are more meaningful, varying between 18 percent for Middlesex and 51.6 percent for the West Riding of Yorkshire. Derbyshire, ranked 15<sup>th</sup>, returned 41.7 percent. The corresponding figure for Hathersage in 1851 was 43 percent based on 49 boys of that age.



**Figure 5.11.** Percentage of children aged 7 to 14 years, designated as employed in Hathersage, 1841-1911.

Source: CEBs, Hathersage and Outseats.

Of 236 working children of whom 60 percent were male, 42 percent were employed in the metal industry, 27 percent as domestic servants and 13 percent in agriculture. The rising proportion of child workers seen up to the 1860s principally followed the expansion of the needle-making business in Hathersage, though the numbers of domestic servants also increased at this time as demonstrated in figure 5.12. The decline in numbers of child workers from 1871 onwards might represent a state of unmet needs, that is, unemployment associated with the downturn of the Hathersage factories rather than a change in attitude towards child employment.<sup>99</sup> Sara Horrell and Jane Humphries proposed that there was a decrease in the use of child labour after 1840, except in mining. This they associated with the declining importance of the

<sup>99</sup> Cunningham, 'Employment and unemployment of children', pp.115 and 149.

child's contribution to family income.<sup>100</sup> They followed the conclusion of Nardinelli that low family income made it more likely that a child would be thrust into paid employment.<sup>101</sup> It is possible that there has been an over-emphasis on family income and wage levels in the determination of the level of child employment as summarised by Humphries.<sup>102</sup> While these factors may have been important in the textile-producing regions, it is important to entertain the possibility that in some localities or industries alternative explanations may be applicable. The continued rise in child employment in Hathersage beyond 1861, and the relatively loose association of father's employment in the metal industry (see below), would suggest that the opportunity to work had an attraction above earning money for the family. The wire-workers in the factories of Hathersage lived locally and the rising output around mid-century required more workers. Children represented an elastic source of cheap labour. Furthermore, the industry was characterised by considerable division of labour, so that a limited range of skills was required and could be realistically acquired in a short time. In Hathersage, it appears that child employment in agriculture was already declining by 1840, which accords with Joyce Burnette's conclusion that the use of young boys as day workers peaked around 1820.<sup>103</sup>

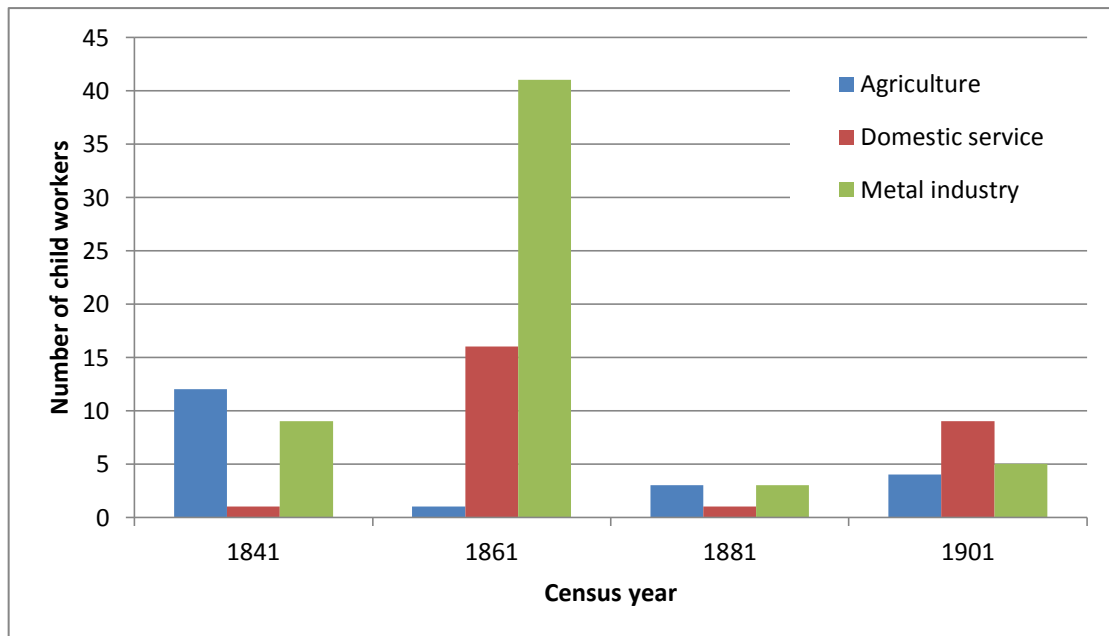
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<sup>100</sup> Horrell, S. and Humphries, J., 'The exploitation of little children: child labor and the family economy in the industrial revolution', *Explorations in Economic History*, 32 (1995), p.496, Humphries, J., 'Childhood and child labour in the British industrial revolution', *Economic History Review*, 66 (2013), p. 400.

<sup>101</sup> Nardinelli, *Child Labor*, p. 154.

<sup>102</sup> Humphries, 'Child labour in the British industrial revolution', pp. 407-14.

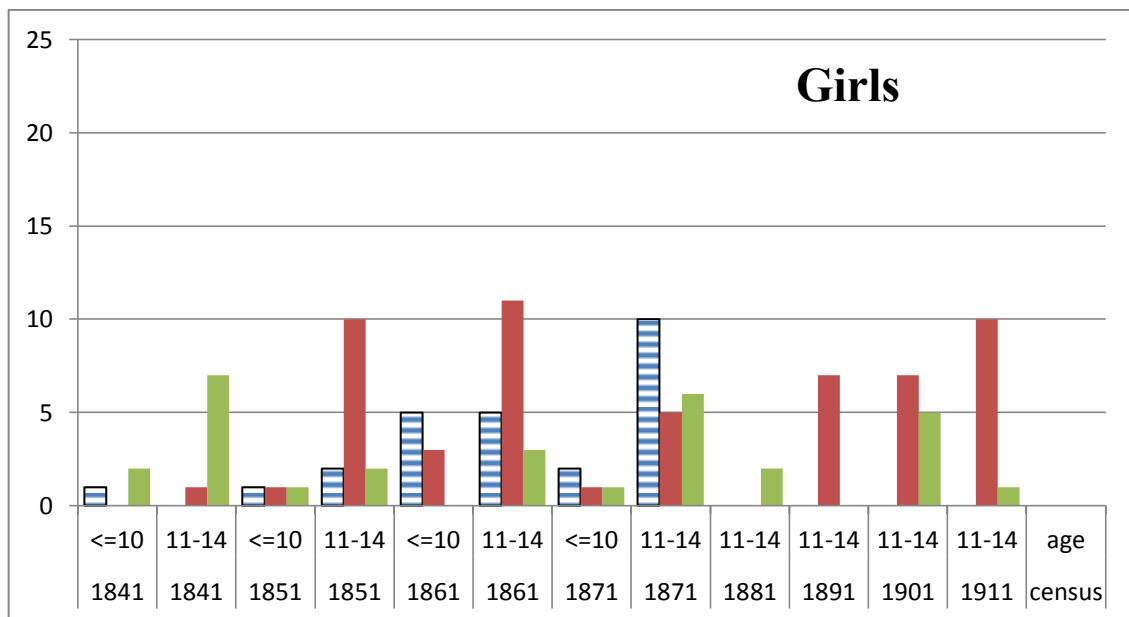
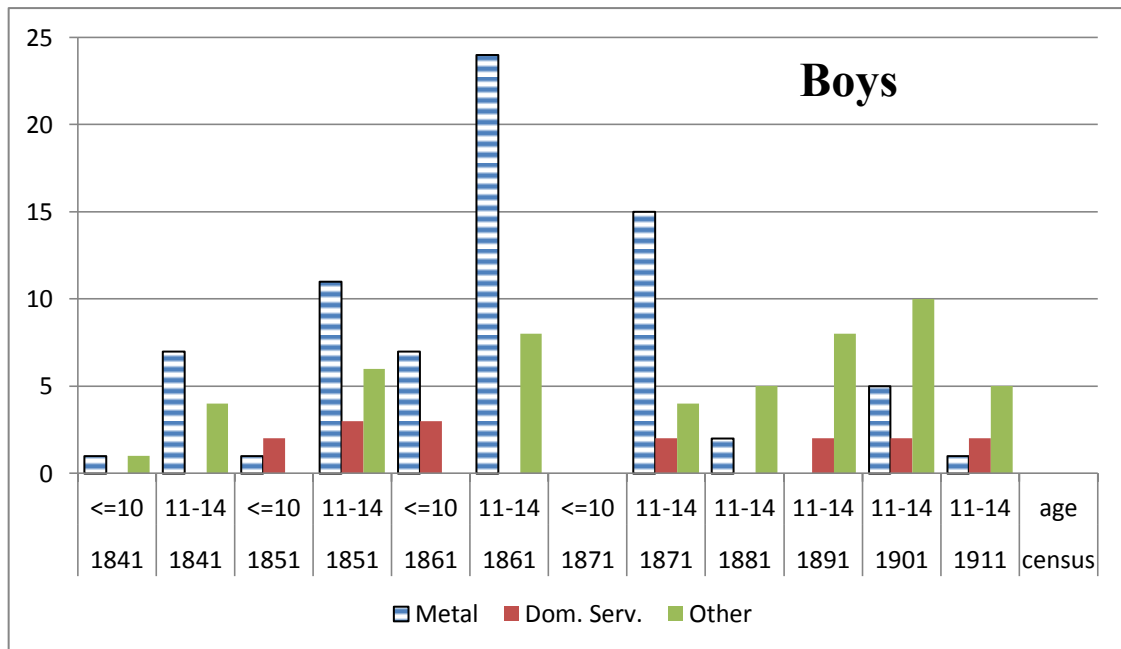
<sup>103</sup> Burnette, J., 'Child day-labourers in agriculture: evidence from farm accounts, 1740-1850', *Economic History Review*, 65 (2012), pp. 1077-99.



**Figure 5.12.** Numbers of children, 7 to 14 years of age employed in the three dominant industries, Hathersage, 1841-1901.

Source: CEBs, Hathersage and Outseats

A greater insight into the decline of child labour can be obtained by examination of the detail. By separating boys and girls and dividing the industries into metal working, domestic service and others (mostly agriculture, quarrying and general labourers), significant changes can be seen occurring over time. These are represented in figure 5.13. Domestic service dominated girls' occupations but hardly featured in that of males. Metal-working accounted for most male children's work until after 1871 when the industry was contracting in Hathersage. The increased number of girls working in the metal trade in 1871, when already there were fewer boys, is coincident with the temporary change of emphasis from needle-making to umbrella manufacture in Hathersage. It also paralleled the trend in women's employment, mentioned in the previous section. Interestingly, the employment of under-10 year olds had virtually disappeared by 1871 ahead of the 1878 Factory Act.



**Figure 5.13.** Numbers of children employed in three occupational activities for ages 10 and under, and 11 to 14 years. Hathersage, 1841-1911.

Note: Where no children were employed, the age category is omitted.

Source: CEBs, 1841-1911, Hathersage and Outseats.

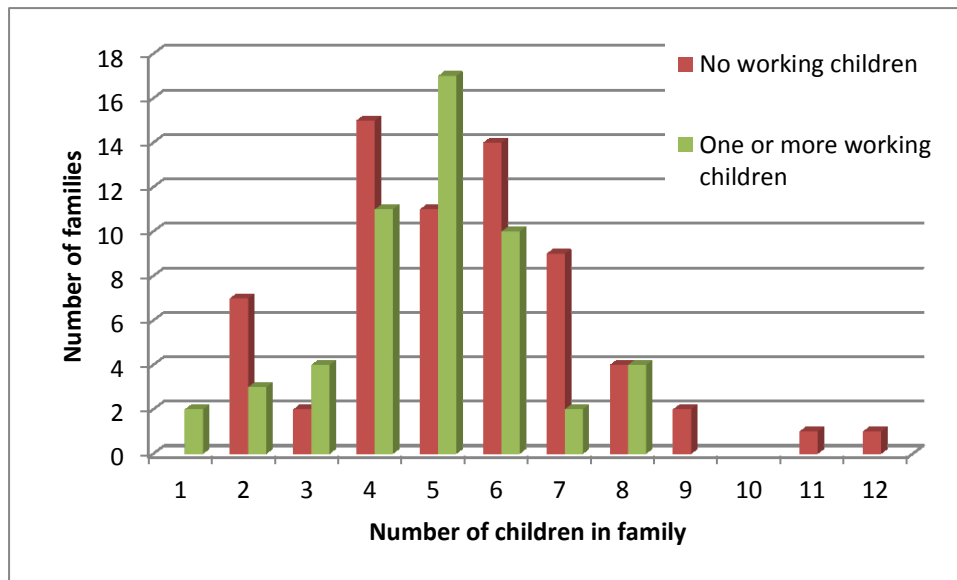
It has been suggested that parents were keen to thrust their children into earning at the soonest possible opportunity. However, the nineteenth-century census data of Hathersage indicates that working children of 14 years and under were a small minority, on average only 6.6 percent between 1841 and 1911. This raises the question of what

factors pushed (or pulled) children into the workplace. As the hackle-pin and needle-making industry boomed in the 1850s and early 1860s, there were opportunities for youngsters to join the workforce. Further clues come from examining the family structure and the relationship of the working child to the head of household. Only one child was declared an apprentice and one a boarder, out of 212 working children of 14 and under where the relationship was known. 39 (18 percent) were servants but 77 percent were living in the family home.<sup>104</sup> There is no direct evidence for degrees of wealth but family size may be an indicator. Figure 5.14 compares 66 families recorded in the 1861 census containing no working children between the ages of 7 and 14 years and 53 families with one or more working children of the same age. The expectation was that working children would be more prevalent in large families but this was not the case. Only in families of 5 children was it more likely that one or more children would be employed. A possible explanation is that in families of more than 5 children, the eldest was likely to exceed 14 years of age and would be contributing to the family income. Families of 3 or fewer dependent children might be managed on the father's wages. Certainly, a working child was more likely to have between 3 and 5 siblings than any other number.<sup>105</sup> More significantly, the families containing working children were more likely to be single-parent families, 25 percent compared to 10.6 percent for families containing 7 to 14 year olds who were not working.

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<sup>104</sup> 150 sons or daughters, 12 grandchildren, 2 step-children.

<sup>105</sup> This is a simplistic argument. Clearly many factors are involved which include the exact ages and gender of the siblings, the presence of siblings unable to work for physical or mental reasons and the need for help in the home.



**Figure 5.14.** Number of families containing working and non-working children, aged 7 to 14 years, Hathersage, 1861.

Source: CEBs, 1861 census for Hathersage and Outseats.

The major employer of children was the needle factories in Hathersage. 100 children were recorded by the censuses between 1841 and 1911. Given that the majority were aged between 10 and 14 years, their working life may have been five years or less, half the inter-censual period. The total figure, therefore may have been in the region of 250 children during the stated period. The 100 children identified therefore represent a reasonable sized sample to answer the question as to whether children tended to work in the same industry as their fathers. The father's occupation was known for 86 of the 100 children. 57 percent of fathers were in the metal industry, 21 percent in agriculture and 15 percent in quarrying and stone working. These figures are not very different from the occupational make-up of the community though metalworkers are significantly over-represented, suggesting that there was some degree of following the father's occupation. A similar degree of bias was noted for working wives (see earlier). This is consistent with the findings of Chapman and Abbott in Lancashire where sons were three times more likely to enter the trade of their father than any other.<sup>106</sup>

<sup>106</sup> Chapman, S. and Abbott, W., 'The tendency of children to enter their father's trades', *Journal of the Royal Statistical Society*, 76 (1913), pp. 599-604.

In the 1841 census 9 children were employed in the needle industry, three were wire-drawers one of whom was only 10 years old, consistent with the views of Rollins that young boys were able to perform this skill.<sup>107</sup> 7 of these youngsters were still to be found working in the needle-making factories 10 years later though 2 had migrated. After 1871, the industry was in decline and the picture was very different. Of the 25 children working in 1871, only 7 were still working in the metal trade 10 years later and only 2 in Hathersage. Indeed 15 had migrated, 2 were dead and a further 3 could not be identified in the 1881 census, possibly emigrated from the mainland. Although the numbers are small this is dramatic illustration of the significant migration, especially of young metal workers, at that time. It is likely that this out migration continued into the twentieth century as of the 5 metal workers under the age of 15 recorded in the 1901 census of Hathersage only one remained, as a general labourer in 1911. The remainder could not be identified and almost certainly had migrated.

Although much has been written about health and disease amongst child factory workers, particularly the textile industries.<sup>108</sup> There were numerous submissions to various parliamentary commissions, many biased or ill-informed.<sup>109</sup> The main retrospective conclusion is that the factory environment was often less of a threat than working in agriculture or mines except for the risk of respiratory disease from air-borne particles. No data is available regarding working conditions for children in the Hathersage mills. Occasionally young persons were involved in needle-grinding. William Kay was a 13-year-old needle-grinder in the 1861 census, but grinders were usually adults.<sup>110</sup> The effects of stone and metal dust will be considered in the following chapter. In general, deaths resulting either from industrial accidents or from

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<sup>107</sup> Rollins, J., *A History of Redditch* (Chichester, 1984), p. 59.

<sup>108</sup> Kirby, *Child Workers and Industrial Health*, Humphries, *Childhood and Child Labour*, McCunnie, T., 'Regulation and health of child workers in the mid-Victorian silk industry', L.P.S. 74 (2005), pp. 54-74, Cruickshank, *Children and Industry*.

<sup>109</sup> Kirby, *Child Workers*, pp. 61-98.

<sup>110</sup> William Kay migrated to Leeds where he continued to work as a needle-grinder and died at the age of 38 years.

occupational diseases were not investigated as such by coroners, who often recorded a cause of death as 'accidental'.<sup>111</sup>

The CEBs for Hathersage do not suggest that children were employed in the needle-making mills contrary to current legislation, at least regarding age. However, both Tobias Child (two charges) and Robert Cook (4 charges) were fined for employing a child without a school attendance certificate in 1885.<sup>112</sup> Again in 1894, Robert Charles Cook was fined for two cases of employing a person without a fitness certificate and John Cook for obstructing the factory inspector.<sup>113</sup>

It is difficult to establish accurate numbers of child workers in the past not least because their employment periods were short and many remain hidden between census dates. In nineteenth-century Hathersage, between 3 and 6 percent of 7-14 year-olds were described as working in the 1841-1911 census, except for 1861 where the figure was 15 percent. Metal working was the largest child employer mid-century but domestic service peaked at the same time. This combination would suggest that while there was sufficient money to employ domestic help, more children were working not primarily to earn money for the family but because they wanted to. This scenario may not have applied to all families, however. Child workers were more frequently found in households containing 3 to 5 children and single parent families. It can be argued that such households might be most short of cash. The fathers of more than half the children working in the needle factories also worked there, suggesting that knowing the hirer of labour helped in obtaining a position. As the needle industry faltered after 1871, we find that migration was a favoured option. 15 of the 25 children employed in the metal industry in 1871 had left the village by 1881, following a similar option to women metal workers.

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<sup>111</sup> Kirby, *Child Workers*, p. 11.

<sup>112</sup> DRO, D232/1/3, #779-84.

<sup>113</sup> DRO, D232/1/4, #286-8.



## Summary of Chapters 4 and 5<sup>114</sup>

The population of Hathersage grew appreciably after 1881 and evidence from age/sex distributions is suggestive of progressive outmigration of young adults. The proportion of natives began to fall after 1871 while the influx from Sheffield did not start until after 1891 and was almost certainly an effect of the railway link. The MHS followed the national pattern, though at a higher level until it converged in 1911. The numbers of both co-residential kin and servants were lower than agricultural areas in other parts of the country and remained static throughout the period 1851 to 1911. The numbers of children and grandchildren per household fell progressively. 33 percent of households in Hathersage included non-conjugal kin which is higher than observed in Preston in 1851. Farmers were less like to offer lodgings than metal and quarry workers and their households were more likely to contain three generations, that is, two nuclear families.

Although the Hathersage aged population grew more quickly than the England average the aged dependency ratio did not rise significantly. Despite the prevailing changes in welfare, only elderly widowed males seem to have reduced their need to work, although widowed females of all ages did show a progressive decline in employment. Rather fewer elderly lived with kin than in Reay's Kentish villages and rather more still had a spouse. In 1851, 68 percent of married elderly still had children in their household. Widows were more likely to live with their children if married, but half of the lone widows had a child living in the village. Half of Hathersage married males had no surviving parents but 24 out of 27 of those who did had that parent living in Hathersage.

For women the major employment sector was domestic service though the needle works was a significant employer until the mid-1870s. Overall more women were employed per 1000 population in 1851 than subsequently and after needle production peaked, outmigration was a common outcome. There was no indication that employment of women declined as age advanced, unlike Preston, though the most likely age for a woman to work was in her twenties.

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<sup>114</sup> Chapters 4 and 5, both dealing with demographic data and originally a single chapter, have been divided to aid assimilation.

The employment of children appeared to follow similar a trend to Derbyshire except that when the needle industry was flourishing, child labour was recruited. When the manufactories came upon hard times, the young migrated from the village.

In chapters 4 and 5 we have seen how the structure of the community and household make-up changed during the century. Demographic indices tracked the slow changes observable across the land, but in some cases such as employment of children, the fortunes of the local industrial sector had a major effect.

## Chapter 6. Health and Death

Death is a well-defined point, easily identifiable from historical sources. It is also one which is sensitive to living and working conditions and one widely used to monitor efforts to improve the health of populations. The expectation for Hathersage was that infant mortality could be used as a barometer of a combination of living and environmental conditions and that adult male lifespan might reflect the specific risks of working in the needle industry.

There are two aspects of health and mortality found in the literature but not available to us in this study. First, maternal mortality is not considered because of the very small numbers involved. In the 1851 census for example, there were five widowed male heads with children under ten years of age in the household. Secondly, there is no documentary evidence of how health care was administered in the community. There is no evidence of a doctor resident in the village for any length of time. That is, it is possible that one was resident in the intercensal years.

### Infant mortality

The first year of life is the most hazardous and the infant mortality rate (IMR) expresses the proportion of children who do not survive beyond it. It was introduced in 1875 by William Farr and rapidly became an accepted and widely adopted measure of the well-being of children and the wider environment.<sup>1</sup> The theoretical potential value of locality-specific IMRs is great and would allow comparison between geographic environments, and degrees of industrialization as well as the mapping of epidemics and food shortages. Its value continues to the present day.<sup>2</sup>

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<sup>1</sup> Galley, C., 'Infant mortality', *LPS*, 82 (2009), p. 71.

<sup>2</sup> Newman, G., *Infant Mortality: A Social Problem* (New York, 1907), Garrett, E., Galley, C., Shelton, N. and Woods, R. (eds), *Infant Mortality: A Continuing Social Problem* (Aldershot, 2006), Smith, R., 'Migration, mortality and medicalisation; investigating the long-run epidemiological consequences of urbanisation, 1600-1945' *LPS Conference*, Cambridge, November 2014.

IMR is expressed as the ratio of the number of infant deaths per 1000 live births over the period of a year. There are several variations, the most important being the period IMR and the cohort IMR.

$$\text{Period IMR} = \frac{\text{number of infant deaths over one year} \times 1000}{\text{number of live births during the same period}}$$

$$\text{Cohort IMR} = \frac{\text{number of infant deaths occurring in the denominator population} \times 1000}{\text{number of live births in the specific population}}$$

The difference is explained by Galley who concluded that in practice there is little numerical difference between these two measures.<sup>3</sup> In the absence of recorded birth and death dates, ecclesiastical baptism and burial registers are used as surrogates. This approach is problematic for a number of reasons including variable birth-baptism intervals, inconsistent recording of age in burial registers, and the irregular inclusion of very early deaths in burial registers on the basis that only baptised babies were eligible for inclusion. In- and outmigration also contribute to inaccuracies.

Wrigley et al suggest that the national IMR rose from about 175 in the late sixteenth century to 200 by the late eighteenth and then fell to around 150 during most of the nineteenth century.<sup>4</sup> However it has been found in my research that the calculation of period IMR, particularly as a time series, can deviate greatly from a carefully calculated cohort IMR. The magnitude of these discrepancies is such that it is judged to be inappropriate to apply such calculations of infant mortality in Hathersage during the nineteenth century. Justification of this position will be found in Appendix 1.

In view of the findings in the appendix any comment on changes of IMR with industrialization would be ill-founded. However, cohort IMRs were calculated for the years 1832 and 1840, subject to the limitations described in the appendix, suggestive of a figure a little under 150/1000 births which is similar to the national average for the period. The absolute limits of the average of the 9 years lay between 82 and 308/1000.

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<sup>3</sup> Galley, 'Infant mortality', pp. 72-73.

<sup>4</sup> Wrigley, E.A., Davies, R., Oeppen, J. and Schofield, R., *English Population History from Family Reconstitution, 1580-1837* (Cambridge, 1997), p. 224.

To summarise, while the period IMR is an attractive concept in theory, in practice it cannot be applied to nineteenth-century data with any degree of confidence. Cohort IMRs are more reliable but are impractically time consuming.<sup>5</sup> They are virtually impossible to contemplate without census information and are therefore limited to the second half of the nineteenth century. Although it is disappointing not to be able to correlate infant mortality and the industrialization of Hathersage, much can be gained from the study of the effect on the adult population, particularly those working in the metal industry.

### **Grinders' disease and other health and safety issues**

Grinder's disease (GD) or silicosis, as we know it today, is a condition affecting the respiratory tract due to the inhalation of particulate silica.<sup>6</sup> GD considerably shortened life. George Calvert Holland concluded in 1843 that a needle-grinder aged 20 years had a life expectancy of just over 11 years compared to the average for England and Wales of 35 years.<sup>7</sup> In the nineteenth century GD was attributed to the inhalation of particles of stone and metal released into the air during grinding of needles, edge tools and other iron products such as forks and fenders. Interestingly, it was a Dr James Johnstone of Worcester who first documented the life shortening pulmonary condition associated with the dry grinding and pointing of needles in the Redditch area. He also suggested a simple preventative measure similar to a bee-keepers' headgear.<sup>8</sup>

Although the shaping of iron tools using a rotating gritstone or limestone grindstone was centuries old the disease did not appear until the mid-eighteenth century for reasons explained by Dr Arnold Knight.<sup>9</sup> Prior to this time working practices did not involve

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<sup>5</sup> Galley, 'Infant mortality', p. 73.

<sup>6</sup> Weatherall, D., Ledingham, J. and Worrall, D. (eds), *Oxford Textbook of Medicine* (Oxford, 1987), pp.15.111-13.

<sup>7</sup> Holland, G, *The Vital Statistics of Sheffield* (London 1843), p. 204.

<sup>8</sup> Johnstone, J., 'Some account of a species of phthisis pulmonalis peculiar to persons employed in pointing of needles in the needle manufacture', *Memoirs of the Medical Society of London*, 5 (1799), pp. 89-93.

<sup>9</sup> Knight, A., 'On the grinders' asthma' in Gill, T. (ed.), *The Technical Repository*, Vol. 3 (London, 1823), p. 398-400.

specialization such that the craftsman spent only part of his working time at the grindstone. Further, grindstones were water-powered and only used when sufficient water was flowing in the stream. The workshops were often lofty with glassless windows, hence well ventilated. During the industrial revolution, grinding wheels became increasingly steam-powered; workshops or ‘hulls’ contained ten or more grindstones in ill-ventilated and low rooms. Such an arrangement led to high concentrations of airborne dust. Specialization further increased the daily exposure of grinders. Further, dry grinding, which created considerably more suspended dust, only became common after 1800. It was popular because of the higher rate at which the iron could be ground compared with wet grinding.<sup>10</sup> Gradually mechanisms were introduced to reduce inhalation of particulates such that GD became less common as the nineteenth century ended and rare after an Act of Parliament transferred the responsibility for protecting the workforce to the employer in 1927.<sup>11</sup>

The importance of the disease is emphasised by considering the number of men who were involved in grinding. In 1794, Lloyd estimated there to be 1485 grinders employed in Sheffield.<sup>12</sup> This had risen to 5,029 in 1857.<sup>13</sup> Sheffield as a centre of edge tool production provided ample material for the study of GD. Drs J.C. Hall and G.C. Holland in particular took up the challenge, reporting extensively on the pathology and epidemiology of the condition, though they were less successful in treatment.<sup>14</sup>

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<sup>10</sup> Johnson, M., ‘The history of grinders’ asthma in Sheffield’, *Trans. Hunter Archaeological Society*, 11 (1981), p. 67.

<sup>11</sup> This legislation made employers liable to pay compensation to grinders using sandstone wheels should they develop silicosis or tuberculosis. Metal Grinding Industries (Silicosis) Scheme, 1927. TNA, PIN 12/23

<sup>12</sup> Lloyd, G., *The Cutlery Trades*, (London, 1913), p. 157.

<sup>13</sup> Hall, J., *On the Prevention and Treatment of Grinders' Disease* (London, 1857), p. 22.

<sup>14</sup> It is worth pointing out that the majority of the contemporary work on GD involved wet and dry grinding of saws, scythes, knives of all sorts and other iron and steel edge tools, files and other iron products. There was little or no needle-grinding performed in Sheffield but it is well established that needle-pointing and polishing is as hazardous as the grinding of edge tools. Indeed Hall estimated there to be only 12 needle-pointers (2.3 per cent of grinders) in Sheffield in 1857. (Hall, *Prevention*, p. 22.) There is also evidence that Drs Hall and Holland visited Hathersage.

The inhaled dust produced inflammation and thickening of the upper airways causing soreness, hoarseness, a dry cough and shortness of breath. The function of the cilia of the lining cells was impaired, allowing particles to accumulate in lung tissue as bean-sized black nodules close to bronchi and within lymph nodes. Smaller airways dilated and their walls became thickened and inflamed. Other features included adhesions between the layers of the pleura and thickening of the pericardium. As the condition progresses cough and shortness of breath become more prominent together with anorexia and weight loss leading to general weakness symptomatic of respiratory and cardiac failure. Damaged lung tissue was susceptible to infection with tuberculosis which often hastened death. Symptoms, particularly arising from the upper respiratory tract, were relieved to some extent by increasing fluid intake and no doubt this explains the reputation acquired by grinders of being excessively partial to their beer. A high intake of alcohol appeared, indeed to be protective.<sup>15</sup> A drunken state would have reduced their capacity to work and hence their exposure to the lethal dust.

It soon became apparent, by observing the average age of those employed, that certain grinding procedures were more dangerous than others.<sup>16</sup> There seems little doubt those engaged in dry grinding would be exposed to greater concentrations of dust.<sup>17</sup> Early exposure, from the age of 14, less commonly as young as 10 years, was associated with rapid onset of the disease and the associated disability.

Treatment with tonics, cough suppressants or expectorants was of little or no value. The only efficacious manoeuvre was removal from the grinding wheel, a seldom realizable option. Prevention from today's perspective offered an obvious route to improve the life quality of grinders and indeed to save lives. However, there were many obstacles and progress was slow. The primary retardant to instituting safety measures was the cost either to the mill owner, as would be the case in Hathersage, or the individual

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<sup>15</sup> Hall, *Prevention*, p. 31.

<sup>16</sup> *Ibid.*, p. 22.

<sup>17</sup> *Ibid.*, p. 24. Needle-pointing was always carried out with a dry stone. Grinding of edge tools often used a wet stone. The lowest part of the stone was enclosed in a trough which could be filled with water. A film of water was raised by the rotating stone and this would trap some of the stone dust released by the abrasive action on the stone and iron work-piece.

grinder who rented a 'trough' in Sheffield.<sup>18</sup> Where the safety device involved the grinder wearing protective apparatus, there was resistance on the grounds of inconvenience and restriction of movement. Dr Jackson recalled in 1857 that needle-grinders agreed to destroy their magnetic masks on the grounds that their use would lead to men leaving the trade with the consequent depression of wages. A good income was regarded as more important than a longer health life.<sup>19</sup> The adoption of any safety device depended upon it being acceptable to the grinders, cheap to produce, easy and inexpensive to install and maintain and of demonstrable benefit. This last requirement was perhaps the most difficult for despite the effects of GD being plain for all to see in the 'hull', anything which encumbered the grinder or slowed his rate of production had an immediate effect on his pay packet.<sup>20</sup> Figure 6.1. illustrates a razor-grinders hull which is thought to be similar to a needle-pointers work-station.

An early protective device was constructed by a John Prior of Yorkshire. It consisted of a wooden casing surrounding the grinding wheel connected to a chimney through which air was circulated using a bellows. This construction was not accepted, primarily due to cost. Later John Elliott realized that the rotating grindstone created sufficient draft to expel dust through the casing and to the chimney.<sup>21</sup> His adaption made the device affordable and it became widely adopted.<sup>22</sup>

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<sup>18</sup> Johnson, 'History of grinders' asthma', p 65.

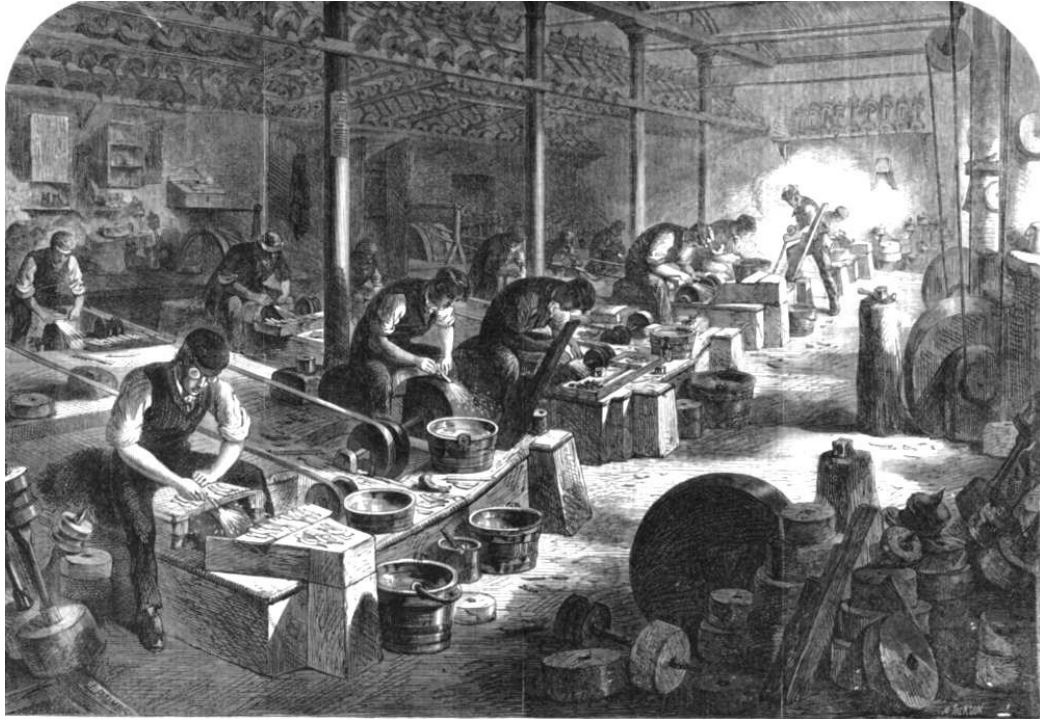
<sup>19</sup> Jackson, T., 'Diseases of special occupations', *B.M.J.* April 4<sup>th</sup>, 1857, p. 289.

<sup>20</sup> 'Hull' was the name applied to the workshop or room in which several grinders worked.

<sup>21</sup> Gill, T., *The Technical Repository*, 3, (London, 1823), pp. 397-8.

<sup>22</sup> There is evidence that the first attempt to reduce inhalation of dust was made by Thomas Wood of Great Berkhamsted (Hertfordshire). His method was to enclose the wheel and to hang a damp cloth between the operator and the air stream issuing from the bottom of the wheel. *The Tradesman*, 13 (1814), p. 391.





**Figure 6.1.** Nineteenth-century razor-grinder's hull, Sheffield.

Source: The steel manufactures of Sheffield: The 'Hull,' or workshop, of the razor-grinders.

<<http://www.victorianweb.org/art/architecture/sheffield/26.html>>

In 1821 J. H. Abraham produced a system consisting of a wet sacking curtain hung from the roof to the wheel and an array of magnets close to the top of the grindstone to collect iron particles. A further ring of magnets was slung about the neck of the grinder. The apparatus was tested by Cocker and Sons in Hathersage as well as Bartleet and Sons, Henry Milward and John English in Redditch.<sup>23</sup> By using a magnetic mouth guard it was shown that more particles reached the mouth in a quarter of an hour when not using the guard and magnets, than in a whole day when using the guard.<sup>24</sup> The apparatus was praised by employers and grinders but failed to gain general acceptance, perhaps due to the greater cost, complexity and encumbrance. Dr Holland introduced a blower into the hulls of Sheffield in 1876, though this device was not used in Hathersage.<sup>25</sup>

<sup>23</sup> Berrow's Worcester Journal, 6<sup>th</sup> June 1822.

<sup>24</sup> Gill, *The Technical Repository*, pp. 256-68.

<sup>25</sup> *SARI*, 20<sup>th</sup> April 1876, p. 8.

Dr Hall observed the effectiveness of fan assisted air extraction in several ‘hulls’ mid-century, sometimes in conjunction with a wadding face-mask but noted that their use was inconsistent, even within the confines of a single ‘hull’.<sup>26</sup> The fan assisted dust extractor based on the designs of Prior and Elliott were the most widely used methods of reducing exposure to silica dust into the twentieth century.

Before considering mortality data from Hathersage brief mention should be made of two other health risks to which the grinders were exposed. As a result of grinding of iron a shower of metallic particles issued tangentially from the wheel. Smaller particles burned completely but larger particles might rebound from the nearby structures and into the face of the operator. Iron particles embedded in the cornea could threaten sight and were familiar to the eye clinic in Sheffield. Prevention using glass eye shields was easy and effective though, again, not universally accepted.<sup>27</sup> A potentially life threatening event was the breaking up of the grindstone itself. Rotating at speeds greater than 4,000 feet per minute at the edge of the wheel was considered dangerous for a dry stone but even at lower speeds stone bursts might occur especially when the stone became eccentric due to wear.<sup>28</sup> The frequency of stone bursts was reduced by improved mounting plates on the shaft and the effects of a disintegration by placing a heavy iron plate between the wheel and the operator. Isaac Bagshaw suffered a head injury when his wheel shattered in 1884 although no reports of fatalities due to this cause have been found for Hathersage.<sup>29</sup> The operator’s seat, or ‘horsing’, was also chained to the floor.<sup>30</sup> Despite these measures, limb injuries were not uncommon. Lastly, loss of digits by direct contact with the wheel was an accepted occupational hazard.

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<sup>26</sup> Hall, *Prevention*, pp. 28-30.

<sup>27</sup> *Ibid.*, p. 17.

<sup>28</sup> Johnson, ‘History of grinders’ asthma’, p. 72.

<sup>28</sup> Lloyd, *Cutlery Trade*, p. 228.

<sup>29</sup> *SARI*, May 15<sup>th</sup> 1884, p.3.

<sup>30</sup> Lloyd, *Cutlery Trade*, p. 228.

Emery wheels were introduced into grinding hulls in Sheffield in the 1880s. These were initially run dry and heating of the metal was a disadvantage. However, when run wet their advantages of lasting longer, being resistant to disintegration and needing less operator pressure came to the fore.<sup>31</sup> It is not known whether emery wheels were introduced in Hathersage.

Between 1841 and 1913, 134 deaths are recorded of men who worked as wire-drawers or needle-makers in Hathersage. It would have been interesting to be able to compare the recorded cause of death in metal workers with age-matched agricultural workers and quarrymen in Hathersage but practical and theoretical difficulties have made this exercise impossible.<sup>32</sup> In addition, as Anne Hardy asserts, 'registered causes of death often bear only an approximation to the truth'.<sup>33</sup> She cites the evolution of disease categorization especially in the early years of registration, the frequency of non-certification and the ambiguity of diagnosis which particularly affected chronic diseases, as sources of uncertainty. Indeed, before the 1874 Act, many people died without medical attention.<sup>34</sup> Often several conditions were included on the death certificate, as is current practice, but the first mentioned may not have been the primary cause of death. This is particularly relevant to GD which was thought to predispose to infection with tubercle. Tuberculosis (TB) is a wasting disease and a common cause of death in the nineteenth century. The recording of TB was also subject to problems of nomenclature.<sup>35</sup> Thus, while GD may have been the main pathological condition, TB may have been the terminal event. GD also led to heart failure so that heart diseases and 'dropsy' may have additionally hidden the root cause of death in these unfortunate individuals. For these reasons, it is unlikely that analysis of the cause of death as recorded on death certificates would offer a helpful insight into the true incidence of GD among Hathersage needle-grinders.

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<sup>31</sup> Taylor, S-A., *Tradition and Change: the Sheffield Cutlery Trades 1870-1914*, Unpublished PhD Thesis (Sheffield, 1988), p. 44.

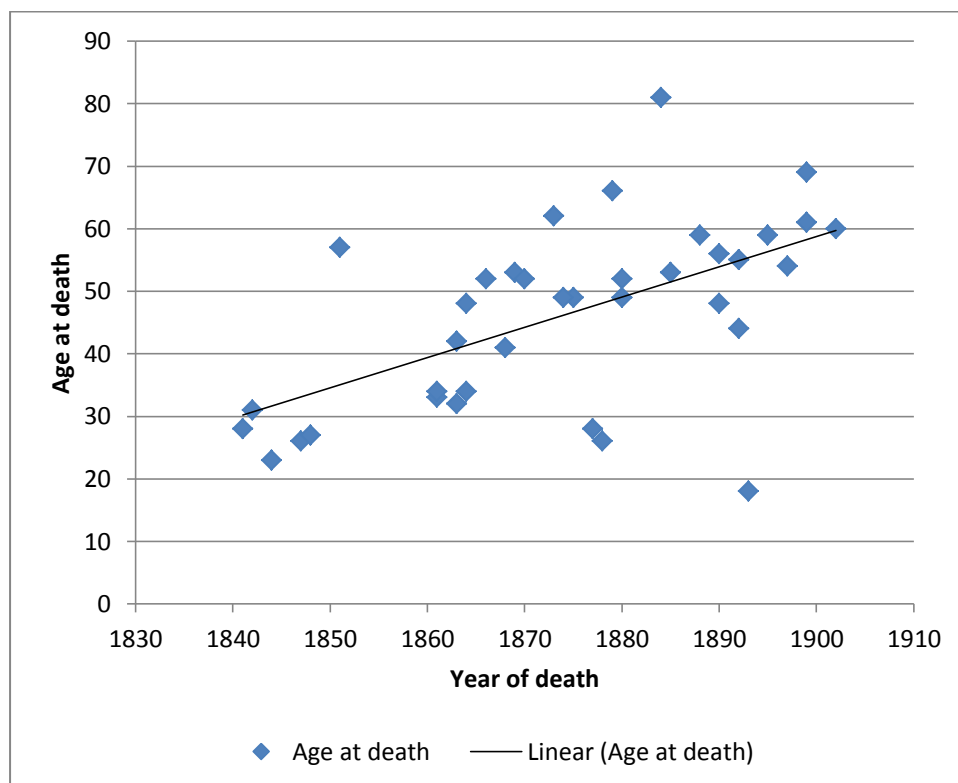
<sup>32</sup> The cost of obtaining certificates would be £2,480.

<sup>33</sup> Hardy, A., 'Death is the cure of all diseases': Using the General Register Office cause of death statistics for 1837-1920', *Social History of Medicine*, 7 (1994), p. 472.

<sup>34</sup> Births and Deaths Registration Act 1874, 37 and 38 Victoria, 88, 20.

<sup>35</sup> Padiak, J., 'Diachronic analysis of cause-of-death terminology: The case of tuberculosis', *Social Science History*, 33 (2009), pp. 341-356.

Scrutiny of the dates and age of death of metal workers can reveal some features of the morbidity of needle-makers. For example, for the 37 men whose principal occupation was grinding, their mean age of death rose from 30 years in 1840 to in excess of 57 years in 1900. A scattergram is presented in figure 6.2. The average age of death for 71 metal-workers employed in non-grinding activities was 45 and 60 years respectively. Thus the life expectancy of needle-grinders in Hathersage rose at a faster rate than non-grinders though had not caught up by the beginning of the twentieth century.



**Figure 6.2.** Age at death, for all causes of death, in 37 Hathersage needle-grinders, 1840 to 1910.

A similar result was obtained by another method which allowed comparison with other occupations. The Anglican register contained 832 burials of males over the age of 14 years between 1800 and 1910 and although no occupations were recorded, it was possible by using censuses and baptism register to establish an occupation for exactly one half of these. Occupations were divided into 4 broad categories: craftsmen (included tradesmen and shop keepers), metal-workers (including management occupations), outside workers (agricultural, labourers, postmen and gamekeepers) and quarrymen and stone masons. These four groups accounted for 386. Best fit lines were

drawn for each scatter-gram of age at death against year of death. The mean age at death was read off for 1840 and 1900. This showed that metal-workers had the lowest life expectancy dying at an average of 36 years in 1840 and outside workers the highest at 56 years. Lines converged towards a range of 60 to 65 years in 1900. The exception was for stone masons and quarry workers whose average age at death declined during the period. The reason for this is assumed to be that the construction of the Totley tunnel was associated with several fatalities. The data is summarised in table 6.1. Nineteenth-century needle-grinders lived, on average, ten years less than those involved in other metal related occupations such as wire-drawers, needle-hardeners, cutters and management.

**Table 6.1.** Mean age at death of Hathersage males in 1840 and 1900 by occupation.

	1840	1900	Number
Craftsmen	48.6	64.2	56
Metal workers	36.0	65.4	102
Outside workers	56.1	62.6	176
Stone quarrymen	59.9	50.7	52
All	50	61	386

Although it was not possible to use infant mortality as an indicator of environmental quality in Hathersage during the nineteenth century, the age of death proved more reliable. In common with expectation, the needle-workers accrued a lower life expectancy than craftsmen and shopkeepers. Both groups enjoyed a shorter life than outside workers such as agricultural and general labourers. These differences had disappeared by the time the century ended. Needle-grinders seemed to be particularly short-lived by 10 years compared with other factory workers. It is not known how many of the Hathersage grinders were affected by GD or how many died of that condition.

## Chapter 7. Migration

Moving from one location to another is effected for a purpose, often calculated to satisfy a basic instinct such as survival or procreation. In community studies the majority of movements are associated with procuring employment as a primary objective or improving housing for which employment is a necessary prerequisite.<sup>1</sup> Jason Long suggests that rural to urban migration was associated with economic benefit, but this was by no means universally realised or of primary concern.<sup>2</sup> A proportion of moves occurred temporally close to marriage: when a man moved to his wife's parish he needed to gain new employment so more often it was the bride who relocated.<sup>3</sup> In the previous chapter it was observed that this relationship also applied to second marriages. There were some special cases, for example: children moving to further education at a boarding school or university, ageing widows moving to live with a child, or imposed migration as judicial punishment, but these situations were numerically fewer. A further generalisation could be reasonably postulated: that the inclination of an individual is to move the shortest distance in order to achieve the required objective. For example, in 1851, 42.5 per cent of the inhabitants of Plymouth were natives and a further 40 per cent had been born in Devon or Cornwall.<sup>4</sup> Thus in-migration and outmigration are a manifestation of the balance between employment opportunities and the material needs of the community including those living in the surrounding area modulated by cultural and idiosyncratic factors.

The foregoing argument leads to a number of expectations relating to any community's migration pattern. It is likely to be specific to that community, dependant on its

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<sup>1</sup> Pooley, C., 'How people moved: researching the experience of mobility in the past', *LPS*, 82 (2009), pp. 63-70, Nicholas, S. and Shergold, P., 'Internal migration in England, 1818-1839', *Journal of Historical Geography*, 13 (1987), pp. 155-68.

<sup>2</sup> Long, J., 'Rural-urban migration and socioeconomic mobility in Victorian Britain', *Journal of Economic History*, 65 (2005), pp. 1-35.

<sup>3</sup> Snell, K.D.M., *Parish and Belonging Community, Identity and Welfare in England and Wales, 1700-1950* (Cambridge, 2006), p. 181 et seq.

<sup>4</sup> Brayshay, M. and Pointon, V., 'Migration and the social geography of mid-nineteenth century Plymouth', *Devon Historian*, 28 (1984), p. 4.

geography and the functional distance and character of nearby settlements.<sup>5</sup> We may expect migration to evolve over time due to changing local conditions and to be different in diverse occupational groups. Inter-occupational differences may be blurred by individuals changing the nature of their work, possibly less common in the nineteenth century than the twenty-first. In any event, one would not expect migration patterns to be universal or to obey mathematical laws. Finally, the migration pattern of any settlement is an aggregate of many individual decisions and choices.

The purpose of studying population movements to and from Hathersage is to further the understanding of the relationship between the changing industry within the township and its inhabitants, and those living close by. In practical terms, we are observing movements of individuals and taking note of any differences between the behaviour of occupational groups.

In his analysis of Derbyshire names in the cutlers' apprenticeship records, Graham Ullathorne concluded that during the eighteenth century, Sheffield core names did not spread into the High Peak, while there was a tendency for High Peak inhabitants to migrate into Sheffield.<sup>6</sup> These observations concord with the widely accepted view that people moved from rural areas towards larger settlements and market towns.<sup>7</sup> Migration towards more urbanised settlements might have increased during the years of the industrial revolution but was by no means confined to it.<sup>8</sup> Our assessment of whom and how many is based upon snapshots of specific groups of people, for example,

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<sup>5</sup> Functional distance is a complex construct which varies with the good being transported and thus alters with time (relating to transport technology) and the (changing) nature of local industry. Nevertheless, it is crucial to migration patterns. Functional distance may change rapidly. In November 2010, the bridge at Cockermouth (Cumbria) was destroyed by floods dividing the community by some 20 miles.

<sup>6</sup> Ullathorne, G., 'Migration from Derbyshire to Hallamshire: the evidence of the Cutler's Company records, 1624-1814', *Northern History*, 41 (2004), p. 102.

<sup>7</sup> Longstaff, G., Rural depopulation, *Journal of the Royal Statistical Society*, 53 (1893), pp. 380-442, Ravenstein, E., 'The laws of migration', *Journal of the Royal Statistical Society*, 48 (1885), pp.167-227 and 52 (1889), pp. 214-301. (These *laws* summarise the characteristics of internal migration during the nineteenth century and have, more or less, remained unchallenged to the present time.)

<sup>8</sup> Saville, J., *Rural Depopulation in England and Wales, 1851-1951* (1957, London, 2000).

apprentices or farm servants.<sup>9</sup> Why people should be attracted to urban life remains to be answered satisfactorily. Perhaps the town offered the prospect of excitement and higher wages not experienced in the village, and the potential for expanding one's social experience. An assumption that employment opportunities, wealth or standards of living were superior in urban environments would be rash. While some migrants were able to take advantage of opportunities for betterment, for many urban life was dangerous, uncomfortable and impoverished.<sup>10</sup> It is also possible that urban drift has been over-emphasised in that most publications refer to the 'proportion of the population living in towns' rather than absolute numbers. Where urban population growth was higher than in surrounding rural areas the urban proportion would grow despite any in-migration.

### Mid-nineteenth century migration from Hathersage

Obtaining an overall view of the migrational habits of a community is a valuable first step in any study. Meaningful and informative results require a quantitative approach. The selection of the survey group is crucial. The observer's ability to keep track of individual movements subsequently is also vital. One option is to choose a population born between two arbitrary dates in a defined locality. In Chute (Wiltshire) this was appropriate because 95 per cent of births were followed by an entry in the baptismal register.<sup>11</sup> The same cannot be assumed for Hathersage. Of 229 individuals of 10 years or younger appearing in the 1841 census with subsequent strong evidence for Hathersage being their birthplace, only 83 per cent are recorded in the register of baptisms.<sup>12</sup> A more

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<sup>9</sup> Kussmaul, A., *Servants in Husbandry in Early Modern England* (Cambridge, 1981), Ullathorne, 'Migration from Derbyshire', Parton, A., 'Poor law settlement certificates and migration to and from Birmingham', *Local Population Studies*, 38 (1987), pp. 23-9. A summary of these studies, and others, appears in Side, C., *Migration from the Wiltshire Village of Chute during the Nineteenth Century*, unpublished M.A. Thesis, Leicester (2011), pp.15-23.

<sup>10</sup> Sheppard J., 'Out-migration, 1821-1851, from a Wealden parish: Chiddingly'. *Local Population Studies*, 59 (1997), pp. 13-25, King, S., 'Migrants on the margin? Mobility, integration and occupations in the West Riding, 1650-1820', *Journal of Historical Geography*, 23 (1997), pp. 284-303.

<sup>11</sup> Side, *Migration from Chute*, pp. 33 and 39. For discussion of some of the effects of the introduction of civil registrations of births on the registration of baptisms see: Ambler, R., 'Civil registration and baptism: popular perceptions of the 1836 act for registering births, death and marriages', *LPS*, 39 (1987), pp. 24-31.

<sup>12</sup> There are further complications. Protestant and Catholics recorded 2233 baptisms between 1822 and 1872 and both included a total of at least 373 non-residents. On some occasions the residence was stated, from Bamford, the closest settlement, to New York. On other occasions, no



appropriate approach in this situation is to follow a group of individuals who were alive at an instant in time, living in a defined place and within defined age limits. For example, individuals recorded as being 10 years old or less in the 1841 census for Hathersage, and confirmed as such from parish records where available.<sup>13</sup> The latter approach was adopted to determine migrational habits of the community in the mid-nineteenth century. 112 males and 142 females were followed in the censuses until their deaths, identified either in the Hathersage burial register or the Civil Registration Index of Deaths for England and Wales.<sup>14</sup>

Not infrequently individuals were absent from a census but reappeared in subsequent censuses (transient disappearances). The reasons for such omissions include emigration with return within the 20-year period spanning the missed census, administrative or transcription errors, and wilful concealment of presence at a census for personal reasons.<sup>15</sup> Transient disappearances rose to a maximum of 12 percent for males between 30 and 40 years of age and then sharply declined. A similar pattern at a lower level was seen for females. It has been estimated that between 20 and 63 percent of emigrants returned to England, depending upon their host country.<sup>16</sup> Parallel trends for males and females after the age of 40 suggest that similar factors were involved in a rising likelihood of transient disappearances.

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residence was recorded, but some names were foreign to Hathersage. Burials were only recorded in the Protestant registers and place of abode was less consistently recorded. Additionally, young children were frequently defined as 'infants' and the applied definition is uncertain. In addition, a Methodist church in Hathersage existed in the village and records are not publically available. The foregoing illustrates the uncertainty of using either birth or baptism within a community as a baseline population in a parish such as Hathersage.

<sup>13</sup> Clearly, those individuals born outside Hathersage and those not baptised are more likely to be included while being over 10 years old at the time of the 1841 census as their age could not be confirmed. However, they amounted to less than 3 per cent of the total, assuming a two-year margin for age in subsequent censuses.

<sup>14</sup> [www.freebmd.org.uk](http://www.freebmd.org.uk) was used for this purpose which has now published on-line virtually 100% of records in the study period. It was not always possible to make a positive match.

<sup>15</sup> A possible example is premarital co-habitation as a number of omissions seem to have occurred in a census shortly preceding marriage, particularly for women. Males most frequently disappeared on leaving home, possibly while a servant. Overall, of 254 individuals, 44 exhibited transient disappearance. These omissions were twice as frequent in males though it is possible that some female omissions are hidden within the permanent losses.

<sup>16</sup> Pooley, C.G. and Turnbull, J., *Migration and Mobility in Britain Since the eighteenth Century* (London, Routledge, 1998), p. 285.

A significant proportion of individuals disappeared from the records permanently: 23 percent of males and 44 per cent of females. Figure 7.1 shows that the sum of identified deaths and permanent losses is similar for males and females suggesting that a proportion of the female losses were due to unidentified deaths for the reasons cited below. The most likely reason for permanent loss was judged to be emigration across the seas, and in the case of females, inability to identify the marriage and/or name change.<sup>17</sup> The latter reason explains the markedly higher level of permanent disappearance for females up to the age of 40 years (1871-1881 censuses in figure 7.1) but does not explain the rise in late disappearances. It is not possible to conclude whether females were more or less likely to migrate across the sea as the greater number of female disappearances is partly due to difficulties in tracing women through marriage. The comparatively low level of male disappearances suggests a relatively small number of emigrations in the 1830-1841 cohort of births in Hathersage. Figure 7.1 shows that a greater proportion of males than females remained in Hathersage. This is consistent with Ravenstein's assertion that more females migrated than males though the difference is small. Alexander and Steidl have argued that Ravenstein's conclusion that females were greater migrators came about because the population in general became progressively more female-dominated due to excess mortality and emigration in males.<sup>18</sup>

The distance/age plot presented in figure 7.2 shows that few individuals migrated for the first time after the age of 35 years and few travelled more than 70 miles from Hathersage: the majority moved 10 to 12 miles to Sheffield and its surrounding villages. The distance moved does not seem to alter with age neither is there any evidence of attraction to a distant metropolis. This contrasts with Chute, where most moves were made between the ages of 12 and 30 years to London some 85-95 miles distant.<sup>19</sup> The

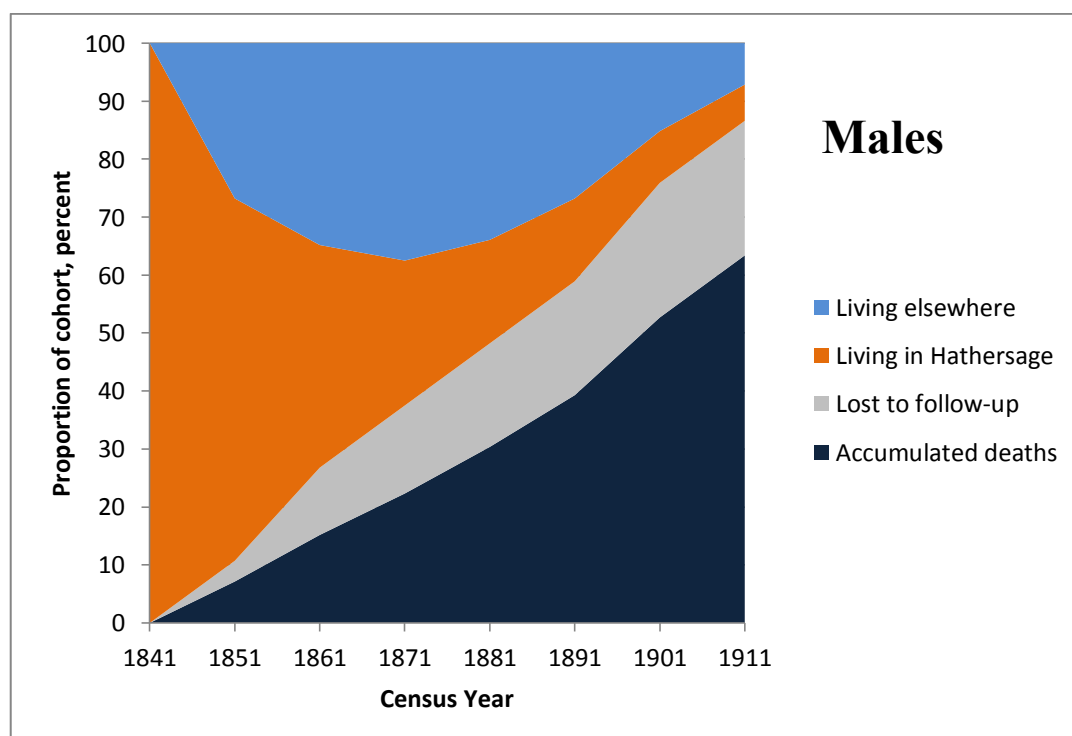
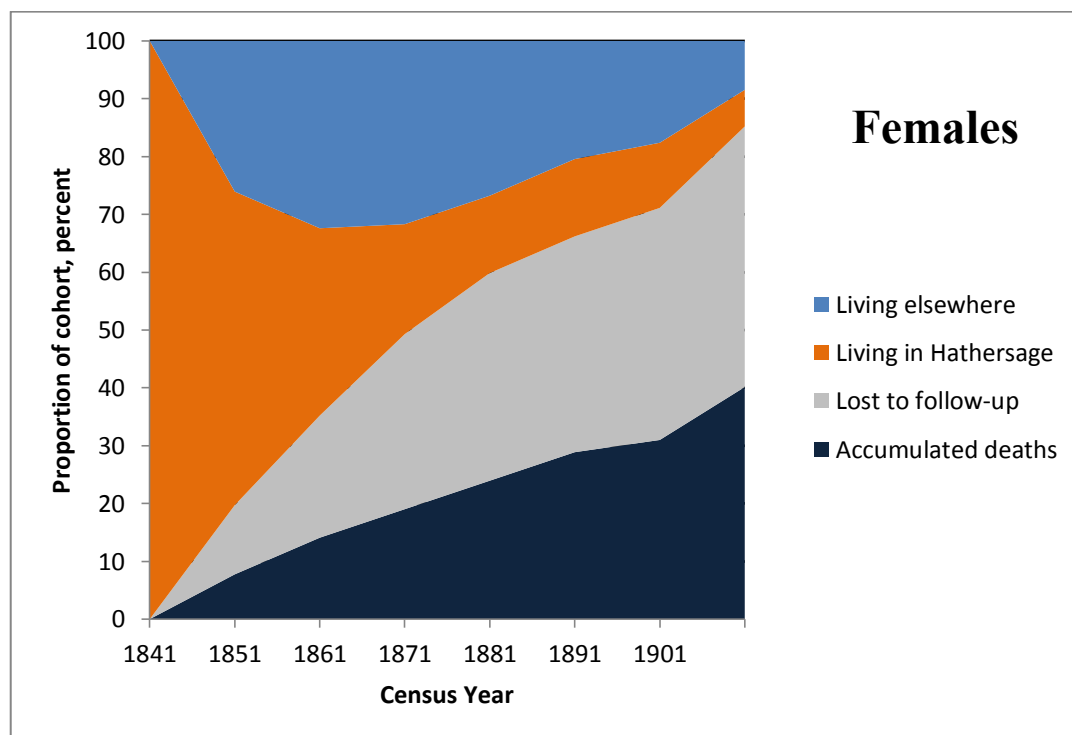
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<sup>17</sup> The author has also noted that in Chute one individual never appeared in any census in England, his presence being defined by baptism and burial several decades later. Such instances are thought to be rare. Female marriages were surprisingly easy to identify; the exception being of a common name (e.g. Ann Smith) having migrated to a populous place (e.g. Manchester) and in addition failing to identify her birthplace as Hathersage. Females born in a large settlement (e.g. Sheffield) also presented difficulties because several of similar age had identical names.

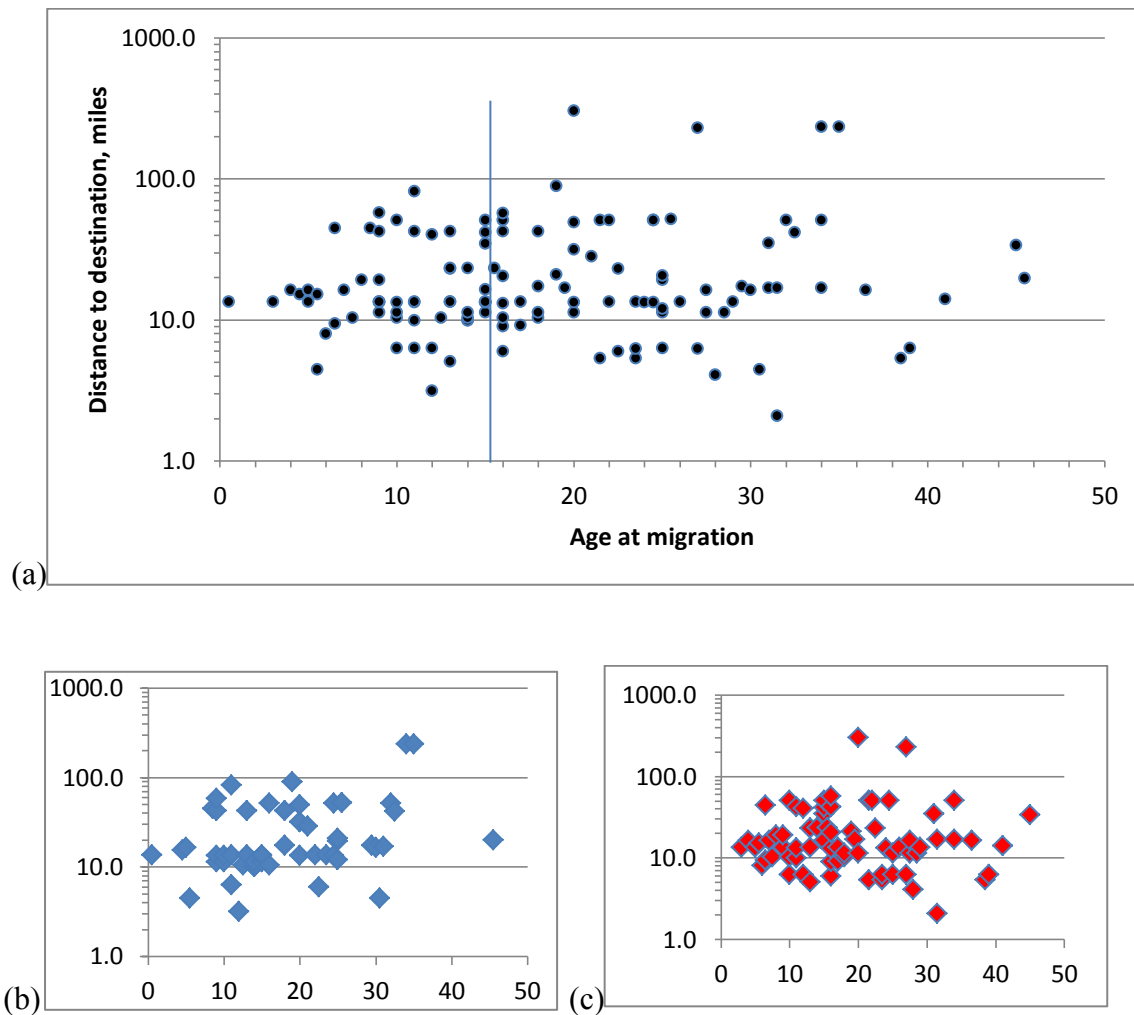
<sup>18</sup> Alexander, J. and Steidl, A., 'Gender and the "Laws of Migration": A reconsideration of nineteenth-century patterns', *Social Science History*, 36 (2012), pp. 223-241.

<sup>19</sup> Side, *Migration from Chute*, figs 24 & 25, pp. 78-9. It should be noted that the Chute data includes all nineteenth-century migrations of Chute born people.

lack of a relationship between age and distance travelled is contrary to the accepted view. However, the author cannot think of any reason why there should be a difference.



**Figure 7.1.** Following the cohort of Hathersage born between 1831-41, from 1841 to 1911 in the decennial censuses.



**Figure 7.2.** Distance moved plotted against age at time of move for 126 individuals born in Hathersage, 1830-1841.  
(a). The vertical line represents the median. (b) males, n=53 and (c) females, n=73. showing a similar pattern though possibly more older females relocated.  
Note the distance axis is logarithmic.

In Hathersage, 13 per cent of first moves occurred shortly before or after marriage, young men and women in equal numbers. 74 per cent of males married prior to migration whereas only 53 percent of women did so. Further it appeared that where relocation intervened, marriage was delayed on average by as much as 5 years for women. This observation deserves further investigation to elucidate some possible reasons and to determine prevalence.

From this preliminary study it is clear that the majority of migration took place in the first four decades of life, that there was no relationship between age and the distance travelled and that emigration was uncommon after 30 years of age for men at least.

Following women across marriage proved difficult leading to large numbers of permanent losses to follow up. These continued through the period, whereas male losses were static after 30 years of life suggesting that these were due to emigration. A quarter of men did not appear in an individual census, twice the frequency of women.

## Destinations and occupation

The first opportunity to study all movements from any single settlement within England and Wales is 1851 when records of an individual's place of birth and current residence were first universally recorded on a decennial basis until 1961. Inaccuracies occur as a result of the informer misremembering, not knowing or fabricating, and to misinterpretation by Ancestry.com transcribers.<sup>20</sup> In all, these errors have been estimated to be in the order of 5 or 6 per cent by the present author which is less than suggested by Baines; 'rarely more than one quarter of those enumerated in, say 1851 can be found in the 1861 census'.<sup>21</sup> Observing the whereabouts of individuals having a common place of birth provides an overview of the direction and extent of spread from a location at a point in time.

The 1851 census provides the cumulative picture of people's migrations over the previous 90 years or so, but only for those who remained alive in 1851. Further, it only reported where people were living at that time, not where they moved to initially or in the interim. Co-resident children provide an indication as to an adult's migration trail and some idea as to dates, but this only relates to younger families. Subsequent census data allows the historian to plot migration over a 10 year period with greater detail and accuracy.

The 1851 census documents 1105 individuals born in Hathersage of whom 664 were living in their birthplace and 441 (40 per cent) were living elsewhere.<sup>22</sup> The data

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<sup>20</sup> In this study, there is no alternative to using the indexing of CEBs provided by Ancestry.co.uk though it has been possible to mitigate the majority of mis-transcribed records using detailed local knowledge.

<sup>21</sup> Baines, D., 'Birthplace Statistics and the analysis of internal migration' in R. Lawton (ed), *The Census and Social Structure* (London, 1978), p. 148. There are particular problems in using Ancestry.co.uk to search the 1851 census though it is believed that these have been overcome in the data presented here.

<sup>22</sup> Clearly, those living in Hathersage, 'stayers', will include a number who had initially migrated but returned. After 1851, very few exhibited this behaviour; almost all who migrated

provided by the census was used to answer three important questions. Firstly, to what extent does the data support predominant movement to more urban settlements and over what distances? Secondly, was migration behaviour related to occupation? Thirdly, does the data suggest a significant difference between the characteristics of movers and remainers?

In the 1851 census movers were identified in 105 different settlements in 14 counties, though only 11 individuals ventured south of Leicester, 7 of these to London (Middlesex i.e. north of the Thames). The major host counties were Yorkshire (202), Derbyshire (177), Lancashire (25) and Cheshire (22), the remaining counties apart from Middlesex, hosted no more than 2 individuals each. The major Derbyshire towns (Derby, Bakewell, Buxton, Chesterfield, Glossop and Matlock) attracted less than 23 percent of those who moved within Derbyshire. A similar situation occurred in Yorkshire where 30 percent of Hathersage migrants were living in Sheffield and Leeds although the majority resided in smaller settlements predominantly around Sheffield such as Bradfield, Stannington and Nether Hallam.<sup>23</sup> The average straight line distance between Hathersage and the

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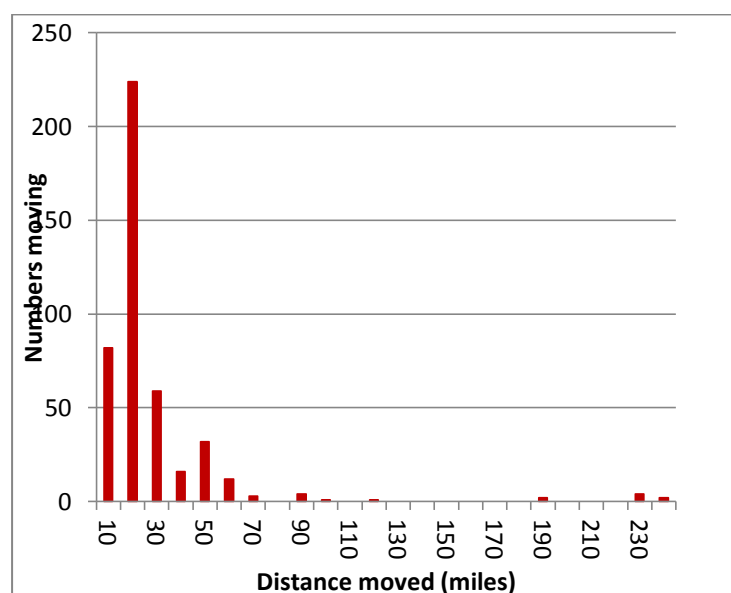
were never recorded to have returned which is unlike the situation in Chute (Wiltshire). It seems reasonable to ignore the effect of returnees prior to 1851.

A further potential difficulty in the data concerns the reliability of the recorded place of birth. An attempt was made to validate birthplace using the reasoning that a baptism in Hathersage was likely to indicate birthplace, especially as the Church of England register appeared to note if the child was born outside the village, in Bamford, for example. It was further assumed that those both born and staying in Hathersage were more likely to be correct about their birthplace than those who were born in Hathersage but lived only briefly there as a child. Indeed, for 1851, 30 percent of stayers appeared not to have been baptised in Hathersage compared with 48 per cent of the movers. In a further 2.5 per cent of stayers and 14 per cent of movers there remained a degree of uncertainty regarding identification and this mostly concerned widowed or married women where a definite marriage could not be found in order to determine the family name. On occasions there seem to have been some confusion in the minds of the census enumerator or the individual as to whether Derwent, Ringinglow or Tideswell should be included with Hathersage and several movers were excluded where evidence suggested that such places were almost certainly place of birth.

Despite careful weighing of evidence, the movers group analysed is likely to include a minority of individuals who were not born in Hathersage and no doubt the group missed a few individuals who though born in Hathersage reported to the census enumerator that they had been born elsewhere. It is impossible to calculate the degree of error.

<sup>23</sup> Some of these settlements, such as Nether Hallam, Upper Hallam and Darnall have become part of greater Sheffield, while others such as Bradfield and Catcliffe (to a lesser extent) have retained their geographical separation.

mover's residence in 1851 was 23 miles; 18.5 per cent of migrants had moved less than 10 miles and only 6.5 per cent over 50 miles.<sup>24</sup> The propensity to move as a function of distance is displayed in figure 7.3 demonstrating neither a simple inverse nor an inverse square relationship. The mode represents the large number of migrants who had moved to villages around but close to Sheffield, and is similar to the clustering of moves to the London area observed in nineteenth-century Chute.<sup>25</sup>



**Figure 7.3.** Distance from Hathersage of all migrant Hathersage born individuals recorded in the 1851 census.

When considering migrational habits, the male occupation is expected to be a prominent determinant in the choice of destination. The occupation together with birth place of movers was only known from the 1851 CEBs and this was used in the following analysis. A wide range of occupations was represented, though only three groups were of any size.<sup>26</sup>

<sup>24</sup> Distances were calculated using the *Placename Gazetteer/Co-ordinate Converter* by Archeology UK.

<sup>25</sup> Side, *Migration from Chute*, figure 25, p.79.

<sup>26</sup> Where a mover's child had been baptised in Hathersage and the father's occupation recorded at the time a change in occupation could be detected. This was only possible in a minority of cases, so the 1851 occupation was used in all cases.

- Farmers and agricultural labourers (excluding farm servants), numbering 37.
- Servants, including farm servants. This heterogeneous group is of limited relevance to the present study.
- Metal-workers, sub-divided into (a) needle-makers and wire-drawers (15), and (b) all other workers in metal, mostly edge-tool makers but including steel castors and managers/owners (26).

It might be supposed that if occupation is an important determinate of destination, then a difference between farmers and metal-workers will be apparent. Figure 7.4a, shows the 1851 domiciles of Hathersage-born farmers and agricultural labourers, spread in a circle around Hathersage, most within 10 or 12 miles. In contrast, most metal-workers were to be found in and around Sheffield, with one or two further north as portrayed in figure 7.4b. This supports the proposition that migration was dependent upon the availability of employment and therefore was occupation-specific.<sup>27</sup>

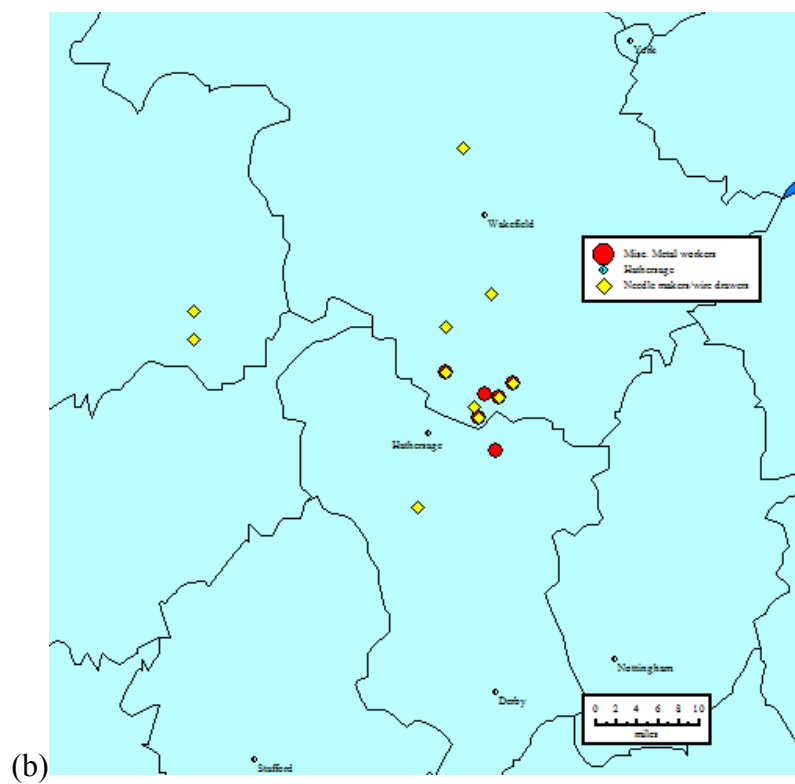
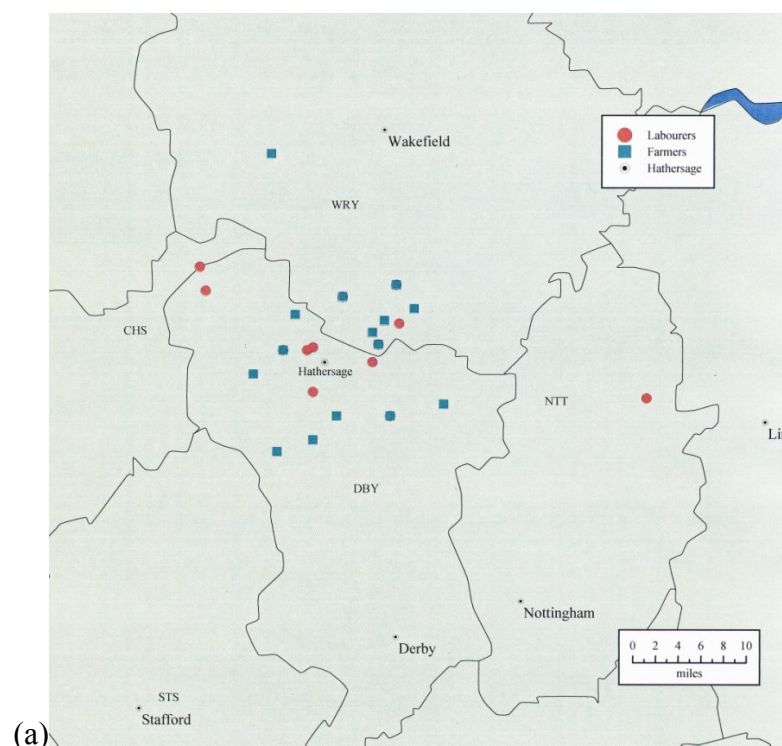
The predilection for neighbouring counties in 1881 as targets for migration is depicted in figure 7.5, and continued throughout the century with Yorkshire, Lancashire and Cheshire predominating. The proportion of migrants travelling south of a line from the Wash to the Bristol Channel did not significantly increase between 1851 and 1901; only just over 1 in 10 migrants travelled further south. It should be born in mind that the impression gained from any census is based on the survivors who migrated during the previous 90 years or so. Any change in migration preferences will be diluted by past events. Only by studying individual migrations will true changes over time be detected and fully appreciated. Nevertheless, the figures so far presented fail to show any major changes in migration patterns from Hathersage during the nineteenth century.

The migration of Hathersage people to Essex and Kent, at first glance, did not appear to follow the general trend. Wire-drawers of Hathersage had links to two specific areas in the south: to North Woolwich (Kent) and West/East Ham (Essex). No such link was apparent with the other main needle-making centre in the south such as at Long Crendon (Buckinghamshire).

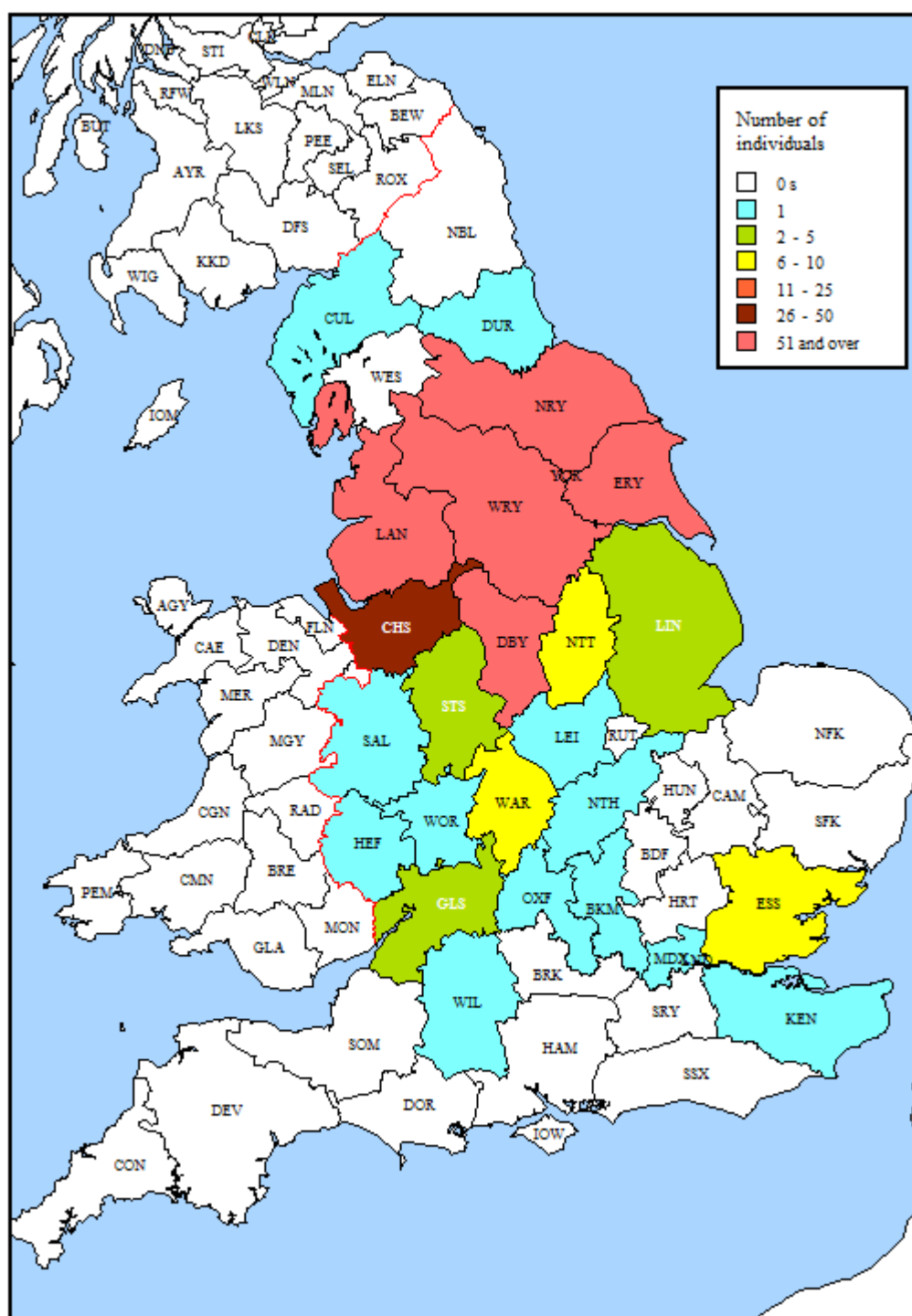
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<sup>27</sup> To some extent, the weight of this argument depends upon the pre-migration occupation being the same, or nearly related to, that reported in 1851. Unfortunately, this information is available for too small a number of individuals to be helpful.





**Figure 7.4.** Place of residence of Hathersage born migrants in the 1851 census.  
 (a) Agricultural workers, (b) metal-workers.

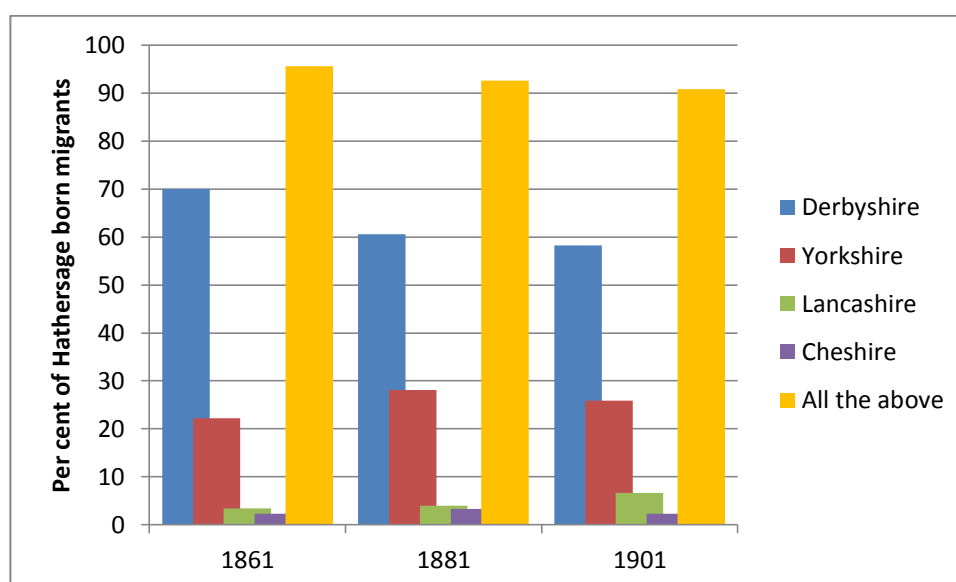


**Figure 7.5.** Number of individuals living in each county, reporting their place of birth as 'Hathersage' in 1881.

Source: 1881 CEBs, indexed by [ancestry.co.uk](http://ancestry.co.uk). Note: Yorkshire is depicted as a single entity, though most migrants were resident in Sheffield and Leeds.

## Changes in migrational behaviour over time

Another important question asked of the data was whether the decline of the needle-making industry in Hathersage altered the migration pattern of the inhabitant. While the numbers of Hathersage-born individuals resident in most midland counties were too small to demonstrate any temporal variation, examination of numbers moving to Yorkshire, Lancashire and Cheshire over time provides some further insight as demonstrated in figure 7.6. Between 1861 and 1901 there was a small but increasing tendency to move away from Derbyshire. The proportion of Hathersage natives residing in Yorkshire and Cheshire was greater in 1881 than 1861, but by 1901 it had dropped back somewhat, while Lancashire slowly advanced as a destination of choice. Although the proportion of migrants travelling further than Lancashire, Cheshire and Yorkshire or remaining within Derbyshire fell slightly, more than 90 per cent of those Hathersage-born remained within these four counties. Overall, there was only a slight decrease in migration between 1861 and 1901 despite definite changes within the township.



**Figure 7.6.** Proportion of Hathersage born migrants living in the adjacent counties, 1861-1901. Source: CEBs indexed by ancestry.co.uk for 1861, 1881 and 1901, *place of birth* 'Hathersage', *lived in* – 'Derbyshire', 'Lancashire', etc. 90 per cent of those born in Hathersage but who had migrated from Hathersage lived in Derbyshire (other than Hathersage), Yorkshire, Lancashire or Cheshire.

Notwithstanding possible inaccuracies, it is clear that people born in Hathersage migrated predominantly within Derbyshire and to Yorkshire and Lancashire, and that

there was no evidence for London being at all attractive.<sup>28</sup> Indeed, penetration out of the midlands was rare. Such a pattern of migration is similar to that exhibited by the inhabitants of Chute in rural Wiltshire who rarely ventured north of a line from The Wash to the Bristol Channel.<sup>29</sup> But it is quite different from the inhabitants of northern Cardiganshire described by Kathryn Cooper, who travelled even greater distances to London in significant numbers, as well as to Lancashire and Cheshire.<sup>30</sup> Significant movement from central Wales to London was also observed by H. R. Jones.<sup>31</sup> We are not, I suggest, observing a national difference or even a north/south divergence. The work of Bernard Deacon and Kathryn Cooper supports the notion that migratory behaviour may be largely dependent upon occupation and to a lesser extent upon the nature of the individual's local environment.<sup>32</sup> Deacon's Cornish miners travelled to mining areas in the north of England, while Durham born engineers migrated to Ashford, Kent, for the building of the railway and many stayed.<sup>33</sup> This may suggest that occupation was more important than distance in the mind of the migrant.<sup>34</sup> Deacon also showed that migrants originating from small settlements were more likely to move to similar sized settlements than large towns. Although a multitude of factors are likely to be considered before moving, occupation, empathy with the immediate landscape and economy are likely to be the predominant influences in most instances.

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<sup>28</sup> The numbers of Hathersage born resident in London, including East Ham was 7 and 6 for the 1851 and 1861 census. This rose in 1871 to 20 and gradually decreased to 15 in 1911. The assumption that women left their homes to travel in one or more steps to London to become domestic servants is common, for example, Hill, B., 'Rural-urban migration of women and their employment in towns', *Rural History*, 5 (1994), p. 187. For Hathersage, such behaviour is not found.

<sup>29</sup> Side, *Migration from Chute*. p. 79.

<sup>30</sup> Cooper, K. *Exodus from Cardiganshire: Rural-urban Migration in Victorian Britain* (Cardiff, 2011).

<sup>31</sup> Jones, H.R., 'A Study of Rural Migration in Central Wales', *Transactions of the Institute of British Geographers*, 37 (1965), pp. 31-45.

<sup>32</sup> Cooper, *Exodus from Cardiganshire*, Deacon, B, 'Communities, families and migration: some evidence from Cornwall', *Family and Community History*, 10 (2007), pp. 49-60.

<sup>33</sup> Side, C. *Ashford as a Railway Town: A view through the 1851 census*, unpublished consignment (University of Oxford, 2009).

<sup>34</sup> Robinson, S., 'Life-time migration and occupation in Motherwell, 1851-1891' *LPS*, 61 (1998), pp. 13-22.

While there seems to have been little change in migratory habits throughout the nineteenth century, there was a change within Hathersage itself. The proportion of individuals born in Hathersage and living there (stayers) fell from 50 per cent to 40 percent between 1861 and 1901. In other words Hathersage born and bred ceased to dominate the village population.

### **Movers and stayers**

Having noted differences in the migrational behaviour (at least in terms of destination), of metal-workers and agricultural workers, it is necessary to identify any differences in the characteristics of movers and stayers. These might arise for two reasons. First, the groups may have been fundamentally different. It has already been mooted that movers may have contained more individuals not born in Hathersage. Secondly, the groups might have been different in outlook or social standing, either within the community or within the family. Table 7.1 reveals that the average age of movers, both male and female, was 10 years greater than that of the stayers. The numbers of individuals in each group are large enough to allow confidence that this is a real difference. Either movers tended to be the healthier and stronger or they obtained some morbidity benefit from moving away from Hathersage. Is it possible that mortality within Hathersage was at that time particularly high due to the industrial effluent and specific industrial diseases? A further contributor could be temporal variations in migration in the earlier part of the nineteenth century such that younger people migrated less as the needle industry grew. We know from data examined previously that there was little overall change in the second half of the century.

In summary, Hathersage-born people did not migrate to urban areas by preference. Less than 30 per cent did so. Neither was there any evidence for significant change in recipient settlements throughout the century. Occupation was a major determinant for place: agricultural workers and farmers spread out in the rural areas around Hathersage, while metal-workers moved to other metal-working areas such as Sheffield and Leeds, and overall only 6.5 per cent travelled over 50 miles. Two differences were noted: the average age of the movers was greater and the age at marriage was higher than for the stayers. Both these observations need further study.

**Table 7.1.** Average age of stayers and movers in years, 1861-1901.

	Average age, males	n	Average age, females	n
Stayers	22.8	330	21.7	334
Movers	32	234	33	206

Source: 1851 census, born Hathersage.

Note: Male movers outnumbered females by some 10 per cent whereas the proportion was approximately 50:50 in the stayers. This difference is almost certainly explained by the higher level of apparent permanent absences of females from the census records, see figure 6.3.

### In- and outmigration of metal workers

Having described in general terms migration patterns from Hathersage during the first half of the nineteenth century, it is necessary to return to the main theme and examine movements of wire-workers in and out of Hathersage. The purpose of this enquiry is to understand how Hathersage mills and workshops recruited their labour force, and the relationship between the migration of that workforce and the fortunes of local industry. Indeed, how did the workers and their families survive the industry's decline?

Although there is some uncertainty concerning the onset of wire-drawing in Hathersage, there is little doubt that Robert and David Cook moved from the Studley area (Warwickshire) early in the second decade of the nineteenth century and set up business in Hathersage making fish hooks, hackle and gill pins and various other steel wire products.<sup>35</sup> Their business as well as that of the Cocker family and others, expanded until the 1860s. The subsequent protracted decline – for it was not until 1904 that the last mill closed – has been explained by Barbara Buxton as the inability of Hathersage needle-makers to compete with the Redditch firms. The primary reason, she says, was that whereas the railway was laid to Redditch (Worcestershire) in 1859, it was not until 1894 that Hathersage was so connected.<sup>36</sup> Buxton's account suggests that the genesis and the

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<sup>35</sup> White's Directory of 1857 is very definite: 'Robert and David Cook first brought the needle business here [to Hathersage] from Redditch on the 14th July, 1811.' (p. 613).

<sup>36</sup> Buxton, B, *Hathersage in The Peak* (Chichester, 2005), p. 104.

fortunes of the Hathersage industry were heavily dependent upon the Redditch needle-makers, but there is an alternative view which demands examination.

541 individuals have been identified from parish records and nineteenth-century CEBs as being employed at some time in wire-working, almost certainly an underestimate. 95 were women. For 59 individuals it is possible that metal-working was not begun until they had moved away from Hathersage. 482, therefore, are documented as having worked in the industry while living in Hathersage and this large sub-group forms the basis of the analysis, unless specifically stated.<sup>37</sup>

Not unexpectedly a greater proportion of women than men had been born in Hathersage or in the county of Derbyshire. The four counties of Derbyshire, Yorkshire, Warwickshire and Worcestershire made up 88 per cent of male and 99 per cent of female workers' origins. This is detailed in table 7.2. Thus while the Redditch area clearly contributed to the Hathersage workforce, in terms of numbers this only represented a relatively small proportion, 8.1 per cent of men and 11.5 per cent of women. One immigrant had been born in Germany, another in Scotland and a third in the East Indies, though the last mentioned had arrived via Studley.

**Table 7.2.** Birthplace of Hathersage metal-workers.

Place of Birth	Males	Females
	%	%
Derbyshire	68.1	80.0
(of which, Hathersage)	(57.5)	(60.9)
Yorkshire	11.6	6.9
Warwickshire	6.1	2.3
Worcestershire	2.0	9.2
Others	12.2	1.6
n	395	87

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<sup>37</sup> As much vital information as possible was collected concerning these individuals, in particular their year of birth and death, place of birth, employment dates and occupational descriptors. In the absence of employment books these dates were often snapshot dates corresponding to the census, but many were modified by events such as childbirth to shorten the range from +/- 5 years to considerably less. In all cases where averages or proportions, expressed in percentages, are proffered, the number of individuals, (n), on which the calculation is based is made clear.

One man, William Shrimpton, is of interest because he was the only example of a needle-worker who lived or worked in more than two geographical locations. Born in 1847 at Redditch (Worcestershire), he married his distant cousin Mary, in 1864. William probably moved to Hathersage shortly before 1881 as in the census of that year he was lodging in John Darvill's household and working as a hackle pin grinder, while his wife was a resident general servant at the Ladybower Inn at Derwent, several miles to the north. By 1891 the couple were living in Brightside Bierlow (Sheffield) and he was still grinding pins. William died there 3 years later. William's father, George, was a needle-maker in Redditch as was his grandfather James. James was born in Long Crendon (Buckinghamshire) and was one of the several Shrimptons to migrate to Tardebigg (Worcestershire) between 1812 and 1815. Most were needle-makers though at least one was a farmer. Of the many Shrimptons, William was the only one to migrate on through Hathersage to Sheffield.

While the figures of table 7.2 relate to 100 years of in-migration, more information can be gained from estimating the rate at which outsiders came to work in Hathersage wire-works. Figure 7.7 provides the number entering Hathersage for each decade during the nineteenth century. Immigration was low until the fifth decade, peaked dramatically around 1861 and subsequently fell back in the 1870s, co-incident with the decline of the industry.

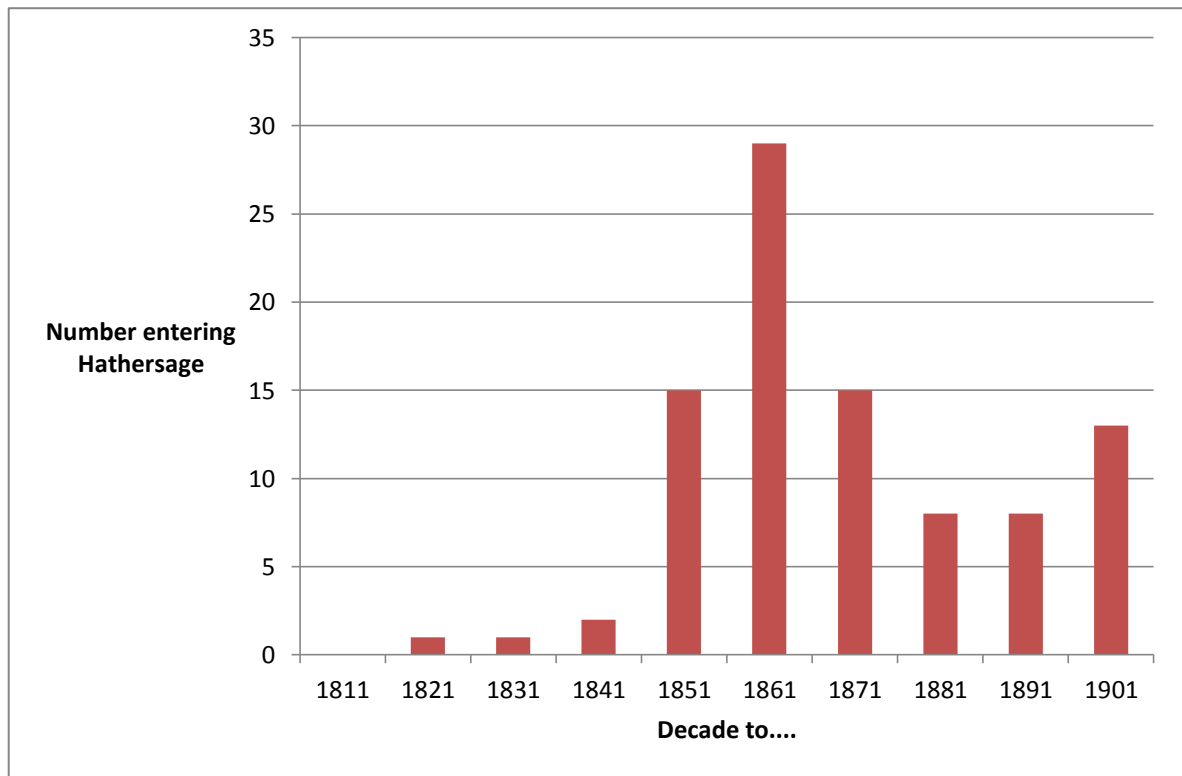
Although the numbers are small, immigrants from Worcestershire and Warwickshire, including the important needle-making areas of Studley, Feckenham and Redditch, follow the general pattern, most arriving between 1855 and 1870. There is no noticeable surge to support any special association between the two areas, rather the rate of movement was proportional to the availability of jobs at any one time. Neither do the figures indicate a substantial in-migration at an early date to kick-start the Hathersage industry. The Hathersage mills were well known, Cocker and Sons having exhibited at the Great Exhibition of 1851.<sup>38</sup>

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<sup>38</sup> *Official Catalogue of the Great Exhibition of the Works of Industry of all Nations* (London, 1851), p.107.

'Cocker and Sons, Hathersage, Mann. – Needles in all stages of manufacture; heckles and heckle-pins; spiral springs; combs and wool-combers' broaches, pinion wire, &c.' The only other needle-maker to exhibit appears to be J. James of Redditch who offered needles and fish hooks, p.120.

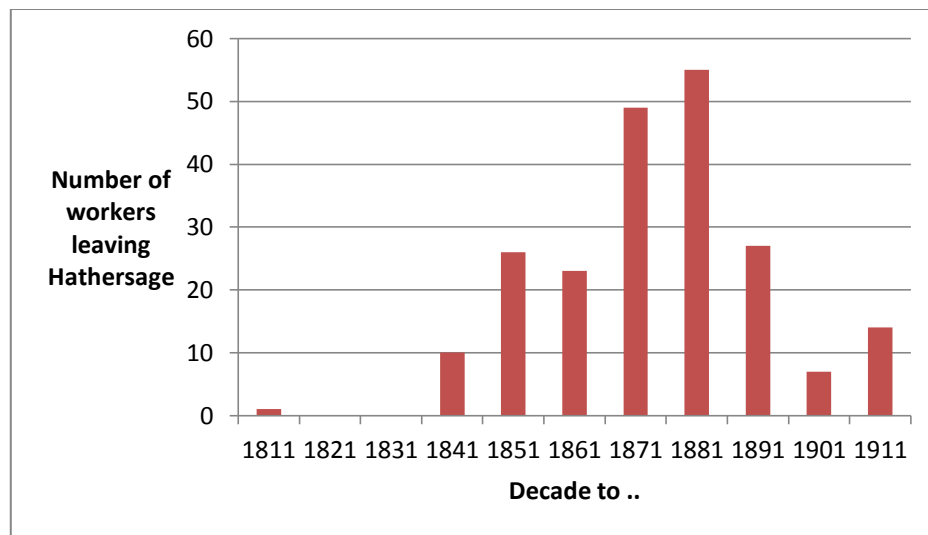




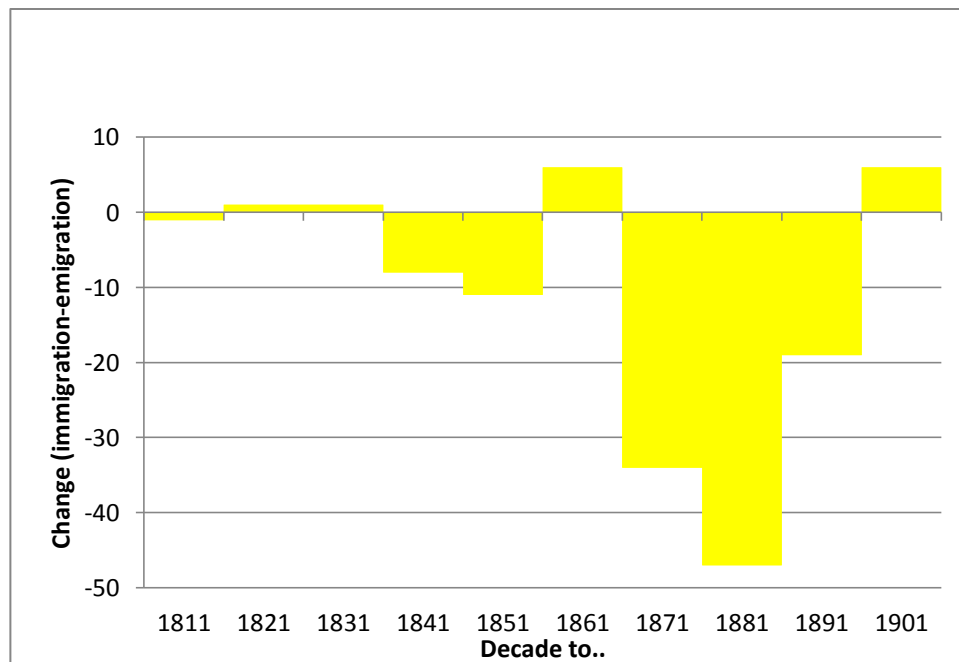
**Figure7.7.** Number of male metal-workers entering Hathersage in each decade of the nineteenth century.

Note: The small number of immigrants prior to 1851 is in part due to the lack of census data. The apparent rise in newcomers in the last decade of the century is believed to be predominantly due to Sheffield workers living in Hathersage; a commute made possible by the rail link.

Turning to outmigration of wire-workers, we find that there is a less regular variation throughout the century, though there is a definite high in the two decades prior to 1881 as portrayed in figure7.8. When in- and outmigration are combined to produce a net change in migration of metal-workers, as in figure7.9, it becomes clear, rather surprisingly, that more wire-workers were leaving than coming to Hathersage for most of the century. The implication of this is that the rapid though temporary rise in the workforce was satisfied by men, and to a lesser extent by women, already living in the village. The large and sustained net outmigration after 1861 is clear.



**Figure 7.8.** Number of metal-workers leaving Hathersage for each decade of the nineteenth century. Note: There was no needle or pin-making after 1901; migration after this date represents residents working elsewhere, almost entirely in Sheffield.



**Figure 7.9.** Net migration of metal-workers for each decade during the nineteenth century.

There were 66 different host locations for outmigration, though the vast majority of men moved into Yorkshire and only a handful to Warwickshire and Worcestershire. Table 7.3 also demonstrates that no county became especially favoured at any time during the nineteenth century. Cross-correlation between the migrants' birth county and host county reveals interesting differences, as demonstrated in table 7.4. Two-thirds of Derbyshire and Yorkshire (mostly Sheffield) born individuals moved into Yorkshire, and only three individuals moved to Warwickshire or Worcestershire. In contrast, a

significant number of those born in Warwickshire and Worcestershire returned to their birth county. The proportion moving to Lancashire, a close by but ‘foreign’ county, was very similar whatever the birth county.

**Table 7.3.** Target-counties for outmigration of metal-workers from Hathersage.

	YKS	DBY	LAN	WOR	LEI	Scot	ESS	WAR	MDX	GLS	KEN	STS	CHS	unk	Total
to 1840	8			2											10
1841-50	10	2	5	1	1	1								6	26
1851-60	13	2				1								7	23
1861-70	27	1	2	1			3	2	2		3			5	46
1871-80	42	6	3				1	1		2	1	1		2	59
1881-90	17	5	1					1					1	1	26
1890+	9	2		3				1						7	22
Total	126	18	11	7	1	2	4	5	2	2	4	1	1	28	212

**Table 7.4.** Relationship between birth-county and target-county for migration of metal-workers.

Host County	LAN	DBY	YKS	WAR/WOR	n=
Birth County					
DBY	6	12	64	2	135
YKS	3	3	64	0	30
WAR/WOR	4	4	40	36	25

Note: Proportions are expressed as percentages.

This data does not suggest any premeditated expansion of Redditch needle-makers into Hathersage or a more than expected recruitment of Redditch workers, when orders for needles were flowing mid-century. Neither does it suggest a reciprocal exchange of workers between the two centres. As might be expected more workers came to Hathersage from the Redditch area, the most important needle-making area in the country, than anywhere else, and these men were more minded to return when the industry declined in Hathersage. Native workers, on the other hand, were more likely to follow their traditional migration routes to Sheffield and deeper into Yorkshire.<sup>39</sup>

<sup>39</sup> During the nineteenth century, no needle-workers came to Hathersage from Long Crendon or other southern centres of needle-making. It is argued here that migration patterns are specific to a community. Channels of migration are opened-up by chance. They become established over time and may even become bi-directional. For Long Crendon, a definite channel to the Redditch area was well-trod. For Chute it was London and for Hathersage the main channel for metal-workers was to Leeds.

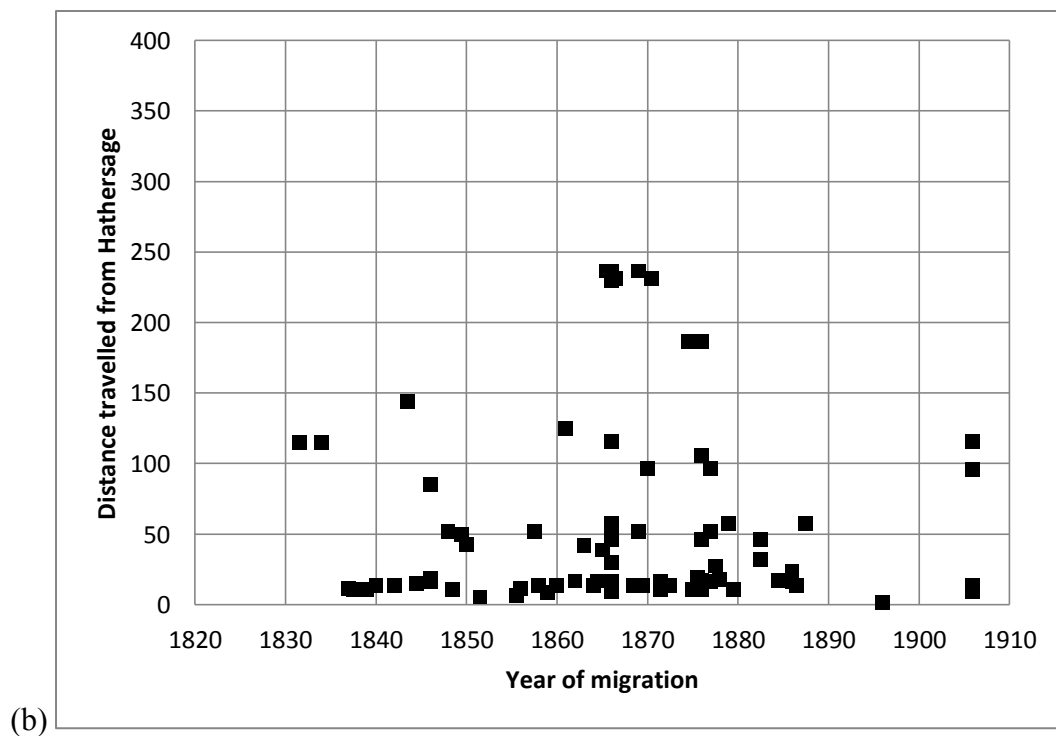
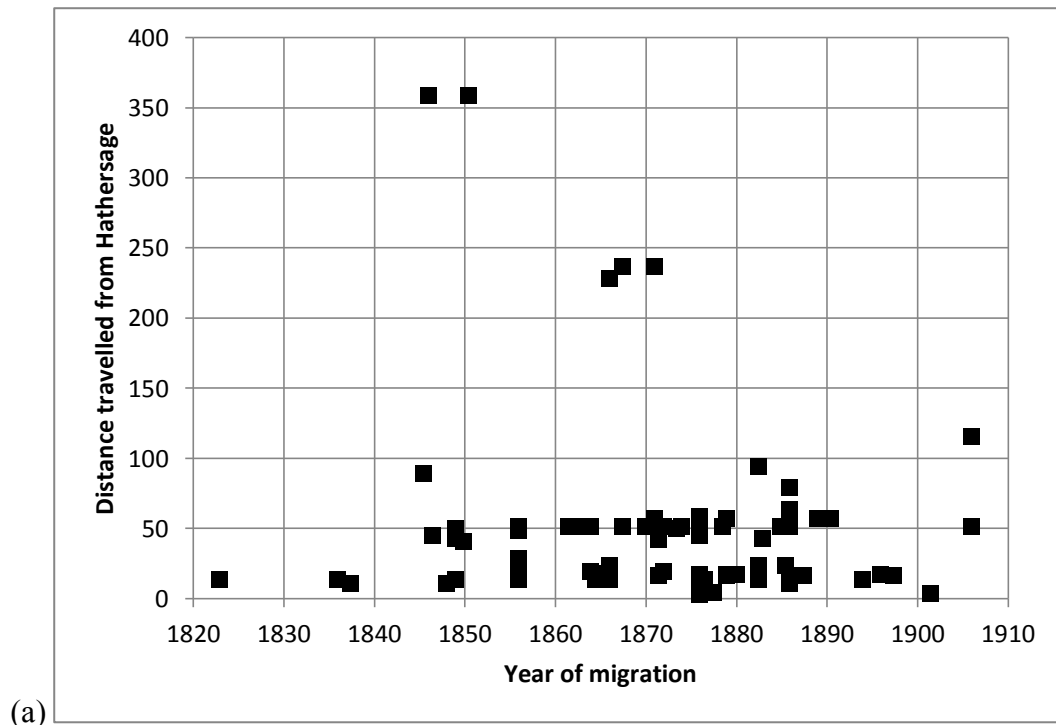
Further evidence for stability in migrational habits comes from charting the distance as a function of time. Such an exercise is presented in figure 7.10 for Hathersage-born workers (a) and non-native workers (b) and demonstrates little change over time.<sup>40</sup> The Bagshaw brothers were exceptions when they migrated to Dundee in 1840/50s, some 360 miles, to continue their hackle-making career. It is striking that the vast majority of migrations involved a movement of 50 miles or less and that this is true for second-time migrators as well as first-time migrants (Hathersage born). Unexpectedly, the migration distance did not increase during the nineteenth century in stark contrast to the inhabitants of Chute (Wiltshire) who increased their average migration distance from approximately 20 miles to over 50 miles over the same period.<sup>41</sup> Neither was there a relationship between age and distance travelled whether natives or immigrants, as shown in figure 7.11. It has been noted, that higher skilled men tended to move further.<sup>42</sup>

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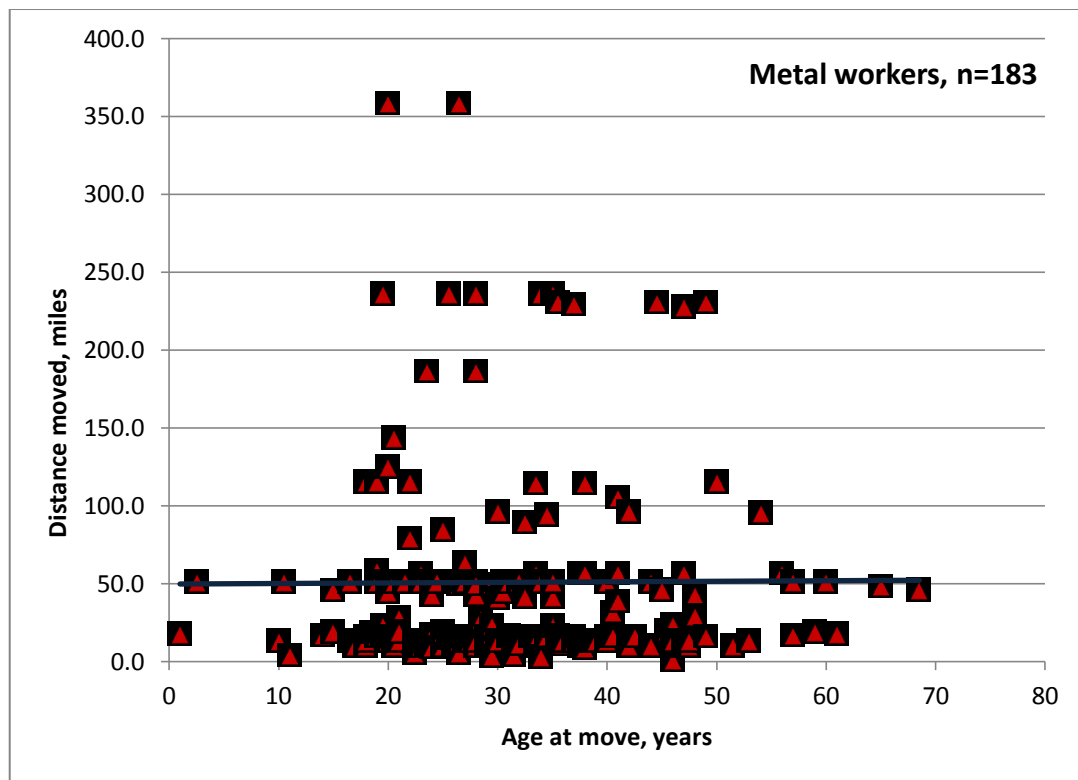
<sup>40</sup> These observations exclude those males where a destination could not be determined and those who almost certainly were not employed in metal working while resident in Hathersage. The resulting number, n=179.

<sup>41</sup> Side, *Migration from Chute*, Figure 26, p. 80. The two populations are not absolutely comparable as the Chute figures include all Chute born migrants during the nineteenth century and the Hathersage population is of male metal workers, both native and non-native.

<sup>42</sup> Pooley, C. and Turnbull, J., 'Migration and mobility in Britain from the eighteenth to the twentieth centuries', *LPS*, 57 (1996), 50-71.



**Figure 7.10.** Migration distance for metal-workers from Hathersage during the nineteenth century.  
 (a) Workers born in Hathersage (n=92) and (b) born elsewhere (n=87).



**Figure 7.11.** Plot of distance moved by age of the metal-worker at the time of migration. Note the average distance line is co-incident with the 50 mile line and does not alter with age. The average distance moved by metal-workers is almost twice the average for all migrators recorded in the 1851 census, see above.

Of the 212 males who migrated, it was possible to determine if the move entailed a change in employment in 155.<sup>43</sup> Following migration from Hathersage 35 (22.6 per cent) were no longer working with metals. A wide variety of occupations were taken up, 30 in all: including cow keeper, agricultural labourer, police constable, school master and shoe maker. A further 32 (20.6 per cent) changed their job within metal-working, for example, needle-grinder to wire-drawer and needle-finisher to umbrella-maker. The majority, 88 (56.8 per cent), retained the same job title. The three well defined sub-groups of wire-drawers, grinders and umbrella-makers (n=77), are compared in table

<sup>43</sup> In 48 cases it was not possible to assess whether a change of employment had occurred for one of the following reasons: no pre-move employment was documented, death intervened before a post-move employment was documented or the individual could not be traced (possibly emigrated from the country).

7.5. The wire-drawers were least likely to move out of metal-working and the umbrella-workers, a newer industry, were least resistant to change.<sup>44</sup>

**Table 7.5.** Change of employment upon leaving Hathersage in three definable groups of metal-workers.

	Complete change	Same job title	Change within metal-working	n
<b>Wire-drawers</b>	15.2	69.7	15.2	33
<b>Grinders</b>	24	64	12	25
<b>Umbrella Makers</b>	31.6	57.9	10.5	19

Note: The figures are percentages and the right hand column gives the total number in each group.

What life-cycle stage were these migrants, bearing in mind that moving away from Hathersage may not have been voluntary? 60 per cent were married and only 2 of the 211 migrants were widowers. Further, 70 per cent of the married couples had already started their family. 10 per cent of the migrants travelled as *children* in a family.<sup>45</sup>

## Conclusion

In this chapter three different methods have been used to assess migration from Hathersage during the nineteenth century. Firstly, a cohort of Hathersage born individuals aged under 10 years and resident in Hathersage at the time of the 1841 census were followed through their lives using census data and civil registrations. Losses to follow-up were relatively high due to emigration and for women, difficulty in identifying them after marriage. Information relating to age at first move, relationship to marriage, occupational changes and distance moved can be gleaned with confidence. Secondly, the residence of all individuals recorded in the England and Wales 1851

<sup>44</sup> Occupational descriptors such as *needle-worker* or *hackle-maker* are difficult to define. *Umbrella-maker* also includes a wide variety of skills, but related to a single product.

<sup>45</sup> There is a degree of uncertainty in the proportion of single or married status at the time of migration amounting to just under 5 per cent. This is because the migration and marriage were within the same time window for 10 of the migrants.

census reported as being born in Hathersage was tabulated. Leaving aside errors related to incorrect reporting of birth-place and transcribing errors, this approach only indicates the accumulated degree of spread of survivors up until 1851. The method was extended using subsequent censuses to determine whether specific destinations, for example, London or Lancashire, changed in popularity over time. Thirdly, 2 occupational groups, namely farmers and metal workers were followed throughout the century to highlight any differences in their migrational habits. For metal workers, interest was related to the growth and decline of needle manufacturing in Hathersage.

These analyses confirmed the observations made in previous studies: inhabitants were more likely to migrate when young, half before the age of 20, and most of these as teenagers, and the average distance travelled was short. Differences in migratory behaviour were also found: there did not appear to be any relationship between the age of the migrant and the distance travelled, nor, importantly, was there any discernible increase in distance with time, unlike the residents of Chute who became markedly more adventurous as the century progressed. Indeed, the destinations changed little during the century with only a handful targeting London and the majority moving within Derbyshire, or to Yorkshire, southern Lancashire and Cheshire. Nearly all migrations took place within the midlands with a westerly bias. The maintenance of established patterns of migration from Hathersage over time concords with Pooley's aggregated study of British and Swedish movements during the nineteenth century. Despite the contrasting characteristics of the two countries, patterns of migration were remarkably constant and similar.<sup>46</sup>

Occupation was confirmed to be a prominent determinant of destination. Farmers and agricultural workers moved within ten-mile radius of Hathersage. Metal-workers moved further to industrial centres such as Sheffield, though often living in its surrounding villages, and Leeds. Servants, on the other hand, were to be found all around Hathersage, in Sheffield and the towns towards Manchester (north-west). Quarry workers moved least often and when they did, tended to be found in Derbyshire villages

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<sup>46</sup> Pooley, C., 'The influence of locality on migration: a comparative study of Britain and Sweden in the nineteenth century', *LPS*, 90 (2013), pp. 13-27.



close to the gritstone edge.<sup>47</sup> As has been commented upon previously, longer distant migrations were associated with higher skilled, more specialised workers.

A steady but small flow of needle-workers came from the Redditch area from about 1820, but there is no evidence that they 'kick-started' the Hathersage manufactories. As the workforce increased in the 1850s and 1860s new recruits were drawn from within the village. When the industry declined towards the end of the 1860s, significant net outmigration of metal workers became established. Those workers who had come from the Redditch area returned, but the Hathersage men did not go with them. Instead they persisted with their traditional routes to Sheffield and Leeds. Not all were able to continue with their specific occupations. 23 per cent left metal-working completely and a further 21 per cent changed their form of work within the industry.

Overall, the number of servants remained stable throughout the nineteenth century though the proportion of females increased with the rise of domestic service. The proportion of servants who had been born in Hathersage reduced significantly from 50 per cent in 1851 to 18 per cent in 1901 associated with the increasing proportion of outsiders residing in the village, especially from Sheffield. The Hathersage young appear to have taken up employment further afield.

In the following chapter the rise and fall of the Hathersage needle industry will be assessed drawing on the data so far presented with additional material from miscellaneous resources.

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<sup>47</sup> Details of the migrational behaviour of quarry workers and servants have not been included in this text.

# Conclusions

There has been no analytical study concerning the needle-making industry in England apart from S.R.H. Jones' detailed account of 1980 using a virtually complete set of company records, accounts and letters from the John English Company in Feckenham.<sup>1</sup> There is no known investigation into the contribution of Hathersage to the history of needle-making. Such an omission can be explained by the absence of contemporary records. Needle-making manufactories were generally based on small workshops with a considerable degree of outsourcing to independent individuals and lacked a formal administrative structure. Written records were likely to have a transient life unless meticulously kept, as in the case of the John English Company, by the family. The challenge therefore, was to piece together a history of Hathersage wire-drawing and needle-making using alternative information; in this case predominantly the Victorian census, vital records, newspaper archives and a collection of miscellaneous archive material.<sup>2</sup> Consequently, there is a demographic and personal bias in this study. Although demographic variables were explored in some detail exposing significant temporal fluctuations, it proved impossible to align most of these with industrialization and de-industrialization. Such variabilities seemed to occur despite the changes taking place within the community. The importance of the work lies predominantly in recording a significant but lesser known part of nineteenth-century industry. A further consequence of the paucity of contemporary records is that detail is replaced by broadness of approach.

A recurring thread in this study is one which pervades all of history; the part played by chance in determining a sequence of events. It is argued that we as observers using the *retrospectroscope* are not in a good position to judge; to ascribe cause and effect to an event where the total context must remain obscure. Nevertheless it has proved instructive to speculate upon why Hathersage became industrialized when it did and to

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<sup>1</sup> Jones, S.R.H., *John English and Company, Feckenham: a study of enterprise in the West Midlands needle industry in 18th and 19th centuries*. Unpublished Ph.D. Thesis. University of London (1980).

<sup>2</sup> Published letters, leases, court lists, minute books, though these were few in number.

what extent chance contributed. Further, the subsequent de-industrialization provided the opportunity for further speculation.

The causes of these two transitions were the primary research questions giving direction to this study. Another strand of the exercise concerned the effect that the industry had on the community, particularly its rise and decline. And further, the nature of the interaction between the community and the factories and factory owners. In Hathersage, there were two main factories, both run by families. The Cockers, if not long standing natives, had been members of the community for three generations, while the Cooks were newcomers. There were other significant differences. Cooks were Roman Catholics and the Cockers were Wesleyans, Liberals and more obviously committed to the community. Yet both suffered financial difficulties in business. It proved impossible, disappointingly, to achieve more than a glimpse of the relationship between the working community and the factory owners. Although demographic effects were relatively straight-forward to investigate, elucidation of feelings was more difficult to achieve, being represented by a handful of incidents throughout the century.

It was possible to gain sufficient information about the main factory owners, the Cooks and Cockers, to compare them with more prosperous industrialists and to assess their contribution to the history of Hathersage. The relationship between mechanization and transport links and the viability of needle-making in Hathersage was explored and plausible conclusions reached. Finally, some attention was given to the relationship between Hathersage and other needle-making centres in England to provide a lucid context not previously attempted.

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It is easy to comprehend why Studley became a centre for needle-making. There were local supplies of iron and charcoal and a ready market in glove-making. It was also close to the nail-makers and other small metal trades in Birmingham. Interestingly, the power source of the River Arrow and its tributaries was not exploited until well after needle-making had become established in the area. Even here, the construct of chance emerges. Why did William Lea, the acknowledged instigator of needle-making in this area, alight in Studley? The reasons will remain forever hidden.

Chance in relation to the location of a needle-making centre is powerfully invoked in the case of Long Crendon (Buckinghamshire). It would appear that this site was most *unsuitable*. There was no fuel, no iron nor a paper mill, the river is some distance downhill and the market (London) was a difficult journey taking several days.

Chance may also have been important at the beginning of the Hathersage industry, though this is less certain. It is clear that Solomon Cocker came to Hathersage about 1742 from neighbouring Bamford where he had been an apprentice wire-drawer, but there is evidence that wire-drawing was sparsely practised in the Hope valley from the seventeenth century. Solomon's descendants were also wire-drawers in the early nineteenth century on a somewhat larger scale. It could be argued that Solomon's decision to settle in Hathersage and that his descendants also became wire-drawers were matters of chance, but both these sequences must have been common occurrences.

Henry Cocker and sons operated from the Dale Mill. In the 1840s business was expanding. He exhibited in the 1851 Great Exhibition. Henry was able to borrow a relatively large sum of money to finance expansion and install a steam engine. Chance, took a significant hand in that their underwriters, the Shore Bank crashed and Henry was forced into bankruptcy.<sup>3</sup> Later, the untimely deaths within months, of Joseph Robert Cocker and his only son and heir, could not have been predicted. Thus the end of the Cocker dynasty and the Atlas works can only be attributed to chance.

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The evidence points to the employees in the needle-making factories living entirely within Hathersage. Using numbers of metal workers recorded in the censuses as a measure of productivity we can surmise that the Hathersage industry prospered until the early 1860s and then declined.<sup>4</sup> According to the evidence of the John English documents, labour costs amounted to 85 percent of the productions costs of a needle.<sup>5</sup>

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<sup>3</sup> Parker, Shore & Co. (established 1770) failed in 1843. Business was acquired by Sheffield Banking Co. Ltd., (established 1831).

<http://heritagearchives.rbs.com/companies/list/sheffield-banking-co-ltd.html> (Viewed 18/8/2017)

<sup>4</sup> Figure 4.1.

<sup>5</sup> Jones, *John English and Company, Feckenham*, p. 90.

There is no reason to suppose that it was very different in Hathersage. It therefore follows that it was essential to operate with an elastic labour supply in order to cope with variations in demand. Exactly how this was achieved in Hathersage is not recorded but the evidence strongly points to labour being drawn predominantly from within the village itself. The use of women and children provided an additional buffer preferentially drawn from the wives and children of existing workers. Labour surplus seems to have been dissipated almost entirely by outmigration.

There were large fluctuations in the sales of John English of Feckenham. 1816 to 1822 saw a rapidly growing market in North America.<sup>6</sup> There was steady growth from £2,500 of sales in 1843 to £10,000 in 1849 followed by a fall to 1858 and then a short, partial and temporary recovery.<sup>7</sup> Jones attributes the difficulties in the 1850s to increasing competition from the German manufacturers who were introducing machinery and were able to undercut the English producers.<sup>8</sup> For Hathersage there can be no knowledge of such short-term variations and no reason why down-turns in Feckenham should be exactly replicated in Hathersage, though German competition could be expected to have a nation-wide effect. In the latter stages of the Hathersage companies, there was some diversification particularly in the production of 'umbrella furniture' which included the shaft, handle and spokes. This 'side-line' propped up the manufactories for some years, though eventually this too declined and some umbrella-makers moved to workshops in Birmingham, Manchester and Chester. Some of the umbrella-makers had originated from these places. From 1873, competition from Germany and America was very stiff due to automation. Mechanisation was very slowly introduced in England due to a ready supply of cheap labour together with poor profits and possibly limited demand. In the Arrow valley, survival was achieved by amalgamation.<sup>9</sup> Such an option did not appear to be available in Hathersage.

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<sup>6</sup> Jones, *John English and Company, Feckenham*, p. 217.

<sup>7</sup> *Ibid*, p. 290.

<sup>8</sup> *Ibid*, p. 289.

<sup>9</sup> *Ibid*, p. 371.

While there are a multitude of precursors to business failure, discussion will be confined to those which specifically relate to the Hathersage manufactories of Cocker and Cook. It can be argued that the background of both were similar in that their ancestors worked in the trade of wire-drawing and needle-making respectively, and in neither family was there a tradition of entrepreneurship or business management. The Cockers, on the other hand, did manage two factories in Hathersage and the successful steel working business in Sheffield was founded by a Cocker.<sup>10</sup> The financial disaster endured by the Cockers in 1843 was not entirely their fault in that the collapse of their lenders was beyond their control. On the other hand, there was a long history of mismanagement, financial crises and possible malpractice in the Cook's partnerships. Mismanagement was exemplified by numerous instances on non-payment of wages exemplified in chapter 3 and court cases relating to company formation and dissolution. The latter were compounded by intra-family disputes. While the needle-making industry was declining in the second part of the nineteenth century, it is noteworthy that the Atlas works continued under the management of Joseph Robert Cocker and John Armstrong Cocker without incident from 1855 until John's death in 1887. It must be acknowledged that the factory may have been quite small in the 1880s. The major contraction having occurred between 1851 when there were 87 workers according to the census to only 42 in 1861. Meanwhile, there were numerous problems at the Barnfield works, as listed in the timeline of table 3.1. It is also clear, that despite the occasional spat, particularly involving Henry Cocker, the Cockers were respected within the community. They were popular in the Methodist circuit and there was an outpouring of grief in the village following the death of J.R. Cocker. Ultimately, the Cocker factory closed through lack of succession. No-one could have predicted that John Armstrong Cocker, the only son, would die within months of his father at the age of 35 years. By this time there were no other Cockers in Hathersage. Had John survived it is likely that children would have been produced.

Business location is an important contributor to the success of a business. Broadly, a company needs easy access to materials, energy and workers with proximity to customers. This was more complex in the context of the industrial revolution because energy supply and transport were transformed during its course, not to mention

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<sup>10</sup> The relationship of the Sheffield Samuel to the Hathersage Cockers is not clear.

mechanisation and the beginnings of automation. The proximity of good flowing water in the Hood and Burbage brooks were a significant ‘plus’ when the factories were built but became less relevant as steam engine became a standard source of power. On the other hand, there was no coal in Hathersage so this had to be brought in, by cart. High quality steel rod was available 10 miles away in Sheffield, though this, too, had to be transported by cart. The finished product had the advantage of being small and transportable, but the customer base was some distance. The Cockers travelled widely; as previously mentioned to London, New York and the Paris exhibition suggesting export into Europe.<sup>11</sup> Joseph R. Cocker toured the north of England and Scotland as evidenced by his letters home. Transport must have been slow and costly compared with rail which was not available until it was too late, in 1894.

The competition in needle-making was located in Warwickshire as described in chapter 2. Coal was available within a short distance. In contrast to Hathersage, the railway arrived earlier, in 1859. This must have facilitated a considerable cost-advantage and allow for a greater volume of product to be handled. A ready supply of workers was available at both sites and the only negative aspect for Warwickshire factories was the import of raw materials. Steel wire was supplied from Sheffield, including Hathersage in the late eighteenth century but also from Stourbridge.

In Long Crendon and the Redditch area specialization was practised in that needles were passed from workshop to workshop and house to house, each location performing one process. For example, Forge Mill at Redditch was a scouring mill. In Hathersage, all operations were carried out on the same site. The latter arrangement might bring the advantage of worker flexibility. There were many examples of Hathersage workmen changing their occupations during a ten year period, from scourer to grinder, for example. In addition, transport costs between processes would be negligible. It is reasonable to suspect that the production costs of the Hathersage manufactories might be marginally lower.

Size matters. It is generally accepted that small businesses are difficult to run profitably for an extended period, and the Hathersage factories were small even in the context of the nineteenth century. Small businesses are vulnerable due to their inability to raise

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<sup>11</sup> *SARI*, 4/8/1855, p.6.

capital at short notice and lack of flexibility and diversity. Sometimes this can have a devastating effect on a community in terms of local unemployment. The long-term viability of the business is also at stake when the company cannot respond quickly to customer requirements.

The introduction of machinery in the needle-making process was slow and resisted by the workers. In chapter 6, evidence was presented suggesting that needle-grinders valued comfort and income above future health. However, an increase in output by a factor of 10 was made between 1824 and 1847 in Redditch by the use of machinery but this fell short of automation.<sup>12</sup> Further advances were made, in particular in relation to the formation of the eye of the needle. Automatic pointing machines were introduced in the Redditch area in the 1870's and with these it was possible to further increase productivity. It is assumed that wages had risen sufficiently to make such an investment judicious. It is doubtful that the Hathersage factories followed suit which further impaired their ability to compete with Redditch needle-makers.

Clearly, a lack of capital was a problem for the Cooks and Cockers in Hathersage. In Long Crendon, there were offers of capital by London merchants and an offer to avail themselves of water power from the River Thame at Notley Abbey, close by. However these needle-makers valued their freedom and independence and as a result failed to modernise or improve their products. The result was a significant migration of workers to Redditch and the surrounding area. Migration was a significant and popular response to local industrial decline in both Hathersage and Long Crendon. The latter reverted easily to an agricultural village but the nature of Hathersage was fundamentally and permanently changed.

Taking evidence from the letters of Joseph Robert Cocker, and the dissolution of the partnership between J.R. and Henry Cocker in 1856, we can conclude that the relationship between the Atlas Works and Dale Mill were not ideal. After Henry's bankruptcy it is not clear what happened to the Dale Mill. There is a suggestion that

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<sup>12</sup> Morrall, *Needle making*, p.21



Robert Cook rented the works but how much activity took place there is unknown. Indeed the last 10 years of Henry Cocker's life are virtually devoid of detail.<sup>13</sup>

Remnants of hackle-pin and gramophone-needle production continued at the Victoria works under the subversion of a Mr Stead and it is unclear as to when this ended. Apart from stone quarrying, there was no other industry and certainly none that was growing to provide employment for surplus needle-makers. As we have seen, there was a prolonged period of outmigration involving young families of needle-makers and young women. The railway immediately made Sheffield an accessible work-place so that incomers could live in Hathersage and work in Sheffield. Hathersage was thus deprived of its self-sufficiency with respect to employment and became a dormitory or satellite for Sheffield.

In both Long Crendon and Hathersage two or three families dominated the needle-making industry. Although this may not have been a primary factor, the concentration of responsibility in the hands of a few can manifest as a weakness. In the case of the Cockers it was an existential weakness. For Long Crendon, William Shrimpton suggests that it was a 'child-like faith to the (fact) that the good old trade names would never fail them'.<sup>14</sup> Neither had access to good transport links or local supplies of raw materials. Hathersage had the benefit of water power and poor soils which initially made it ripe for industrialization; and more difficult to return to an agrarian economy.

The final decline of the needle-making industry in Long Crendon and Hathersage both occurred in the latter half of the nineteenth century. The causes of failure were complex and multifactorial but significant falling demand can be ruled out because the Arrow Valley continued to survive. Long Crendon had a long tradition stretching back to the reign of Elizabeth I whereas Hathersage did not enter the market until the nineteenth century. In both cases, the railway arrived late; in 1862 and 3 miles away for Crendon and 1894 for Hathersage. It has been suggested that Kirby, Beard and Co. moved their Crendon factory to Redditch because of lack of a railway and as the move occurred

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<sup>13</sup> Table 3.1.

<sup>14</sup> Shrimpton, W., *Notes on a Decayed Needle-land with a History of the Needle Redditch Indicator* (Redditch, 1897), pp. 24-25.

before the railway opened. This seems implausible, however, as the owners must have known that the railway was being constructed some years before its opening.<sup>15</sup>

Innate business and management acumen was and remains more varied, however, with different views of work-lifestyle balance. The employer's skills in management would have had a direct effect upon sales and profits and would have modulated national and international pressures on business. The financial history of Robert Cook's Barnfield Works was precarious and complicated by legal disputes. The firm faced bankruptcy in 1867 and continued in various guises with several closures, re-openings and questionable transactions. There is ample evidence that Cook was either unable to pay the wages of those who worked for him, or attempted to avoid paying to the extent that the workers were compelled to seek legal redress. Yet, there was evidence of extreme loyalty on the part of his manager, for example. That the personality of the participants is integral to the success or otherwise of a company has been shown to be true for the Hathersage needle-manufacturers and was thought to be a factor in the John English Company in Feckenham. While the desire to make money powered by the desire for social advancement is common to virtually all businessmen, the desire to benefit their workers and the wider community is more variable.

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We can now attempt to evaluate how the mill owners interacted with the community. Again, there is a reliance on reports in the local newspapers which immediately biases impressions towards the very good and the very bad. Samuel Cocker's early life and education is unknown, Ralph Greaves, the owner of one of the smaller workshops, received a grammar-school education but the Cooks and Tobias Child were of humble labouring backgrounds. All, however, as employers in Hathersage clearly sought to emulate the gentry. They did this by buying rights to shoot on the grouse moors, by giving generously (and often conspicuously) to local causes, joining semi-learned societies and taking a prominent part in religious and/or political activities.<sup>16</sup> In Hathersage at least this set them apart from farmers, shop keepers and tradesmen who pursued a lower profile existence. This contrast raises the question of what motivated

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<sup>15</sup> Shrimpton, *Notes on a Decayed Needle-land*, p. 25.

<sup>16</sup> For example, *Derby Mercury*, 12/9/1827, p.1. and 26/9/1849, p.1.

men to become businessmen? Clearly, the prime motive was to make money; but not just to provide the necessities of life or as an end in itself.<sup>17</sup> Money provides security and power through climbing the social ladder. Studies of the lives of leaders of large businesses, such as Arkwright, Strutt, Wedgewood and Courtauld, leads to the conclusion that social advancement was a most prized possession.<sup>18</sup> It appears then, that modest business men have similar motives and exhibit similar behaviour to successful men such as W. H. Lever, Julius Drew and Eric Bowater as considered by Reader, or capitalist gentlemen like Samuel Holland, William McArthur or Robert Fowler.<sup>19</sup> Social and philanthropic activities are not purely the pleasurable and altruistic by-products of monetary profit. They may also be means of enhancing business through networking.

‘Networking’ is modern terminology for interpersonal interaction on a variety of levels: social, political, cultural and business. Specifically, economic historians look for financial or power gains as an objective which implies a motive other than altruism in personal relationships. Such activity can be advantageous in the business world, especially when materials are obtained and goods sold over a wide area. It is natural to deal preferentially with individuals known personally and trust is enhanced by multiple favourable interactions. In contrast there is a natural wariness when dealing with a stranger.

Networking is not an activity easy to document or even recognise from historical sources. It is usual to use proxy associations such as shared interests (e.g. membership of societies or clubs), shared occupations and political affiliations. The most tangible forms of association are represented by witnesses and executors of wills. This could have been exploited further in this work. Kinship ties can be included and often provide valuable business links. The Cockers in particular used networking extensively. In the foregoing pages there are several examples. Robert Cocker travelled to America and married there. Edwin Cocker promoted the business in London. Henry Cocker joined

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<sup>17</sup> Reader, W., ‘Businessmen and their motives’ in Coleman, D. and Mathias, P. (eds), *Enterprise and History: Essays in Honour of Charles Wilson* (Cambridge, 1984), p. 44.

<sup>18</sup> Coleman, D., ‘Gentlemen and Players’ in *Myth, History and the Industrial Revolution* (London, 1992), pp. 127-8.

<sup>19</sup> Malchow, H., *Gentlemen Capitalists: The Social and Political World of the Victorian Businessman* (Stanford, 1992).

the Literary and Philosophical Society and became a Wesleyan preacher. From the letters of J. R. Cocker to his sister Hannah which he wrote on his travels around northern England and Scotland it is clear that he was visiting and revisiting acquaintances related to business and kin. He writes from Dundee to his sister Hannah; 'I find Mr Riley here from Cocker and Son' and from Glasgow; 'I came down to Liverpool last night and having about three hours I went to see James' (nephew).<sup>20</sup>

Robin Pearson and David Richardson studied officers of several insurance companies located in northern England and the West Country between 1776 and 1824.<sup>21</sup> Not surprisingly they found a 'high degree of occupational homogeneity' in the board members corresponding to the main industry of the area. A high proportion had been prominent locally for several generations and had accumulated wealth by investments, banking, marriage and inheritance. Property was traded between themselves. Many were involved in local government and philanthropy. Most were Tories and High Church. Kinship was also important though easier to demonstrate in aristocratic families rather than those with artisans ancestors. Inter-marriage within business groupings was common and it is notable that the Cockers, Cooks, Childs and Greaves families were linked by marriage. Hathersage needle manufacturers were also linked to high social ranking villagers such as the Broomheads and Ibbotsons.<sup>22</sup>

Like minded men associated and exploited their power and influence to increase their wealth characteristically by diversification of their activities and interests. By this method they were able to enhance their business by supplying goods to government agencies in which they happen to be associated. As an example of local association, the lease on a piece of land including the gas works in Hathersage was auctioned in 1861. It was owned jointly by Robert Cook, George Spencer and Joseph Cocker.<sup>23</sup> Although Pearson and Richardson's work was criticised by Wilson and Popp on the grounds of choice of data source and analytical methods, their original conclusions concur with

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<sup>20</sup> Cocker Letters, 23rd July 1845 and 14th January 1846.

<sup>21</sup> Pearson, R. and Richardson, D., 'Business networking in the industrial revolution', *Economic History Review*, 54 (2001), pp.657-679.

<sup>22</sup> Appendix 2, figure 3.

<sup>23</sup> *SARI*, 12/10/1861, p. 4.

wider anecdotal evidence.<sup>24</sup> Practical details as to how networks were created and fostered remained unexplained. Chance encounters are likely to play a part but seeking contact without clear objectives seems unlikely. Even kinship links decay unless some benefit is to be had by one or both parties.

Monetary co-operation between business families has been described above but there were also disputes. The Cooks were Catholics and the Cockers were Anglican Non-conformists and one might expect fierce competition in business, as indeed, was alluded to in the press account of the event described below. Further, Cocker's Atlas Works was adjacent to Cook's Barnfield Factory. Plenty to fuel open disputes leading to violence, on occasions. At the Derbyshire Easter Sessions held at Chesterfield on the 4<sup>th</sup> April 1832, Samuel and Henry Cocker together with Thomas Broomhead, then the constable, and his sons Thomas and Robert were found guilty of serious assault on William Frost, an employee of Robert Cook. Frost was beaten about the head rendering him unconscious and then imprisoned in the village lock-up. The assault occurred at the Ordnance Arms where Robert Cook was landlord. The dispute involved the Cockers pulling down a building recently erected by Cook which obstructed an ancient carriageway across a piece of wasteland. Cook claimed that he had recently purchased the land. The assault was not popular with inhabitants and a riot ensued with the burning of an effigy of Cocker.<sup>25</sup> The following year Robert Cook was in dispute with James Morton who again claimed that a carriageway had been obstructed by Robert Cook erecting a building on the waste land. The ruling on this occasion went against Cook.<sup>26</sup>

Apart from disputes between rival firms, there were disputes between the mill owners and the local gentry. In 1840 John Shuttleworth took Henry Cocker to the Derbyshire Assize Court to claim damages for the 'effects of a nuisance arising from the defendant's needle manufactory'. Shuttleworth claimed that dust and smoke soiled his

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<sup>24</sup> Wilson, J. and Popp, A., 'Business networking in the industrial revolution: some comments', *Economic History Review*, 56 (2003), pp. 355-361.

<sup>25</sup> *SIYDA*, 14/4/1832. (Several cases were brought before the J.P., J. Holworthy at the time of the riot: *SIYDA*, 29/10/1831.)

<sup>26</sup> *Derby Mercury*, 27/3/1833.

washing and the noise of the extractor fans could be heard 3 or 4 miles away. It was commented that the fans had been in existence for 10 years and had been installed in order to reduce the risk of grinder's disease affecting the workers, considered in chapter 6. Shuttleworth was awarded damages of one shilling.<sup>27</sup>

Conflicts also arose between employer and employee. Walter Darvill, apprenticed to Mr Cocker was sentenced to 21 days imprisonment at Bakewell Petty Sessions for running away.<sup>28</sup> Mary Wiggett, a foreman packer for Cook and Spencer was charged with recurrent stealing from the firm in 1860.<sup>29</sup> In 1871 Frederick Powers and James Bagshaw were charged by Cook and Co for absenteeism at Bakewell Petty Sessions resulting in costs of 19s being awarded to each defendant.<sup>30</sup> However, instances of the employer seeking redress from his employees for absenteeism were relatively few and far between and not amounting to an attempt to control labour using the law as argued by Marc Steinberg.<sup>31</sup> In fact, there were more instances of employees seeking recompense from their employer. Between 1883 and 1889 there were numerous cases heard at Bakewell Petty Sessions against Robert C. Cook for non-payment of wages. Godfrey Biggin, for example, applied on five separate occasions to the court to secure his due wages and on each occasion he was accompanied by a dozen or so co-complainants.<sup>32</sup> Some cases were settled out of court. This state of affairs must have caused considerable worry and inconvenience to the workers and their families and also reflects the chaos and possibly cash-flow difficulties within the Cook manufactory at that time.

Despite employer/employee disputes examples of extreme loyalty were found. Joseph Lilleman, already mentioned, worked for Robert Cook's company in many guises from the age of 7 years until his death in 1895 at the age of 69 and reached the status of

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<sup>27</sup> *SARI*, 15/8/1840, p. 7.

<sup>28</sup> *Derby Mercury*, 18/6/1856, page 8.

<sup>29</sup> *Derby Mercury*, 17/10/1860, page illeg.

<sup>30</sup> *Derby Mercury*, 6/12/1871, page 2.

<sup>31</sup> Steinberg, M., *England's Great Transformation: Law, Labor and the Industrial Revolution* (Chicago, 2016).

<sup>32</sup> DRO, D232/1/1-3

manager.<sup>33</sup> Though even he found it necessary to resort to the court in October 1888 to secure his wages of £9. 15s.<sup>34</sup>

Religion and politics were important ‘factors in the Victorians’ search for personal and social identity’ and possessed the potential for division as well as unity.<sup>35</sup> Politics had hitherto been the preserve of the landed gentry but both occupied the needle mill owners a good deal in Hathersage. Non-conformism and entrepreneurism were often associated and it has been argued that religion significantly influences business practices and decisions.<sup>36</sup> It is not surprising that the Cockers were of that inclination. Buxton suggests that brothers Thomas and Jonathan Cocker joined the Wesleyan group and that Thomas became a preacher in 1792.<sup>37</sup> The first preaching plan of the Bradwell circuit was instituted in 1813 and contained 9 local preachers of whom ‘S. Cocker’ was one.<sup>38</sup> Certainly the Cocker family contributed generously and frequently to the Bradwell funds: Mr Cocker (*Thomas?*), S. Cocker (*Samuel, b. 1790, son of Thomas*) and J. Cocker (*Jonathan*), as well as Mr Ibbotson, and again S. Cocker, H. Cocker (Henry, son of Thomas) and Mrs J. Cocker (*Jonathan’s wife, i.e. Nancy*).<sup>39</sup> The Darvill family, also small needle manufacturers were Wesleyans and John Darvill was a preacher in 1862.<sup>40</sup> The Cockers contributed significantly to the building of the Methodist chapel at Thornhill.<sup>41</sup> Henry was a Methodist preacher in 1824 but in the

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<sup>33</sup> *SARI*, 24/1/1895, p. 7.

<sup>34</sup> DRO D232/1/3 #758

<sup>35</sup> Trainor, R., *Black Country Elites: The Exercise of Authority in an Industrial Area, 1830-1900* (Oxford, 1993), p. 175.

<sup>36</sup> McFarlane, D., ‘Religion and business: identifying relationship gaps and influences’, *Culture and Religion Review Journal* (2011), pp. 94-105.

<sup>37</sup> Buxton, *Hathersage*, p. 99.

<sup>38</sup> Evans, S., *Bradwell: Ancient and Modern* (London, 1912), p. 102.

<sup>39</sup> Wesleyan Methodist Missionary Society Report, 1818, pp. 31 and 55 respectively.

<sup>40</sup> Evans, *Bradwell*, p. 102.

<sup>41</sup> *Ibid.*, p. 104.

1840s was a churchwarden at the parish church.<sup>42</sup> Joseph Robert Cocker, who had worked at the Atlas Works all his life, latterly managing it, was second preacher on the Bradfield Circuit of the Wesleyan Connexion and also chairman of the Hathersage Polling District as a Liberal.<sup>43</sup> His son, John Armstrong Cocker was president of the Castleton Liberal Club.<sup>44</sup> Hathersage was predominantly Liberal in the latter nineteenth century.<sup>45</sup> Robert Cook, on the other hand was Roman Catholic. He may have been a late convert as David 's children were baptised in the Protestant church.

Unfortunately, payroll lists have not survived for it would be interesting to note whether there was any sectarian selection in the labour force of the Cook and Cocker factories. The only clue comes from examining the list of 35 individuals who claimed at court unpaid wages from Robert Cook and Co between 1886 and 1888.<sup>46</sup> Of these 11 were identified in the Roman Catholic baptismal registers, 1822-1872. The total number of Catholic baptisms recorded between 1822 and 1872 was 435. This compares with 401 in the Anglican Church. This suggests that there were similar numbers of Catholics and Anglicans in Hathersage and no evidence of Catholics preferentially choosing Cook as an employer.

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The entrepreneurs of the Arrow Valley who become owners of needle-making mills were typically the product of farmers, having small but sufficient amounts of capital to start the business. In Hathersage this may not have been the case. Certainly the Cooks were the product of employed needle-makers. There is evidence that the Cockers had some interest in the land and possibly farming. In any event, compared with textile mills employing hundreds of workers, needle-making factories were small. The larger firms in Warwickshire employed no more than 100 hands and the Hathersage establishments were smaller still. Consequently, annual sales were modest. There is no

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<sup>42</sup> Buxton, *Hathersage*, p. 100.

<sup>43</sup> *SARI*, 4/10/1887, p. 2.

<sup>44</sup> *SARI*, 15/12/1887, p. 3.

<sup>45</sup> *SARI*, 10/4/1880, p. 3 and 29/5/1891, p.6.

<sup>46</sup> DRO D232/1/2-3.



indication as to the magnitude of sales for the Hathersage mills, but for John English, one of the largest manufacturers in the Arrow Valley employing about 100 hands, sales rarely reached £10,000 in a year. Jones observes that in the Arrow Valley, large profits were not made in needle-making. The more prosperous owners were those who were early in the business and had made a little money which they later invested in land. It was from the land and properties that their modest fortunes were made. Nevertheless, such fortunes were tiny compared with major industrialists of the period.<sup>47</sup> A similar situation appears to have pertained in Hathersage though on a smaller scale. When Henry Cocker's estate was liquidated and Ralph Greaves sold up his business, properties and lands not associated with the needle factory were included in the auction inventories and may have realised the major portion of the proceeds.

As we have seen, modest financial returns did not prevent the owners from attempting to enter the world of the landed gentry. Henry Cocker, by the 1840s, was attempting to become accepted in society. In January 1843 he attended and presented at the Literary and Philosophical Society.<sup>48</sup> The next month he was elected to the Royal Agricultural Society of England.<sup>49</sup> During the previous 10 years Henry had acquired a large amount of property, and had joined the society of the gentry. Having been a Methodist preacher he also became a churchwarden at the Anglican Parish Church. Delia Garratt in her study of Methodism in Shropshire noted that the Primitive Methodists attracted working-class people, predominantly miners and agricultural labourers and that the preachers were drawn from the same stock.<sup>50</sup> The preacher may have had more understanding and empathy with his flock, therefore, compared with the Anglican Vicar who may well have had an Oxford degree. Here, in the Cockers we see the wire-drawer minister with his worker parishioners. But also, we see Henry Cocker aping the intelligentsia. Following the crash of the Parker and Shore Bank in which the Vicar,

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<sup>47</sup> Jones, *John English and Company, Feckenham*, pp. 401-2.

<sup>48</sup> *SARI*, 7/1/1843, p. 8.

<sup>49</sup> *Derby Mercury*, 15/2/1843.

<sup>50</sup> Garratt, D., *Primitive Methodism in Shropshire, 1820-1900*, Unpublished Ph.D. Thesis, University of Leicester (2002), pp. 290-1.

John Le Cornu, was reported to have lost £5,800 Henry found himself in the bankruptcy court.<sup>51</sup> If his rise was noted locally his fall was reported from Cornwall to Edinburgh.

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Migration has been mentioned above, but a few more observations are worth highlighting. In both Hathersage and Long Crendon, needle-workers who had been born in the Arrow Valley returned to their roots. Crendon natives involved in needle-making moved with them. This did not happen in Hathersage where natives migrated northwards to Sheffield and Leeds. One in five left the industry after moving and a further fifth changed their job within the industry, though wire-drawers were least likely to switch.

As the needle-making industry declined in Hathersage, there were 3 decades when workers, mostly with young families, left the community. But despite this, the population grew. In the beginning this was due to the sudden arrival of navvies who resided in temporary wooden huts in Padley Wood to the south and as lodgers within the village proper.<sup>52</sup> They were the builders of the railway between Sheffield and Manchester and specifically the Totley tunnel.<sup>53</sup> Once the railway had opened in 1894, Hathersage was repopulated predominantly by Yorkshire people, many from Sheffield. This changed the balance of the village. In 1870, 60 percent of the village were natives as had been the case for years. Ten years later this had dropped to a stable 40 percent.<sup>54</sup> There were more traders, shop keepers and middlemen, an estate agent, for example. Fewer families with children and a greater proportion of residents earned their living outside the village, most in Sheffield. Hathersage, once a community dominated by people born and bred there and who earned their living within the village, was quickly changed into a dormitory for Sheffield people working in the smoke but sleeping in the fresh air of the Derwent Valley. The inability to negotiate a railway connection 30 years earlier was almost certainly a factor in the decline of needle-making in Hathersage. But

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<sup>51</sup> *SARI*, 18/2/1843, p. 2.

<sup>52</sup> A short description of the railway workers may be found in appendix 3.

<sup>53</sup> Appendix 3.

<sup>54</sup> Figure 4.4.

its opening in 1894 was also instrumental in the growth of the village which took place from 1881.<sup>55</sup> The railway entering the village from outside changed the make-up of the community to a greater extent than the growth and decline of the industry that came from within. If Hathersage had remained disconnected it is likely to have shrunk into relative obscurity.

Apart from the outmigration of needle-makers, migration was studied with a wider perspective. A cohort study of those born in Hathersage between 1831 and 1841 showed that few moved after the age of 35 years and few more than 70 miles. The main recipient areas were Yorkshire (mostly Sheffield and Leeds), Lancashire and Cheshire (towns now within Greater Manchester). Only one in ten moved south of a line from the Bristol Channel to the Wash and surprisingly, this did not increase over time. The distance moved was not in any way related to age.<sup>56</sup> Neither did the mean distance increase with time. It appears that migration patterns were relatively fixed, yet idiosyncratic. In keeping with the findings of Bernard Deacon in Cornwall and the author's own observations, that the most important determinant of destination was occupation with a desire to choose a similar local landscape. For example, agricultural workers and farmers moved very short distances to neighbouring farms and settlements and factory workers moved to the industrial areas of Yorkshire. An interesting incidental observation was that marriage was delayed by an average of 5 years following migration, compared with a similar group of women who stayed in Hathersage. Certainly, young girls who left Chute (Wiltshire) for domestic service in London during the nineteenth century married late but this was not quantified at the time. It would be interesting to investigate this phenomenon further by examining data from a variety of locations and at different times. The broad aspects of the process of leaving home, solitary living and implications for national fertility deserve greater attention.

Demographic measurements such as mean household size and composition are subject to wide geographic variations. The former fell in England rather later than other

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<sup>55</sup> Figure 4.2.

<sup>56</sup> Figure 7.2

industrializing countries and Hathersage followed this trend.<sup>57</sup> Such wide variations might lead us to suspect that local conditions have a considerable influence. To explore such relationships would be to stray from the purpose of this study. The most marked changes observed were the progressive fall in the propensity for non-conjugal kin to be included in the household as the century progressed. This particularly related to the inclusion of grandchildren and parents. On the other hand, the inclusion of lodgers or boarders and siblings, particularly towards the end of life seem to become more common. Again, the numbers were small and it was therefore decided to compare two specific censuses, 1851 and 1891 for this pilot study. It might be appropriate to expand this sort of analysis using two or more larger populations in successive censuses from 1851 to 1911. It is not thought that the needle industry had any effect of changes of MHS or inclusion of kin in Hathersage.

The rise in marriage age was also marked; for men it rose from an average of 24½ years to 28 over the century with a similar rise for women who married on average 2½ years younger.<sup>58</sup> This resulted in declining fertility. In Hathersage, the decline was particularly acute following the opening of the railway, due to a disproportionate immigration of mature couples from Sheffield. It has been demonstrated in figure 4.6 that the changes of MHS over time vary considerably from community to community and this observation merits further study. It is possible that the observation follows from the smallness of the community such that single households can produce disproportionate changes.

Domestic service dominated women's employment though a significant proportion worked in the needle-making factories. Their number fluctuated in line with the number of employed men. Some worked for many years in the industry though few remained after 1881. The majority were unmarried girls but a significant number were married or widowed.<sup>59</sup> Certain jobs were gender specific. For example, wire-drawing and needle-pointing (grinding) were never executed by women and eyeing and packing were almost always women's work. Other jobs like needle-straightening and polishing

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<sup>57</sup> Figure 4.6.

<sup>58</sup> Figure 4.10.

<sup>59</sup> Table 5.6.

could be performed by either gender. Upon leaving the factory, most left the village, very few finding alternative employment within it. Contrary to Michael Anderson's findings in Lancashire, Hathersage women did not appear to work less as they aged.<sup>60</sup>

The needle-making factories of Hathersage employed 42 percent of working children between the ages of 7 and 14 years. Domestic service and agriculture made up another 40 percent. Despite the existence of the factories, the proportion of child workers was similar to the Derbyshire average. After the needle industry peaked, the numbers of employed children fell precipitously.<sup>61</sup> Employment of children proved difficult to investigate with confidence. From CEB designation of individuals we might conclude that children between the ages of 10 and 14 provided significant elasticity in labour provision and that only in the boom years around 1861 were under 10 year olds used, and then in small numbers. An interesting observation was that working children under the age of 14 years were most likely to come from families with 5 children rather than more or fewer. The observation may suggest that it was these families who were most hard pressed financially and this deserves further enquiry.

The proportion of over 65 year-olds living in Hathersage increased between 1851 and 1911 at a rate faster than the national average: 4.4 to 5.8 percent compared with 4.6 to 4.7 percent. But the average age of this group remained at 72 years suggesting that average life expectancy of villagers had not increased during this period. There was a decreasing tendency to live with their children during the latter part of the century and a cohort study revealed that the household structure containing elderly was fluid, though the inclusion of young children was an enduring feature.

The number of non-native elderly solitaires was very small making up 2 to 4 percent of the elderly, but they were less likely to have kin living within the village. More than half of widowed elderly solitaires had kin, usually children, living within the community and this despite considerable outmigration of young families. Those without kin were either childless or had no surviving children. The evidence suggests that every effort was made by families to ensure that the elderly were not isolated. This coincided with low usage of the Bakewell Union Workhouse and the small number of designated

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<sup>60</sup> Figures 5.9 and 5.10.

<sup>61</sup> Figure 5.11.

paupers in the village. Potential care pathways were available for the vast majority of elderly in Hathersage. These involved kin, though not necessarily within the same household. Where a parent remarried, the mother was more likely to move away from the community than the father. Again it would be worthwhile comparing with other communities using the same methodology.

Although markedly changed, both in composition and size, the experience of industrialization and failure of that industry as an enduring local employer appears to have left few scars. The two chimneys stand smokeless as a reminder that some industrial activity occurred there but there is little evidence of the revolutionary events of the nineteenth century.

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Hathersage entered the nineteenth century earning its living from the land. Farming and quarrying were the major employers with a few families involved in lead smelting, button making, calico working and the usual trades and crafts found in a country village. From approximately 1815 until the 1860's the needle-making industry grew to become the major employer.<sup>62</sup> In spite of incomers from Warwickshire in the early industrial years, the population appeared to be relatively stable until the 1850's only to fall back as the needle industry declined. The proportion of natives living in the village, which had been stable at about 60 percent declined to 40 percent as needle-workers migrated northwards to Sheffield and Leeds. After the railway opened when there was also an influx from Sheffield.<sup>63</sup>

The detailed work on household makeup over time and kin relationships described in this volume necessitates transferring the information included in images of the CEBs into a digital database. This takes many hours; handwriting can be difficult to read and a proportion of entries are obscured by latter, apparently random lines drawn across the documents. Working with a particular community over a prolonged period allows many initial mis-transcriptions to be corrected. This probably explains why detailed studies so far published tend to be of relatively small communities. Extension of this work to

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<sup>62</sup> Figure 4.1.

<sup>63</sup> Figure 4.4.

several larger communities is considered to be more appropriate for a funded project in a local history department rather than a lone researcher.

Employment of Hathersage women appeared to change little during the nineteenth century. Mid-century over 20 percent of working women were employed in the needle-making factories and as the industry declined, opportunities for younger women in particular all but vanished. More girls entered domestic service. Many migrated, often towards Cheshire and Lancashire and on average this delayed their marriage age by five years. It had previously been noted that later marriage was also a feature of Chute girls migrating to service in London. The relationship between service, migration and declining fertility in the latter nineteenth century needs further investigation involving different communities in a range of areas. Part-time working has not been explored but is likely to have been a feature of factory work for both women and children. This information might have been gleaned from pay books or employee lists used by the factory managers but these have not survived. These would have provided more accurate assessments of the both the numbers of employees and their functions than the estimates based on CEBs. It might have been possible to observe workers moving from one factory to another and relate such changes to conflicts or financial difficulties in the company.

Infant mortality has long been accepted as a health indicator even prior to national registration of births and deaths. It was surprising, therefore, using meticulous record linkage only possible in small communities like Hathersage, such uncertainty in the result was revealed which sheds doubt on much previous work prior to the twentieth century. Age of death, though a crude measure, proved more reliable. Age at death improved for most Hathersage male workers, during the second part of the nineteenth century, particularly needle grinders. The exception was for stone quarrymen; being peripheral to the present work, the possible reasons were not considered. Maternal deaths have not been considered at all because the numbers were very small. For example, four instances were identified where a child was in the household of a grandparent due to the death of one parent.<sup>64</sup>

Although markedly changed, both in composition and size, the experience of industrialization and the failure of the needle-making industry as an enduring local

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<sup>64</sup> Table 4.3.

employer appears to have left few scars. The bricks and mortar of the Barnfield Works, the Victoria Works and the Dale Mill stand as a reminder of that industrial period for which there is remarkably little documentary evidence. This volume attempts to bring together disparate material to establish the event in historiography.



# Appendix 1. Estimation of infant mortality

The *period* IMR uses the number of infant deaths in a period of time, usually a year, as the numerator and the total live births during that same period as the denominator. The *cohort* IMR is purer and uses the number of live births during a period, again usually a year, as the denominator but the number of deaths during the first year of life of those individuals as the numerator.

$$\text{IMR} = \frac{\text{number of deaths under 1 year of age over time, T}}{\text{number of live births over time T}} \dots\dots\dots (1)$$

(usually expressed as per 1000 live births, T usually 1 year)

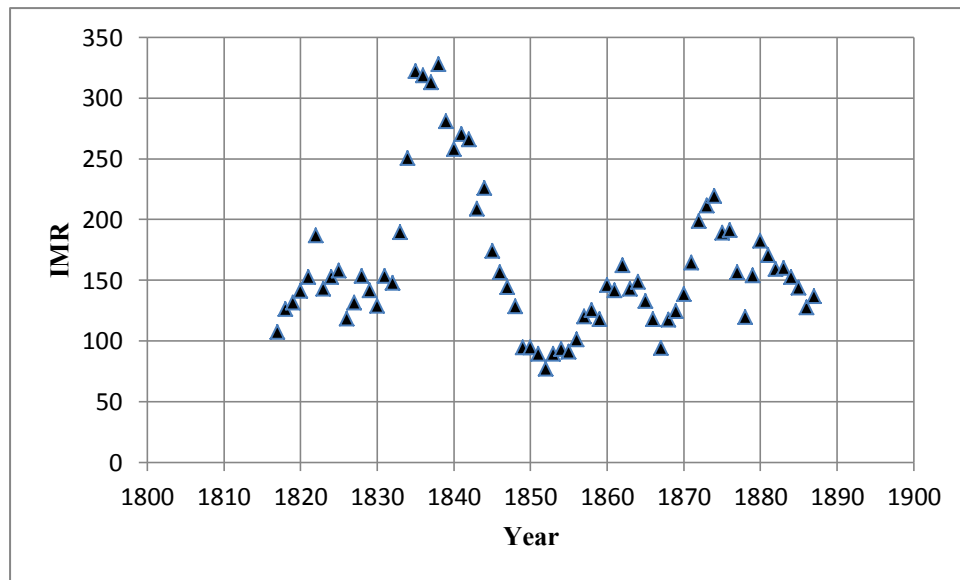
In the twentieth century, births and deaths have been recorded to a standard that allows such ratios to be computed with confidence. Further back in time, records were less reliable, particularly earlier than the 1870s. Some of the difficulties experienced in this study illustrate how unreliable historical estimations may be.

National recording of births and deaths started in 1837, but not all births were recorded in the early years, and ages were not included in the deaths index until 1866. Historians have used church records as surrogates: baptisms substituting for births and burials for deaths. Ecclesiastical records are associated with several difficulties. First, Church of England, Catholic and some Nonconformists often kept their own records. Not all have survived and there is no one repository. Some records, mostly Nonconformist, are unavailable to the public. Secondly, not all births were followed by a baptism. The proportion of babies baptised varied with location and was generally reduced around 1837 due to parents' confusion over whether birth registration *and* baptism were required. Similarly, not all neo-natal deaths were associated with a burial ceremony. Thirdly, there is a specific problem associated with identifying burials of children under the age of one year. Age was not declared on a regular basis until 1813. At all ages, accuracy varies and it was customary to describe under one-year-olds as 'infants'. In Hathersage between 1832 and 1840 for example, there were 5 instances out of 317, where the term 'infant' was used for a child over the age of one year. Of 2,797 Church

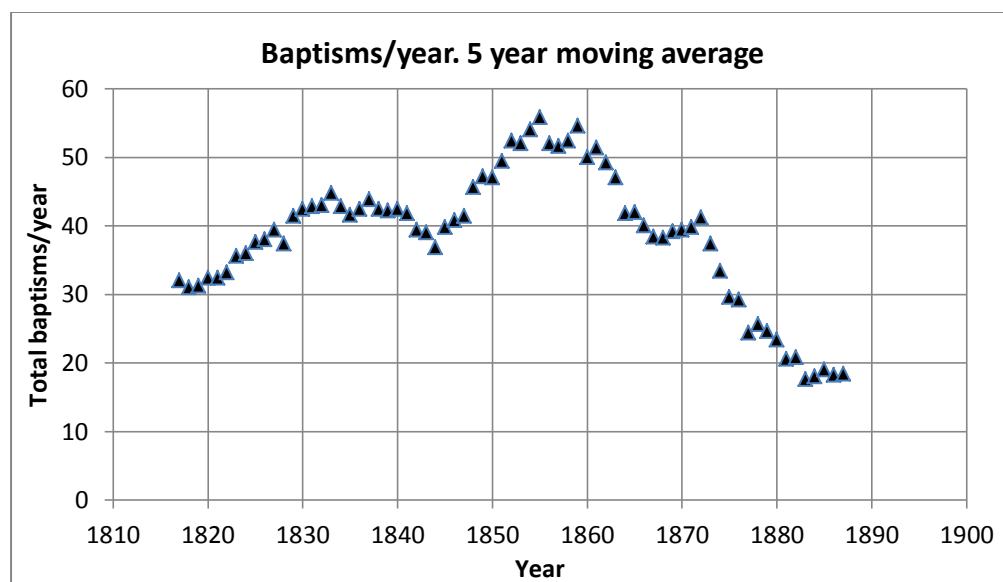
of England burials recorded in Hathersage between 1800 and 1910, 10 percent did not include an age. 541 appeared to relate to children less than 1 year in age and 29 percent of these were annotated 'infant'. For the remainder, the age was specified in terms of hours, days, weeks or months. However not all childhood deaths were associated with a burial, as evidenced by only the parents appearing in the CEB following shortly after a baptism.

Lastly, while it is assumed that the period IMR and the cohort IMR are approximately equal, the difference can be substantial when dealing with smaller populations such as towns. Unfortunately it is at the locality level where changes in IMR can tell the historian so much. The reason for the discrepancy is easy to appreciate. The computation includes as the denominator, the number of baptisms (or births) in a year, say, January to December 1838. The numerator is the number of burials (deaths) of infants occurring in the same period. Leaving aside the fact that the population may have changed due to migration, a child dying at 11 months of age on 1<sup>st</sup> January 1838, will have been born in January or February 1837. If, the proportion of babies born and subsequently baptised fell, then the denominator is reduced and the resulting IMR artificially raised. Not all children were baptised. For Hathersage at this time, each child not baptised would increase the IMR by approximately 5.7/1000.

Notwithstanding these errors and in common with accepted practice, a period IMR was calculated for Hathersage between 1813 and 1887. The IMR varied between zero and 450 and is depicted in figure A1.1 as a five-year moving average. There are three distinct peaks centred on the late 1830s, early 1860s and early 1870s. The average IMR is 162/1000 over the selected period. The first peak occurred at the same time that birth registration was introduced. Could a more than doubling of the period IMR be caused by a decrease in baptisms, as opposed to births?



**Figure A1.1.** Period IMR for nineteenth-century Hathersage as a 5-year moving average.



**Figure A1.2.** Five-year moving average of nineteenth-century Hathersage baptisms.

As shown in figure A1.2, there was no obvious fall in the number of baptisms between 1830 and 1840, varying randomly between 29 and 40 per year. To answer this question definitively, a cohort IMR was calculated for the years 1832 and 1840. A total of 317 baptisms were conducted during this period, both Church of England and Roman Catholic. Most were from Hathersage but a number were resident in Bamford and smaller settlements around Hathersage. An attempt was made to identify each

individual in the Hathersage burial register, 1841 and 1851 censuses for Hathersage and the 1851 census for the whole of England and Wales. 29 infant deaths were recorded. 68 babies (21 percent) could not be identified at all. This number is substantial. In 1833 the unidentified amounted to one third of those baptised. It will be argued that the treatment of this unidentified group has a substantial effect on the computed IMR.

What are the possible reasons for failing to identify these babies following baptism?

1. Parents emigrated.
2. Parents migrated and the child died and buried elsewhere.
3. The child died but no burial recorded. This might have applied more to very early deaths. (Of 28 unidentified babies born in Hathersage, seven sets of parents were found in the 1841 Hathersage census. This suggests that a quarter may have been due to this cause.)
4. Not entered into CEBs for various reasons mentioned previously.

It is worth noting that 16 percent of subsequently unidentified babies were illegitimate compared with less than three percent of the identified group. Illegitimate children are notoriously difficult to follow due to difficult life circumstances, name changes and possible increased mortality. A higher IMR is likely to have been associated with illegitimacy but because of the relatively small proportion of illegitimate births, the effect on the overall IMR is small.<sup>1</sup> For the years 1830-7, Wrigley and colleagues suggest that the illegitimacy rate was six per cent adding 8.4 to the legitimate IMR of 140.4. The illegitimacy rate in Hathersage for the period 1832-40 was 5.7 percent. Another possible error arises in a possible reduction in the denominator by the practice described by Mooney. He suggests that in some cases an illegitimate baby was killed prior to birth such that it was stillborn as killing a child was only murder once it had been born.<sup>2</sup>

Having acknowledged that for one-fifth of the baptisms it is not possible to determine how many died within the first year, it is necessary to consider the effect of the possible

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<sup>1</sup> Wrigley, E.A., Davies, R., Oeppen, J. and Schofield, R., *English Population History from Family Reconstitution, 1580-1837* (Cambridge, 1997), pp. 222-5.

<sup>2</sup> Mooney, G., 'Still-births and the measurement of urban infant mortality rates, c. 1890-1930', *LPS*, 53 (1994), pp. 42-52.

corrective options. It is necessary to bear in mind that the smaller group whose death could not be identified, differed from the identified group in that they formed a larger proportion of baptised in the years 1832, 1833 and 1838. They also, as already mentioned, contained a larger proportion of illegitimate babies and were more likely to live outside the parish of Hathersage by a factor of 4. Both substantially increase the difficulty in finding people in censuses.<sup>3</sup>

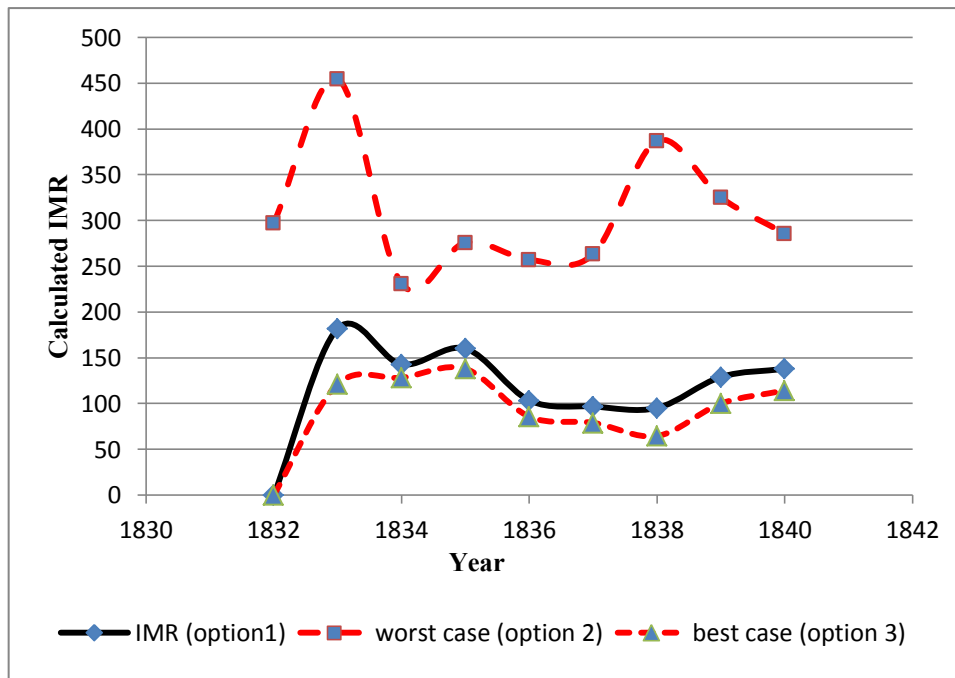
The options are:

1. To confine the calculation of IMR to the group of babies whose death or survival could be positively identified. This assumes that the IMR was identical in the two groups.
2. The worst case scenario assuming that all the unidentified babies had died before their first year.
3. The best case scenario assuming that all the unidentified survived.

These options have been applied for the years 1832 to 1840, which fall around the prominent peak in the 5-year moving average of period IMR of figure A1.1. The resulting curves are laid out in figure A1.3. This shows that the best case scenario produces a result similar in magnitude and trend to making the assumption of parity between identified and unidentified groups. On the other hand, the worst case scenario produces a grossly inflated IMR and a less stable trend. From the foregoing remarks relating to the difference between the two groups of babies, it is reasonable to expect the true IMR of the unidentified group to be higher than the identified group and thus the true IMR relating to Hathersage during the years 1832 to 1840 to be slightly higher than depicted by the black curve in figure A1.3. Most importantly, there is no sign of the rising limb and peak of IMR manifest in the period IMR and throws considerable doubt on the use of such a measure in nineteenth-century mortality calculations.

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<sup>3</sup> There is no doubt that if more time was to be spent on detection a greater number of 'finds' would be achieved. However, such a temptation was resisted on the grounds that such activity would be inappropriate in repeated and larger studies.



**Figure A1.3.** Calculation of cohort IMR, Hathersage 1832-1840.

The argument developed in the preceding pages makes one hesitant to align the second, smaller peak in figure A1.1 to levels of smoke air-born particulates accompanying industrialization. We have seen that the IMR may be inflated by increasing numbers of baptisms (births), but there is direct evidence that both baptisms and numbers of children are declining at that time. This is shown in figures A1.2. It is suggested that increased migration, both inward and outward, might increase the error associated with calculating IMR.

In order to be more confident in stating that the peak of the period IMR at 1860 was an artefact, bearing in mind that there were 835 baptisms between 1849 and 1870, two years were chosen. First 1849 at the foot and 1859 near the peak. The results are tabulated in table A.1.1. For 1849 baptisms, all the babies were traced subsequently so that the cohort IMR is true.<sup>4</sup> For 1859, it was not possible to determine whether 6 babies were alive at one year. This led to some uncertainty to the true cohort IMR as indicated by the limits in the table. Assuming that the mortality was the same for these six babies, the IMR for the 1859 cohort was substantially lower than ten years previously. This would support the view that the 1860 period IMR was a product of the

<sup>4</sup> If we accept that baptisms equal births.

method rather than a true event. It is also worth noting that the inability to follow 6 out of 40 babies leads to considerable uncertainty in the computed IMR.

**Table A1.1.** IMRs for Hathersage, 1849 and 1859

Baptisms for the year	1849	1859
Number of baptisms	23	40
Number of babies traced	23	34
Number of confirmed infant deaths	3	3
Cohort IMR	130	88
Limits of IMR	n/a	75-225

The exercise described in this appendix using real data demonstrates the significant degree of uncertainty pertaining to the calculation of period IMRs prior to the twentieth century. Even cohort IMR may be subject to an unacceptable degree of uncertainty increasing with the proportion of babies whose life status at the end of a year cannot be determined.

## Appendix 2. Some Important Families

Reference has been made to a handful of Hathersage families repeatedly in the text. An expanded account of the more prominent families is included in this appendix. The purpose is to clarify some of the points made previously and for interest.

### The Cocker Family

The first documented evidence of a Cocker in Hathersage was in 1724 when Solomon married Hannah Windle. There is no reliable information relating to Solomon's birthplace, but he stayed in Hathersage and produced 4 children; William died aged 7 and Mary at the age of 36, unmarried. James and Robert married and produced families who mostly stayed in Hathersage. Unfortunately, nothing has been found to indicate their occupations. According to James Holworthy, quoted in chapter 3, Solomon became an apprentice wire-drawer in Bamford, and married his master's daughter.<sup>1</sup> A high preponderance of wire-drawers and metal-workers among his descendants might be attributed to Solomon's enthusiasm and/or success. An abbreviated family tree is presented in figure A2.1 and the distribution of Cockers across the north of England in 1881 is shown in figure A2.1.

The only traceable descendant of Solomon's son, James Cocker, is his grandson John, who in 1851 was a 'wire, hackle and pin manufacturer' in Brightside Bierlow (Sheffield). John appears to have left Hathersage for Sheffield between 1822 and 1824 and died in Belfast.

Robert Cocker (1729-1814) married Mary Fox (1732-1788) in 1757 and as a widower lived at Carr Head. Robert and Mary had 9 children of whom the first, Thomas (1758-1834) and third, Jonathan (1763-1827) went on to produce large families in Hathersage and were prominent in the wire-drawing and hackle-pin making industries, particularly Thomas. In his later years Jonathan was a shopkeeper appearing at Bakewell Petty

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<sup>1</sup> Examination of parish registers reveals that Hannah Windle's parents were Joshua Windle and Mary Critchley. Their children were baptised and buried at Hathersage, there being no church at Bamford at that time. Unfortunately, nothing has been found to confirm Joshua's occupation.



Sessions in 1822 and 1825 being fined on both occasions for irregularities in his weighing scales. Thomas first married Ann Ibbotson of Moorseats in 1786. Ann died in 1806 after bearing 10 children. The following year Thomas married Betty Thorpe and they had a further 3 children including Joseph Robert (1819-1887) who managed the Atlas works in the latter years of the business. From Thomas's first marriage, his first born, Henry (1786-1856) was a key player in the Hathersage wire and needle works.

From the register of baptisms, we know that Thomas was a wire-drawer between 1813 and 1819, and that Samuel worked as a wire-drawer in 1818/19. But in 1821 Samuel is described as a farmer and from 1822 as a needle and wire manufacturer. In 1834 he moved to Ecclesall Bierlow.

Edwin Cocker (1803-1853), son of Thomas was known to be in London in 1828 working for the family business where he mentions in a letter that he had begun to have fits. In 1841, Edwin was a boarding house keeper in St Pancras (Middlesex) with a family. There is a further letter from Edwin to Joseph Robert referring to a visit from James. In the 1851 census Edwin is described as an 'Agent'. Edwin died in 1853.

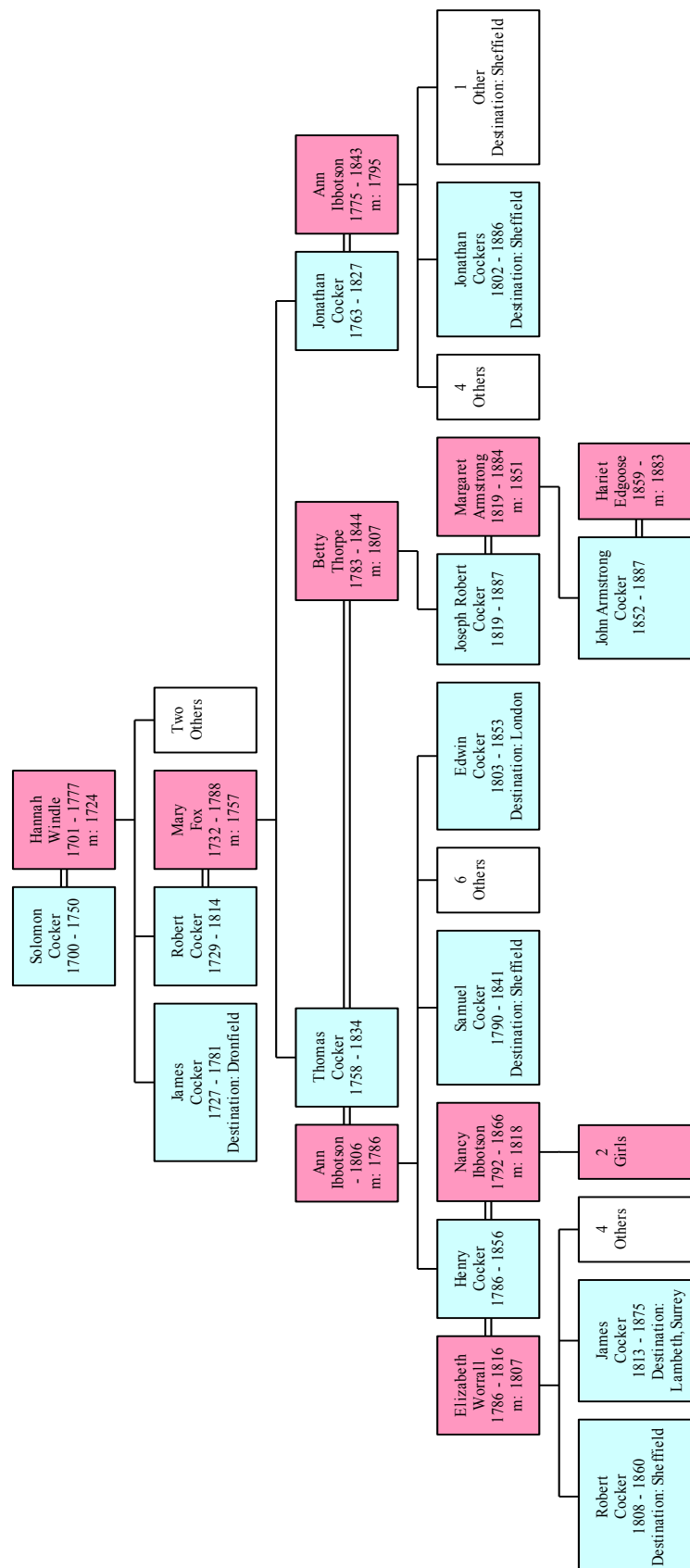
James (b.1813), we have seen in chapter 3 was also involved in the business, probably at the Dale works. In 1844 he moved to Liverpool. Just prior to leaving Hathersage he sold by auction 10 cottages at The Hill, and 9 parcels of land in Outseats amounting to 24 acres (some of which were bought by his father Henry), Eastwood's Farm and 15 acres of land which he acquired from William Furniss and his pew in the church.<sup>2</sup> In a separate auction he sold his house, Eastwood Cottage, and the contents of modern furniture, glass and books suggesting some wealth and education.<sup>3</sup>

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<sup>2</sup> *SARI*, 10/8/1844. It appears that the farm and pew were unsold as they were presented for auction again in June 1846, *SARI*, 16/5/1846, p. 4.

<sup>3</sup> *SARI*, 21/9/1844, p.4.

## *Descendants of Solomon Cocker*



**Figure A2.1.** Abbreviated family tree of the Cocker family including only those mentioned in the text, being family members involved in the manufacturing of needles.

Robert (b.1808, eldest son of Henry) travelled in steerage to New York in October 1848 from Halifax (Nova Scotia) on S. Caledonia, describing himself as a merchant.<sup>4</sup> It is probable that he married during an earlier trip as his daughter, Mary Fisher Cocker, was born in 1844 in the USA. It is assumed that he was selling needles there. The Morning Post reported at the end of July 1853 that Robert Cocker, formerly of New York but now a needle manufacturer in Hathersage was bankrupt in his own right.<sup>5</sup> In the 1861 census, he was resident in Attercliffe (Sheffield) with his wife and daughter and described as a 'manufacturer of cast steel, employing 25 men'. He is thought to have died in 1870 in Sheffield and his wife moved to Aston, Warwickshire to live with her daughter. It appears that Robert was facilitating trade with Northern America for the Hathersage firm. Certainly, Cocker Brothers (of Sheffield, and possibly the company with which Robert was earlier associated) were exporting substantial quantities of good crucible steel wire to the United states in the 1880s and 1890s.<sup>6</sup>

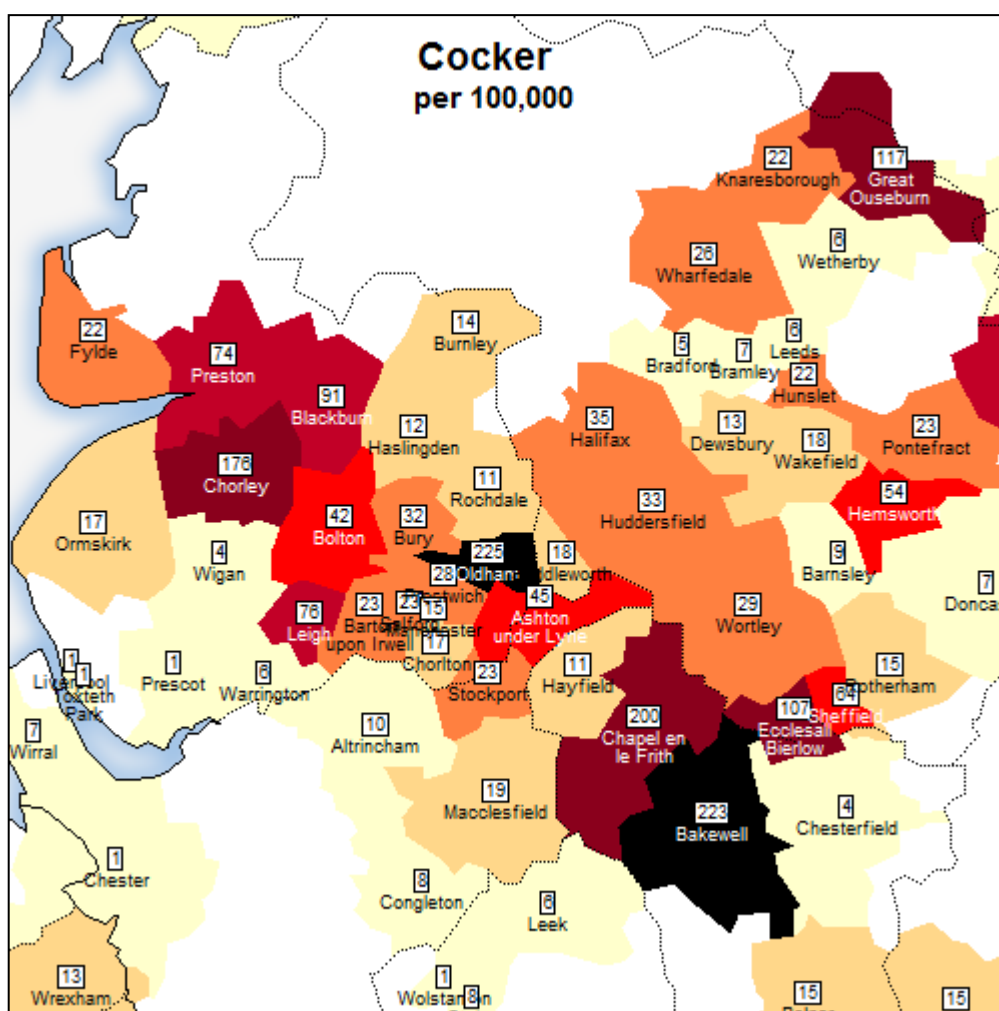
As explained in chapter 3, by 1990 there were no Cockers in Hathersage.

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<sup>4</sup> [www.ukimmigrants.org](http://www.ukimmigrants.org) (Viewed 8/7/2014). According to [www.familysearch.org](http://www.familysearch.org) he may also have travelled to New York in 1837.

<sup>5</sup> *Morning Post*, 30/7/1853, p.7.

<sup>6</sup> Tweedale, G., *Sheffield Steel and America: A Century of Commercial and Technological Interdependence, 1830-1930* (Cambridge, 1987), p. 29.



**Figure A2.2.** Distribution of Cocker Surname in 1881, as occurrences per 100,000 population, by Poor Law Union.

Source: *Surname Atlas*, Archer Software.

As can be seen from figure A2.2. there were many Cockers in Sheffield. An advertisement in Lever's Yearbook shown in figure A2.3 is evidence of a Samuel Cocker established in the Sheffield wire industry as early as 1752. Buxton has assumed that these Cockers were part of the same family as the Hathersage Cockers and that they came from Manchester but no supporting evidence is offered and the present author has been unable to find any.<sup>7</sup> By the 1851 census for Sheffield, all the resident Cockers had been born either in Sheffield or Hathersage providing no clues to eighteenth-century origins.

<sup>7</sup> Buxton, Hathersage, p. 98.

It has not been possible to gain permission to publish this image, but it can be viewed at:  
(correct on 30.5.2018).

<https://books.google.co.uk/books?id=268EAAAAQAAJ&printsec=frontcover&dq=The+Railway+and+the+mine.+Lever%27s+illustrated+year-book&hl=en&sa=X&ved=0ahUKEwiDy7Gnya3bAhUJQ8AKHUFrC7AQ6AEILTAB#v=onepage&q=Cocker&f=false>

**Figure A2.3.** Advertisement for Cocker Brothers.

Source: Lever, E., Lever's Year Book; or Railway and Mining Almanack, the Railway and the Mine. (Google eBook) 1861.

## The Ibbotson Family.

The Ibbotsons were one of the most wealthy and extensive family in Hathersage between the seventeenth and the nineteenth century. Ibbotsons moved from Hope to Netherhurst, a large farming estate between Outseats and Bamford. They prospered and came to own or tenant lands stretching eastwards from Netherhurst including the farms called Gatehouse and Greens House which contained a paper mill, Hollow Fields north of the boundary road close to Stanage Edge and the farms of Moscar also known as Carr Head. The Ibbotsons were not prominent in the needle-making business, the subject of this work, and their numbers make it impossible to produce a concise diagram of value. Indeed, an account of the family would be a worthy independent field of study. Their importance, however, appears to have been appreciated by the Cockers in particular, as links between the families, by way of marriage, were frequent. This is demonstrated in figure A2.6. As owners of the paper mill, the Ibbotsons supplied the Cockers and probably Cooks also, with packing paper.

Another family involved in wire-drawing and with the Cockers by marriage were the Ibbotsons. Henry Ibbotson (1734-1797) was a yeoman farmer having tenant rights on estates at Carr Head and Moss carr. His children had married well into influential and successful families in the village: John Furniss, Thomas Broomhead and Thomas Cocker. Henry Ibbotson's eldest son, William, inherited the lands at Moss carr where he had already been farming for some years. But William's major occupation was carting. He carried millstones from the quarries to Sheffield. It is reputed that it was there that he was introduced to the monetary rewards of wire-drawing and made ready a barn at the farm for the purpose.<sup>8</sup> The date is estimated to be the late eighteenth century but not specifically stated. William went on to manufacture steel fenders (guards for the Sheffield steel industry). William's eldest daughter, Mary, married her cousin, another William Ibbotson who became a manufacturer and merchant in Sheffield. He formed a partnership with his brother-in-law (and cousin) Henry to form the Globe Steel Works in Sheffield, built in 1824. This building is still to be seen at the bottom of Pennistone Road and shown in figure A2.4. Charles Cammell worked at The Globe Works in his younger days. Later, he was to buy the Brookfield estate.

When William Ibbotson senior died in 1818 he left his son Henry land and houses at Moor seats, occupied by Henry Cocker and John Priestley and the farm at Moss carr. (Henry was instructed to pay his brother John an annuity of £26/10/0d. at 10/6 a week). To his son-in-law William Ibbotson, he bequeathed his house at Broadland, Sheffield and directed that his daughter Mary was to have half of his personal estate paid in thirds, at intervals.

From the available evidence is not possible to determine, without doubt, whether William Ibbotson initiated wire-drawing at Carr Head or whether Thomas Cocker was already working at that craft, bearing in mind that he married Ann Ibbotson in 1786. The Holworthy notes suggest the latter, but why would William Ibbotson learn about wire-drawing in Sheffield rather from Thomas Cocker? As has been intimated, there are questions regarding the accuracy and provenance of the anonymous account of the Ibbotson family.

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<sup>8</sup> Anon. *The Ibbotsons of Carr Head*. (np. nd.), Sheffield Local Studies Library. Several presented facts in this document have proved impossible to verify.

It has not been possible to gain permission to publish this image, but it can be viewed at: (correct on 30.5.2018).

<https://www.google.co.uk/search?q=the+globe+works+sheffield&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwiG7tTSy63bAhVJZ8AKHXpJAp0Q7AkIYw&biw=1113&bih=548#imgsrc=R441jGgcGdgCxM:>

**Figure A2.4.** An engraving of the Globe works, Sheffield.

Source: <http://www.wkfinetools.com/hUK/IbbotsonBros%26Co/IbbotsonBros%26Co-index.asp>

## The Cooks

A family tree is presented in figure A2.7.

Robert Cook was the 4<sup>th</sup> child of William and Mary, christened in 1790 at Studley.<sup>9</sup> Sometime in his teens, he moved with his younger brother, David, to Hathersage. He married Amelia White, but she died without issue in June 1818 at the age of 32 years and is buried in Hathersage.<sup>10</sup> The marriage bond with Jane Avery of Macclesfield is dated 11<sup>th</sup> December 1819 and their first child, Mary was baptised in there.<sup>11</sup> Their

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<sup>9</sup> There were 8 children. Source: I.G.I.

<sup>10</sup> No marriage of Amelia (White) and Robert Cook has been found and it is assumed that the burial of Amelia was that of Robert's first wife. In the marriage bond to Jane Avery in 1819 he is described as a widower.

<sup>11</sup> Marriage and baptism of the first birth need not infer place of domicile. It was not uncommon for a mother to give birth for the first time in her parent's home and therefore parish. A quantitative description of this practice has not been found in the literature.

second child, Elizabeth, was baptised in the Roman Catholic Church at Hathersage in 1823. Robert, George, Jane and Richard followed but Jane (wife) died in 1835. Robert soon re-married but again, the marriage record has not been found. His third wife was Mary White who bore Robert 8 children, all baptised in the Hathersage Roman Catholic Church.<sup>12</sup>

[In 1828, Robert Cook leased a messuage with a garden and piggeries adjoining lands called the Hough Crofts from James Furniss, button maker, for £100.<sup>13</sup> ]

regarded highly by everyone as a local employer.

Robert Cook died 1<sup>st</sup> March 1866. In his will he makes mention of his wife Mary (White) and all the surviving children of his third marriage and his brother-in-law Thomas Broomhead, grocer of Hathersage.<sup>14</sup> The will lists a considerable amount of property in Holmsfield, Ringinglow, Whiteley Wood and two unidentified locations. The property at Ringinglow is of special interest as it included a wire works, 10 cottages and the Norfolk Arms which are still identifiable today. The wire-drawing shed is shown in figure A2.5. Son Robert Charles sought to let the wire mill, which included a coal seam. Indeed, the advertisement describes the property in some detail. This is reproduced in figure A2.6.<sup>15</sup> However, for probate, the Cook estate was valued at ‘under £18,000’.<sup>16</sup>

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<sup>12</sup> A descendant of the Furniss family, suggests that Mary White was the sister of Amelia White, but there is no evidence to support this and the burial record of Amelia suggests she was born some 13 years prior to the marriage of Mary White’s parents. Mary White was born in Hathersage in 1807.

<sup>13</sup> DRO, Cam D/76.

<sup>14</sup> DRO, Derbyshire Wills, 1866, p. 349. This is important in that Thomas Broomhead’s wife was Sarah White and appears to have been Mary White’s sister. Sarah’s mother was Mary, nee Furniss, daughter of Thomas Furniss the button maker. It has been previously mentioned that Robert Cook purchased a house and land from James Furniss who inherited the property from his father Thomas Furniss. Thomas Boomhead was also an associate of Henry Cocker.

<sup>15</sup> *SARI*, 13/7/1867, p.2.

<sup>16</sup> National Probate Calendar. ([www.ancestry.co.uk](http://www.ancestry.co.uk))





**Figure A2.5.** Wire-drawing shed at Ringinglow.

The wire mill, now a substantial garden shed in the centre of the picture with the row of cottages to the right and the buildings of the Norfolk Arms on the skyline centre right. Photograph by C. Side. 2014.

43, Exchange street, Sheffield, and Retford, Nottinghamshire.

**T**O WIRE DRAWERS.—To be Let the STEAM WIRE-DRAWING MILL and PREMISES, situate at Ringinglowe, late in the occupation of Messieurs Winterbottom and Fieldsend, with the High-pressure STEAM ENGINE (of 25-horse power, capable of being worked up to 60-horse power )

There are six large and eight small Blocks for Wire-drawing, with the necessary Annealing and Blueing Furnaces and Ovens complete. The Mill is capable of turning out from three to four tons of Wire a week.

There is a Coalpit on the Premises, with Steam Engine and Pumps complete for getting and drawing Coal. The Bed of Coal is four feet six inches in thickness, and of good quality for engine purposes.

The Pit would be let with the Works.

Apply to Mr. ROBERT COOK, **Hathersage.**

**Figure A2.6.** ‘To Let’ notice of the Ringinglow works. The advertisement lists the facilities and specifies the output from the works.

Source: *SARI*, 13/7/1867, p.2.

The exclusion of any of his children from his marriage to Jane Avery suggests a rift had occurred between the two families some time before 1866 and confirmed by a court hearing concerning a shooting incident already mentioned. As with the Cockers, there appear to have been several companies.

David Cook was born between 1794 and 1800, and came to Hathersage with his brother. He married Elizabeth Greaves in Prestbury (Cheshire) in 1820 and as Robert married a Macclesfield girl in 1819 it is possible that they both spent some time in the Macclesfield area prior to Hathersage or had some connection there. In the 1841 census David Cook described himself as a ‘needle-maker’, though his partnership with Robert as needle manufacturers was dissolved in July 1820.<sup>17</sup> David and Elizabeth had two children, Charles (b. 1822) and David (b. 1824), both in Hathersage. Elizabeth died in 1835.

In 1838 David, senior, married Frances Beeley in Sheffield. David died in 1846 at Hathersage. Young Charles married Rose Ann Pickett in Sheffield in early 1851 and in 1861 was living in Manchester as a brewer. No further trace can be found. Neither is there trace of young David until 1861 where he appears in Plumstead (Kent) as an engine fitter married to Elizabeth from Cornwall. Their only daughter, Jeanette was born in Crewe in 1860. David and his descendants had only a fleeting involvement with needle-making and appear to have had a limited attachment to the village. In contrast Robert, through his marriage to Mary White, became related to Thomas Broomhead, respected locally and later an influential and wealthy man. The Cockers were related to the same Broomhead family. Another marriage important to the Cook business was that between his daughter, Elizabeth, and George Holme Spencer.

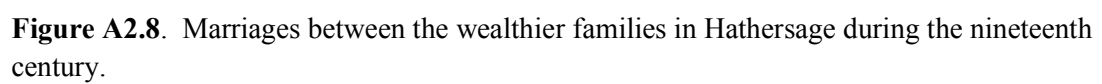
## Other Families

Other important families, more wealthy and influential than the majority of the village inhabitants, were the Broomheads and Whites. The Furniss family, the button makers and property owners described in chapter 3, were also associated with both Cooks and Cockers and again marriage ties are seen in figure A2.8.

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<sup>17</sup> *The Gazette* (London), 22/7/1820.





## Appendix 3. The Railway Navvys.

Although these workers, present in the area for only five years, are outside the main interest of the present work, the railway by its initial absence and then presence had a significant effect on the history of Hathersage. The sudden influx of navvies, miners and bricklayers temporarily distorted the demographics of the village as demonstrated in chapter 4 and it is therefore appropriate to present some data to go some way to answering questions relating to the effect on the village.

Work commenced on the Totley Tunnel in 1888 and was completed in 1893, opening to the public the following year. At the time it was the second longest railway tunnel in the UK at over three and a half miles stretching from Totley in the north-east under the grouse moors of the Earl of Rutland to Nether Padley in the south-west. This is shown in figure A3.1 as a dotted line. Considerable problems with flooding were encountered and the Earl of Rutland was reluctant to allow ventilation shafts to emerge on his grouse moor. These difficulties caused several delays during the construction. The whole of the tunnel was lined with bricks and the entrances are of local stone.

Miners and construction teams worked in eight hour shifts allowing round the clock working. They were housed in wooden and brick built huts at the two ends of the tunnel, at Totley and in Padley Wood. Sanitary conditions were poor and disease said to be rife. A case of smallpox was reported in the Padley Wood in 1892.<sup>1</sup> A proportion of workers boarded in Hathersage and probably in Totley. Residents of the latter were bothered by drunken behaviour but Hathersage, being that much further from the encampment at Padley may have been spared to some extent. There were also seven borders in the Nether Padley 1891 census out of a total of 42 persons. By the beginning of 1883, the local press reported that men were beginning to leave the area as the work was nearing completion.<sup>2</sup>

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<sup>1</sup> SARI, 20 December 1892, p.7.

<sup>2</sup> SARI, 13 March 1893, p.6.

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**Figure A3.1.** Part of an Ordnance Survey Map showing the course of the Sheffield to Manchester railway in the vicinity of Hathersage.  
Scale: kilometre squares.

The 1891 census, occurring near the middle of the construction period, provides numerical data but it should be borne in mind that this is a mere snap-shot. There are many entries in the parish records relating to construction workers not listed in the 1891 census for Hathersage (some are found elsewhere at the time) suggesting that the workers were quite fluid and moved about quite frequently. This factor alone would have reduced the opportunity for relationships to build with the local community. The majority of the men were employed by contractors, rather than the railway company, and many were recruited locally. This being the norm for navvies employed on railway construction projects.<sup>3</sup>

The 1891 census records 137 men specifically defined as working on the tunnel, and a further 21 where there was circumstantial evidence of them being so employed.<sup>4</sup> 41 of these 158 were married and were accompanied by 136 wives, children and other relatives. This made a total of 294 or 20 percent of the Hathersage population.

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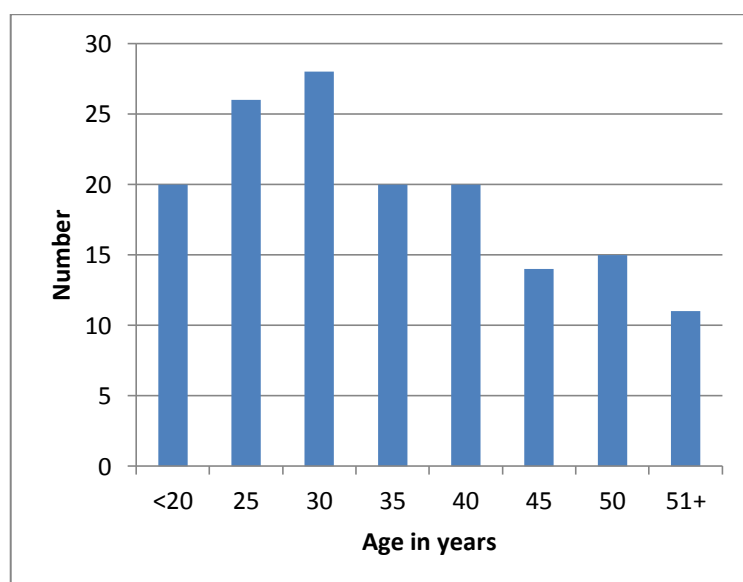
<sup>3</sup> Leivers, C., 'The modern Ishmaels? Navvy communities in the High Peak', *Family and Community History*, 9 (2006), p. 142.

<sup>4</sup> They were living in the huts or in the same household as a fellow boarder and they were not natives of Hathersage.



13 of the workmen had been born in Derbyshire, four in Hathersage. The remainder originated widely from Cornwall to Scotland, Ireland and Wales. Several of the children had been born in Hathersage and one wife. Although these figures suggest that few of the indigenous population were involved with the construction work, we cannot tell if some of the Hathersage quarry workers contributed their labour to produce stone for the entrances to the tunnel, in particular.

The age range of the workers in the 1891 census, shown in figure A3.2 shows a surprising spread. By no means was this a young workforce. Indeed, David Brook suggests that the navy way of life lost its appeal to young men as the nineteenth century progressed.<sup>5</sup>



**Figure A3.2.** Age structure of the tunnel workforce.  
Source: 1891 CEB for Hathersage.

In 1891 there were 159 boarders and 22 lodgers making up 12.3 percent of the population.<sup>6</sup> This compared to 6 boarders and 22 lodgers in 1881 (2.7 percent of the population). This was a considerable change but not as much as would seem. Ten were boarded in the village lodging house, a further 23 scattered in the village and the remaining housed in the purpose built brick or wood huts. Typically, a hut housed a

<sup>5</sup> Brooke, D., *The Railway Navy: 'That Despicable Race of Men'*, (Newton Abbott, David and Charles, 1983), p. 37.

<sup>6</sup> Indeed, the total of workers and their 'camp followers' made up 20 percent of the Hathersage population 1891.

family of four to six and six to eight boarders, who were generally single men. There were also 13 families who rented houses within the village.

Between 1890 and the end of 1894 there were nine marriages in Hathersage involving a railway construction worker. Five of these were to Hathersage girls. There were also numerous baptisms and burials associated with navvy population. A few men stayed in the area once the construction was complete, but none of the local men employed by the contractors moved on to a further project.

The extent to which navvies followed construction as a career was addressed by Clive Leivers who attempted to trace the navvies in the 1891 census working on the Dore to Chinley railway which included the Totley tunnel, in the 1881 and 1901 censuses. He found only 30 percent of men in the 1881 census, confirming Brooke's view that 'the railway navvy remains, alas, an obscure and elusive figure'.<sup>7</sup> Of those detected in the 1901 census, 20 percent were working on another major railway construction and 11 percent performing other work on the railway in other locations.

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<sup>7</sup> Brooke, *The Railway Navvy*, p.9, quoted in Leivers, 'The modern Ishmaels?', p.142.



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