

**AN UNEXCEPTIONAL PEOPLE: REGIONAL
VARIATIONS IN QUAKER OCCUPATIONS IN
EIGHTEENTH-CENTURY ENGLAND AND WALES
c1700-1800.**

by

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Abstract

Previous scholars such as Richard Vann & David Eversley and Richard Allen & Rosemary Moore have suggested that Quakers in the seventeenth- and early eighteenth-centuries were ‘middle-class’ or of a ‘middling sort’ in their economic activity. These conclusions are based on studies which were limited either in geographic scope or to specific economic sectors. Other work such as that by Arthur Raistrick, attempts to suggest that Quakers as a group were exceptional in their achievements or position in society – the phrase ‘a peculiar people’ has been used, for example by Joseph John Gurney. This thesis suggests that Quakers were aligned with local economies in terms of occupation, except for a low representation in agriculture, and that claims for exceptional sector influence or control are not supported by the evidence. As such, in economic terms they were not such a ‘peculiar’ and exceptional people.

This study uses the digested Quaker marriage records from 1691 to 1809, located in Friends House Library, London, as the basis for an examination of the occupational and geographic location patterns of the eighteenth-century Quaker population across England and Wales. The results provide a wide perspective on Quakers in different economic sectors and highlight the patterns of geographical change in Quaker activity across the country. Additionally, it addresses the idea of exceptionalism by examining Charles Hyde’s claim of Quaker domination of the iron industry in the early eighteenth century.

The database shows that the recording of occupational data in the marriage records varied in completeness with distance from London. There were much lower recording rates in distant

regions, such as Cumberland and Northumberland, which were agricultural and economically poorer than the metropolis. This finding has implications for conventional socio-economic descriptions of Quakers. The biggest groups of economically active Quakers, representing 40% of the database, were artisans and retailers. Comparisons with studies of the general population show that their work was reflective of the local economy, although Quakers were less likely to be involved in agriculture.

Such comparisons also showed that Quakers followed the eighteenth-century trend towards urbanisation and were early movers to towns. Their liking for retail activity was shown by the appearance of more food retailers in later years, which was a shift in their food-related activity away from processing. Because these artisan and retail occupations can be regarded as either working- or middle-class, the size of this combined group means that the received view of Quakers as predominantly middle-class is challenged. This challenge is potentially enhanced by the low level of recording of occupations in remote regions. Such regions were likely to contain poorer populations with a higher proportion of humbler occupations. Thus, the reduction in recording rate is likely to disproportionately affect the recording of these humbler occupations.

The connection to local economies is a challenge to the received view of Quaker exceptionality. Hyde's claim for Quaker control of the iron industry, a specific example of such exceptionality, is investigated. An analysis of the English iron industry is presented which includes both production and distribution to examine the extent of Quaker involvement. The findings are that Quakers were more likely to be involved with iron distribution than production and that Hyde's claim is not supported.

Dedication

The drive to produce a PhD thesis had been in my mind for some thirty years – ever since my MPhil examiner cut my viva short just as it was becoming interesting. He commented ‘I’d forgotten that this wasn’t a Doctoral examination, I think we’ve done enough’, and that made me wonder what the full experience would be like. So, thank you, Professor Peter Goodhew (now Emeritus Professor), of Liverpool University Dept. of Engineering. Without that comment this thesis would probably not have been written!

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I am very grateful to my two supervisors, Prof. Ben Dandelion and Dr. Malcolm Dick, whose contrasting inputs illuminated the sweet spot between Quaker Studies and History and added considerably to the pleasure of developing this thesis.

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Presentation of County Names

Within this thesis counties are named in two contexts. These are as geographical locations for activity and as names for Quarterly Quaker Meetings.

For the former use county names in a list are separated by commas and the word ‘and’ is used, for example Herefordshire, Worcestershire and Wales for an activity occurring across the Welsh borders and Wales.

The Quarterly Quaker Meeting covering the same area is called ‘Herefordshire Worcestershire & Wales’. It is one entity and is designated as such by their being no separating commas and the use of the ampersand symbol. Other examples are ‘Berkshire & Oxfordshire’ and ‘Derbyshire & Nottinghamshire’.

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Chapter 1: Introduction

This thesis uses the marriage records of all Quakers across England and Wales in the eighteenth century to examine Quaker occupations and economic activity across the entire century. It answers the questions of what Quakers did to make a living, where they did it and how they fit into existing social structures. Following a very brief summary of the thesis this chapter introduces the Quakers and reviews the existing scholarship on their working lives in the eighteenth century. This review demonstrates the utility of this thesis in providing a nation-wide study of their economic activity. It is followed by a section laying out the structure of the thesis and its arguments.

The large size of the database means that the conclusions drawn are about ordinary people, who are usually invisible. Previous studies in the area have been focussed more regionally or locally and have been more limited in economic range or presented as a side issue to a study of another aspect of life. By including the English and Welsh data, I present a more complete picture than has been possible previously and am able to comment on some of the distortions visible in the data. The thesis provides important data and analysis that those concerned with localised detail should take note of when considering the importance of local factors and trends.

The finding of regional variations in the quality of recording of occupations indicates the originality of using a large database and geographical analysis. This systematic variation is manifested as a reduction in the level of occupational recording with distance from London and informs the further findings below. I show that the largest sectors of work for Quakers were in artisanal and retail activities (which leads to an allied observation that the agricultural

fraction is smaller than in the general population). Firstly, this is important because it shows that many Quakers were not beholden to others for their employment (which would be understandable when they wished to avoid persecution). Secondly, it suggests that Quakers were in the vanguard of the industrialisation happening in English economic society at large because the data shows them shifting across the century from artisanal to manufacturing work. But this finding is potentially tempered by the impact of the regional variations found because the reduction in occupational recording arose in remote communities where more low-level agricultural work might be expected. I suggest that the finding of a large group of artisans and retailers challenges the view of Quakers as middle-class, a challenge that is strengthened if the possibility of missing agriculturalists is included. I also suggest that these missing agriculturalists, if they existed, would dilute the reported trend of Quakers being more involved in commercial activity than the general population.

Much is made of the high achievers of the Quaker economic world, and such Quaker exceptionalism has become received wisdom. The Darbys in the iron industry, the Lloyds in iron and banking and the Barclays in banking are frequently invoked.¹ This trumpeting of success and lauding of Quaker exceptionalism, are a trait that recurs in the work of many authors. In 1910 an author known only as FAS claimed Anthony Lowther, a founder of the Royal Society, as a Quaker, and also Joseph Lister, the introducer of antiseptics.² Such

¹ For example Nancy Cox, 'Imagination and Innovation of an Industrial Pioneer: The First Abraham Darby', *Industrial Archaeology Review*, 12.2 (1990), 127–44; Arthur Raistrick, *Dynasty of Ironfounders - The Darbys and Coalbrookdale* (Newton Abbot: David & Charles, 1970); Judy Lloyd, 'The Lloyds of Birmingham: Quaker Culture and Identity 1850-1918' (unpublished PhD, University of London, 2006); Jacob M. Price, 'The Great Quaker Business Families of Eighteenth Century London: The Rise and Fall of a Sectarian Patriciate', in *The World of William Penn*, ed. by Richard S. Dunn and Mary Maples Dunn (Philadelphia: University of Pennsylvania Press, 1986), pp.367-8, 378, 380; David Burns Windsor, *The Quaker Enterprise* (London: Frederick Muller Limited, 1980), pp.21-5.

² F.A.S, 'Friends and the Learned Societies', *Journal of the Friends Historical Society*, 7.1 (1910), 30–33. Anthony Lowther was married to William Penn's daughter Margaret but this appears to be his only connection with Quakerism and the marriage was private, an indication of it not being Quaker (Andrew R. Murphy, *William*

exceptionalism is challenged here by the finding that Quaker occupations are generally reflective of the local economy. But the most interesting claim, for the purposes of this thesis, is that made by Charles Hyde, and often repeated, including recently by Priya Satia, that Quakers controlled 50-75% of the iron industry in the early eighteenth century.³ This exceptionality is challenged by my finding that, although Quakers were early urbanisers, their common artisanal and retail activities mirrored those of the local economy and were not exceptional. My challenge is strengthened by the finding that Hyde's claim of control of the iron industry is unsupportable.

1.1 Quakers

The Religious Society of Friends of the Truth, the Quakers, are popularly seen as a small and exclusive sect within the Christian grouping. They emerged from the religious maelstrom existing during the English civil war of the mid seventeenth century and predate the major non-conformist church of the Wesleyan Methodists.⁴ Their egalitarian view of Christianity was revolutionary, whereby everyone and anyone can have a direct experience of God and express the revelation received, without the need for an elite priestly caste.⁵ Such views, coupled with a reluctance to support the priestly caste by not paying tithes and disrupting established church services led to persecution by the state authorities.⁶ Thus, being a Quaker required commitment, and hence the strong sense of mutual support and community within

Penn: A Life (Oxford, New York: Oxford University Press, 2018, pp.42-3). Joseph Lister had Quaker parents but became a Scottish Episcopalian on his marriage (Christopher Lawrence, 'Lister, Joseph, Baron Lister (1827–1912), Surgeon and Founder of a System of Antiseptic Surgery', *Oxford Dictionary of National Biography*, 2004, <<https://doi.org/10.1093/ref:odnb/34553>>) [accessed 14 November 2022].

³ Charles K. Hyde, *Technological Change and the British Iron Industry, 1700-1870* (Princeton, NJ: Princeton University Press, 1977), p.16; Priya Satia, *Empire of Guns: The Violent Making of the Industrial Revolution*. (New York, NY: Penguin Press, 2018), p.70.

⁴ Carole Dale Spencer, 'Quakers in Theological Context', in *The Oxford Handbook of Quaker Studies*, ed. by Stephen W. Angell and Pink Dandelion (Oxford: Oxford University Press), p. 146.

⁵ Spencer, 'Quakers in Theological Context', pp.142,144.

⁶ Joseph Besse, *A Collection of the Sufferings of the People Called Quakers*, 2 vols (London: L. Hinde, 1753) is a listing of the 'crimes' perpetrated by Quakers and the resulting sentences to c1690.

the Society. During the eighteenth century the persecution ebbed and Quakers began to integrate into mainstream society. This was offset by a reduction in fervour in some adherents, and later in the century an inward-looking ‘quietist’ practice became very popular and significant.⁷ Not all were of this view and serious tensions developed between the ‘spheres’ of religious and worldly lives.⁸ Some of those who were more extrovert in their Quakerism became known as ‘gay’ quakers for their wider integration into Georgian society.⁹ Such integration inevitably led to apostasy, particularly amongst younger members of multi-generational Quaker families.¹⁰

The combination of radical fervour and communal support resulted in the start of a tradition of recording life in the society. The early persecutions were noted within the movement and works such as Besse’s *Sufferings* are much referred to even today.¹¹ The contemporary gatherings of Quakers on a weekly basis in London led to the establishment and structuring of Quaker Meetings which still exists today without much change.¹² Relevant to this study is the grouping of Meetings for the purposes of communication and administration. The structure of the Society of Friends was that of a Quarterly Meeting (at roughly county level, which sent its representatives to the national Yearly Meeting) which was made up of several Monthly Meetings, which in turn were made up of local Preparative Meetings (which prepared on a local basis for Monthly Meetings for Business). The Preparative Meetings drew adherents from a small area and met together on a monthly basis in a larger Monthly

⁷ Robynne Rogers Healey, ‘Quietist Quakerism, 1692-c1805’, in *The Oxford Handbook of Quaker Studies*, ed. by Stephen W. Angell and Pink Dandelion (Oxford: Oxford University Press), pp.47–8.

⁸ Pink Dandelion, ‘Guarded Domesticity and Engagement with “the World”: The Separate Spheres of Quaker Quietism’, *Common Knowledge*, 16.1 (2010), pp.106-8.

⁹ Healey, ‘Quietist Quakerism’ p.58

¹⁰ Jacob M. Price, ‘Great Quaker Business Families’, p.388.

¹¹ Besse, *Sufferings*.

¹² Richard C. Allen, *Quaker Communities in Early Modern Wales: From Resistance to Respectability* (Cardiff: University of Wales Press, 2007), pp.61-2.

Meeting where much activity took place. The data in this study are reported at the Quarterly Meeting level. Some Quarterly Meetings were larger than others and the Meetings of London & Middlesex, Yorkshire, Bristol & Somerset and Lancashire are referred to here as the 'larger meetings'.

Early Quaker appreciation of the power of words in an era of widening availability of printed media meant that much was written about the society. Such writings were kept in archives and libraries and therefore the membership became more accessible to modern historians than for many other contemporary groups.¹³ The development of Quaker Studies as a discipline has been helped by the preservation of these writings and records.

1.2 Eighteenth-Century Quaker Occupations: Literature Review

Studies of general occupational patterns of Quakers are not common, particularly for the eighteenth century – that period between the founding enthusiasm of the Society in the seventeenth century and the rethinking of the nineteenth century. The work regarded as the most authoritative on the subject and the period is that of Richard Vann and David Eversley, who considered occupation as a necessary part of their primary objective of examining eighteenth-century Quaker marriage patterns.¹⁴ Many studies are more local or specialised in their range. Widely cited and still regarded as definitive is Arthur Raistrick's work on industrial and scientific Quakers, which presents a view of Quakers as being highly influential

¹³ Rosemary Moore, 'Seventeenth Century Context and Quaker Beginnings', in *The Oxford Handbook of Quaker Studies*, ed. by Stephen W. Angell and Pink Dandelion (Oxford: Oxford University Press), pp.20-22.

¹⁴ Richard T. Vann and David Eversley, *Friends in Life and Death – The British and Irish Quakers in the Demographic Transition* (Cambridge: Cambridge University Press, 1992).

in those fields.¹⁵ This review of the state of current knowledge is presented in a chronological format. More detailed examination of these works appears in the subsequent chapters in this thesis where it is directly relevant. There are other studies that make points that are applicable to this thesis but sit outside the knowledge development thread described below. These are considered in section 1.2.2.

1.2.1 Studies of Quaker Occupations

Although limited in numbers and location, the work of William Beck and Thomas Ball is a very early mention of Quaker occupation and social class.¹⁶ In their discussion of the development of the London Meetings and Quaker structures they tabulate the marriages recorded across London for the years 1658 to 1864 and give the occupations for samples of 250 marriages ‘about’ 1680 and 1780.¹⁷ They give no indication of any selection criteria for the sample, or any quantification of ‘about’, and their commentary is limited to noting that ‘humbler’ occupations were more evident in the earlier period.

A limited examination of very early Quaker occupations was provided by Ernest Taylor in his study of the *Valiant Sixty*.¹⁸ They were a group of 66 Quakers from North-West England who by the Spring of 1654 had begun to travel across England professing this new philosophy

¹⁵ Arthur Raistrick, *Quakers in Science and Industry* (Newton Abbot: David & Charles, 1968), a slightly updated version of his 1950 first edition. I have used this throughout the thesis.

¹⁶ William Beck and Thomas Frederick Ball, *The London Friends' Meetings, Showing the Rise of the Society of Friends in London; Its Progress and the Development of Its Discipline: With Accounts of the Various Meeting-Houses and Burial-Grounds, Their History and General Associations, Compiled from Original Records and Other Sources by William Beck and T. Frederick Ball*. (London: F. Bowyer Kitto, 1869).

¹⁷ Beck and Ball, *The London Friends' Meetings*, pp.90-91.

¹⁸ Ernest E. Taylor, *The Valiant Sixty*, 2nd ed (London: Bannisdale Press, 1951). The first edition was published in 1947.

of Quakerism. Within this group the largest occupational sector was agriculture, and Taylor suggests that many of them were materially comfortable.

Arthur Raistrick's still highly regarded *Quakers in Science and Industry* was originally published in 1950 and reissued in 1968.¹⁹ His thesis is that Quakers were drawn to industry because the technical challenges of manufacturing provided an alternative to the academic world closed by the Test Acts. He usefully provides an overview of the Quaker position in society and how Quaker principles and attitudes gave them an advantage in the changing and developing commercial world of the eighteenth century. Besides the chapters on ironmasters, mining companies, other industries and transport, clocks and instruments, naturalists and doctors the interactions between commodity production and trading led him to include sections on Quakers who acted as merchants and moved into the emerging sector of banking. His concentration on advantageous Quaker qualities and success stories reads as more hagiographic than would be expected from contemporary historians.

In 1957 a general examination of Quaker occupations was carried out by Alan Cole.²⁰ He used the marriage records but was interested in the early Quakers and was less systematic than later studies. For Lancashire prior to 1688, he identified a large group active in textiles and a low agricultural activity. Within the textile sector he noted that the first stage of the industrial revolution was already appearing with the 'employment' of weavers by merchants who 'put out' cloth production – this system is described in more detail later in the thesis. His is also the only study prior to this one to comment on occupational recording rates, noting

¹⁹ Raistrick, *Quakers in Science and Industry*.

²⁰ Alan Cole, 'The Social Origins of the Early Friends', *The Journal of the Friends Historical Society*, 48.3 (1957), 99–118.

that south of the River Ribble 70% of grooms recorded an occupation, compared to 40% north of it. In Gloucestershire (also before 1688) a recording rate of only 20% was seen with textile activity again being high, though Quaker commercial and industrial activity (11% and 62% respectively) was much higher than in the general population. Pre-1688 Buckinghamshire was agricultural, already feeding London. Its higher level of labourers and husbandmen is a possible indication of increased economic hardship arising from early conversion to agricultural enclosure. In Bristol, Cole used records up to 1702. Even then Bristol was a significant urban centre and this showed in the occupations he found. Textiles were the largest sector (44%), while the second sector was 'mechanics' (metal, wood and construction) at 26%, with merchants and other commercial at 20%. The 7% of soap boilers is an early indicator of a chemical industry. Cole was able to compare London Quaker occupations for 1689 and 1719, finding that the biggest sector, textiles, fell from 40% to 35%, as did the second sector, artisans, from 21% to 18%. Of note was a 3% labouring sector and a 5% mariner sector, part of the 'rabble'. Merchants and commercial made up 16% of the population and professional people were 3% in 1729, up from a smattering (0.5%) in 1689. Evidence of involvement with capital-intensive industries such as brewing, sugar refining or dye making was sparse. Cole concluded that more Quakers were artisanal than agricultural, though their leaders included wealthy agriculturalists, and that industrial Quakers outnumbered commercial ones, with Quaker influence in some textile-focussed areas.

Richard Vann's first 1969 study (*Interregnum*) published limited studies on Norfolk & Norwich and Buckinghamshire Quakers.²¹ *Interregnum* is focussed on the very early Quakers and opens with a statement that received wisdom suggests that Quakers originated as

²¹ Richard T. Vann, 'Quakerism and the Social Structure in the Interregnum', *Past & Present*, 43, 1969, 71–91.

coming from the lower- or lower middle-classes in the period up to 1660, then rose towards the upper middle-class. He clearly states his own position - that early Quakers are only underrepresented in the top and bottom sections of the social scale.²² Vann makes some effort to reconcile his findings with the earlier study by Alan Cole and explains the differences as due to Cole using only marriage records whereas he looked at a range of records to locate early mention of Quakers. At this early stage in the Society's development, conversion of already married Quakers was a significant factor. In particular, Vann found a presence of 'gentry' (which he loosely defined as being those recognised as gentry by their contemporaries) in Buckinghamshire, these 'gentry being exemplified by the names of Isaac Pennington, Thomas Ellwood, John Raunce and William Russell.²³ To check that Buckinghamshire was not an outlier county, with an unusual pattern of attraction towards Quakerism, Vann then considered Norfolk & Norwich, and found a similar population of trading Quakers with lifestyles above the petite bourgeoisie.

The second of Richard Vann's publications (*Social Development*) is much more concerned with the development of the organisation and structures of Quakerism, and Quakers' place in English society during the first 100 years of the movement.²⁴ In setting his scene he does discuss occupational factors. He notes that early Quakerism appeared attractive to the poorer classes, although such ideas arose from biased reporting.²⁵ He also takes note of Ernest Taylor's view that at least some Quakers were materially more well off.²⁶ But again looking

²² Vann, 'Interregnum', pp.71-2.

²³ Vann, 'Interregnum', p.80.

²⁴ Richard T. Vann, *The Social Development of English Quakerism 1655-1755*, (Cambridge, MA: Harvard University Press, 1969), pp.47-50.

²⁵ Vann, *Social Development*, p.47, cites Ephraim Pagitt, *Heresiography*, 5th ed (John Marshall and Robert Trott, 1654).

²⁶ Taylor, *Valiant Sixty*, pp.40-60.

at Buckinghamshire and Norfolk & Norwich Quakers, he finds early Quakers to be of what we would now call the middle-classes, being wholesalers, agricultural yeomen and gentlemen. He then goes on to note that this social construction changed and became more plebeian as the eighteenth century moved towards its midpoint, and more artisans, petty traders and labourers appeared. He concludes the section by taking issue with Alan Cole's differentiation of yeomen and husbandmen (Cole suggested that husbandmen were 'hard-pressed') stating that Cole underestimated the fraction of gentlemen, and by taking the view that Quaker enrichment over time was not proven.

A 1970 study by Judith Hurwich refers to both of the above works by Richard Vann, noting that he saw a coterie of upper-class Quakers in Buckinghamshire and a move to a lower status membership after the first twenty years.²⁷ Her paper uses Hearth Tax records to suggest that there was no clear change in the economic status of Quakers up to 1689, although there is a suggestion that the first Quakers may have been wealthier. Neither does she support the presence of a cohort of gentry or wealthy tradesmen. However, the records she used were from Warwickshire, and the Quakers in that county were located in the semi-industrial region in the north of it. There was no rural 'upper bourgeoisie' and consequently the downward social shift seen by Vann in Buckinghamshire did not occur in Warwickshire. But both studies are localised, and so neither can be taken as a reliable representation of the national picture.

²⁷ Judith Jones Hurwich, 'The Social Origins of the Early Quakers', *Past & Present*, 48, 1970, 156–62.

In 1975 David Pratt investigated the impact of Quakers in the industrial revolution of the later eighteenth century.²⁸ While he did look at their occupations in the major urban centres of the industrialising North and West Midlands of England (and Bristol), this was through the lens of Quaker philosophy. He developed an idea of Quaker protestantism fostering a culture of practical education and an emphasis on natural sciences and suggested that this made them especially suited for success in the technical and business fields. But by looking only at growing urban commercial communities there must be an element of self-selection of this category of person – Birmingham and Manchester are obvious destinations to attract someone who is interested in the mechanisation of work. His conclusion that the Society is overrepresented in technology and trading is broad and predictable from his choice of sample. However, he does point out the migration to banking, discussed later in more detail by Jacob Price, concluding that it arose from a sect-type mentality which included a need to achieve, but at moderate risk.²⁹

Jacob Price has looked at a selection of Quaker families in London, who were involved in a variety of businesses.³⁰ His fourteen Quaker family groupings are London-based, but some have provincial connections. They are all wealthy, mostly with wealth derived from trading or manufacturing. They show two developmental patterns. They move away from risky trading into safer financial services, such as banking, and there is a drift away from Quakerism as the wealth becomes established, typically over three generations. Two examples will illustrate this. John Gurney of Norwich converted to Quakerism. Prior to his

²⁸ David H. Pratt, 'English Quakers and The First Industrial Revolution: A Study of The Quaker Community in Four Industrial Counties – Lancashire, York, Warwick and Gloucester, 1750-1830' (unpublished PhD, University of Nebraska, 1975).

²⁹ Pratt, 'English Quakers and The First Industrial Revolution', p.191.

³⁰ Price, 'Great Quaker Business Families'.

death in 1721, he had been involved in several occupations, notably in the textile industry. His sons were textile merchants, and one of their sons founded Gurneys Bank in 1775. The founding of the bank strengthened and cemented the family's London connections, but, by this time, family members had begun to leave the Quaker community. It was said that one reason for founding the bank was to provide a family member with an easier occupation than textile trading.³¹ The Lloyd family of Birmingham were iron masters and ironmongers but entered banking in Birmingham, quickly establishing activities in London. Their Quaker connections took longer than the common three generations to diminish, and their iron trade connections carried on in the Midlands, but by the 1850s the family could no longer be described as Quaker.³²

The broadest existing examination of Quaker occupations is that by Richard Vann and David Eversley. They recorded observations concerning occupation when discussing the characteristics of their chosen dataset, but their primary focus was on the marriage patterns, fertility and mortality of the Quaker population. Their dataset comprised family reconstructions from information in the digested Quaker registers of births, marriages and deaths, Irish family lists and genealogies.³³ The data used were selected by area and surname. The English data included all families formed in Bedfordshire & Hertfordshire, Berkshire & Oxfordshire, Bristol, Buckinghamshire, Cambridgeshire & Huntingdonshire and Norfolk & Norwich, together with those whose surname started with B in London & Middlesex, Westmorland and Yorkshire, and B or S in Cheshire, Sussex & Surrey and Herefordshire Worcestershire & Wales. They then collated the data into large groups

³¹ Price, 'Great Quaker Business Families', pp.372-73.

³² Price, 'Great Quaker Business Families', pp.377-79.

³³ The digested Quaker records are summaries collated and tabulated in the nineteenth-century from the countrywide registers collected for the Non-parochial Registers Commission.

covering Ireland, Northern England (N & W of the Humber Severn line), Southern England (S & E of the line) and urban (Norwich, Bristol & London).³⁴ They noted that their sample was from areas where Quakerism was strong. Vann and Eversley conclude that Quakers were underrepresented in agriculture and overrepresented in commerce – but they do put caveats on the latter, noting the difficulties in dealing with trades such as shoemaking where artisans probably sold directly to the public. Additionally, they suggest from an analysis of wills that many drapers and grocers were wholesalers rather than retailers, and note that in the eighteenth century the occupation of mercer or draper had an implication of involvement in the wider supply chain by arranging for cloth to be woven.³⁵ Although reasonably detailed tables of occupational classes are presented, comparatively few comments are made – reflecting the authors' focus on marriage patterns. Their cross-classification between industry and activity type (for example, textiles and artisans) and double counting of some occupations makes for some opacity in interpretation. However, the paucity of labourers is noted in both rural and urban society, as is the drift away from agriculture, artisan work and textiles and the rise in food-related and professional occupations.³⁶

Sylvia Stevens studied eighteenth-century Quakers in North-East Norfolk.³⁷ Her focus was on the reactions of rural Quakers to the changing social climate of that century and the accommodations they made. She recognises the increasing urbanisation of Quakers in the period and takes great interest in the impact of the increasing application of Quaker discipline in the latter part of the century. As a study of the spiritual and philosophical aspects of the

³⁴ Vann and Eversley, *Friends in Life and Death*, pp.32-6.

³⁵ Vann and Eversley, *Friends in Life and Death*, p.72.

³⁶ Vann and Eversley, *Friends in Life and Death*, pp.70-71, 73-4.

³⁷ Sylvia Stevens, 'A Believing People in a Changing World: Quakers in Society in North-East Norfolk, 1690-1800' (unpublished PhD, University of Sunderland, 2005).

community it does not directly impact the work presented here, but as she identifies individuals, there are some nuggets of useful information.

Simon Dixon's recent work examining the social position of Quakers in London in the seventeenth and early eighteenth century includes some comments on occupation.³⁸ His overall focus is on the wider social considerations of community (both internal and interaction with the external population) and wealth. Although he presents some detailed occupational information in tables and maps (derived from marriage records), his classification differs from those used elsewhere (but reflects that used by other historians of London). He notes a gradual decline in the number of London marriages from a peak in the 1680s, which is reflected in a decline in the manufacturing sector.³⁹ This is balanced by an increase in the dealing sector, with agriculture, building, services and transport remaining static.

Wales is a region, or country, that is large enough and diverse enough for studies of it to be arguably considered as more than local. However, as acknowledged by Richard Allen in his work on Quaker communities in Wales, Welsh Quaker records are sparse.⁴⁰ His analysis of Monmouthshire Quakers before 1700 finds that 21% were gentry in a predominantly agricultural county.⁴¹ But the numbers are small and some individual influential families are possibly distorting the picture. The Hanburys were local gentry who were involved in developing the Welsh iron industry along with the Allgoods, who came from Northamptonshire and later made japanware. Later in the eighteenth century, the Harford

³⁸ Simon Neil Dixon, 'Quaker Communities in London, 1667-c1714' (unpublished PhD, Royal Holloway, University of London, 2006).

³⁹ Dixon, 'Quaker Communities in London', p.92.

⁴⁰ Richard C. Allen, *Quaker Communities in Early Modern Wales*.

⁴¹ Richard C. Allen, *Quaker Communities in Early Modern Wales*, pp.34-59.

family arrived in Ebbw Vale to set up an ironworks, and in the 1790s the Fox and Price families came from Cornwall, also to run ironworks.

Discussion of Quaker occupations cannot be complete without mention of Edward Milligan's volume listing brief biographies of approximately 2,800 industrial and commercial Quakers.⁴² This is an alphabetical, factual record of business principals culled from diverse manuscript and printed sources over many years. It is not an interpretative survey but is a useful tool for identifying individuals. The author, the late and longstanding librarian of the Society of Friends, does not claim completeness and discloses his personal biases in the selection. His period, 1775-1920, is a little late for my study, but nevertheless the volume has provided useful crosschecks on the register data.

The final entry in this section on general occupational studies is the recent thesis from Andrew Fincham.⁴³ His work examines the presence of Quakers in the eighteenth-century commercial world, and specifically the drives for the development and exploitation of Quaker business networks. He builds on the 1992 work of Vann and Eversley. He found limitations in their work because of their filtering of the raw data to enable their use of the family reconstruction methodology. He cited further problems with skewed occupational analyses from their double counting of some occupations, such as merchants being taken as professional and wholesale. To counteract these issues, he reanalysed their occupations into categories more useful for his commercial analysis and added further data from East Anglia and London & Middlesex marriage records. His conclusions from this analysis are that the

⁴² Edward H. Milligan, *Biographical Dictionary of British Quakers in Commerce and Industry 1775-1920* (York: Sessions Book Trust, 2007).

⁴³ Andrew Fincham, 'The Origins of Quaker Commercial Success (1689-c.1755)' (unpublished PhD, University of Birmingham, 2021).

proportion of Friends involved in direct commercial activity rose during the century to just over half of the population, and during that time the appearance of lower-class and artisanal occupations declined while professional representation increased.

1.2.2 Studies on the Atlantic Trade which Acknowledge Quaker Involvement

A major change in the eighteenth-century economic landscape was the development of the Atlantic Trade with America and the West Indies. This trade became more important as commodity production across the Atlantic became supported by slave labour and the triangular Europe/Africa/America path emerged. Quaker involvement in this trade evolved as cross-Atlantic Quaker family networks developed and Quaker merchants scented opportunities.

Jordan Landes specifically looked at Quaker merchant involvement in the Atlantic trade.⁴⁴ Landes is interested in how later seventeenth-century London Quakers, and the institutions that they were developing for the Society (Meeting for Sufferings and the Morning Meeting), assisted Quakers in building a trans-Atlantic community. After examining how these Quakers operated within their religious world, and how they communicated their ideas and theology to far-flung colonial Meetings, she applies similar thinking to their behaviour in commercial settings where trading facilitated the spread of printed media and people. Her final chapter considers the Quaker exploitation of resources under a colonial system,

⁴⁴ Jordan Landes, *London Quakers in the Trans-Atlantic World: The Creation of an Early Modern Community* (Basingstoke: Palgrave Macmillan, 2015); Jordan Landes, 'London's Role in the Creation of a Quaker Transatlantic Community in the Late Seventeenth and Early Eighteenth Centuries' (unpublished PhD, Centre for Metropolitan History, Institute of Historical Research, School of Advanced Studies, University of London, 2011).

including slaves (at that time), and whether all the communication did lead to community building. She concludes that Quakers, and London Quakers in particular, were in a strong place to build and take part in the networks essential to the carrying on of the Atlantic trade. The development of religious networks allowed the overseeing, distribution and control of a religious (Quaker) message, and other networks such as kinship supported the trading and colonisation activities.

Esther Sahle postulated that the seventeenth-century success of trans-Atlantic Quaker merchants was due to one or more of the specific factors of strong business ethics, conduct policing and marital endogamy practised in the Society.⁴⁵ However, the latter two only operated after 1750, and the first is not unique to Quakers and was not widely visible until the nineteenth century. But it does appear that the Philadelphia Quakers use of in-network debt enforcement extended to trans-Atlantic trading with some London Quaker merchants could have been a factor in the success. Andrew Fincham is unconvinced by aspects of Sahle's work.⁴⁶ He dislikes her lack of recognition of the independence of London and Philadelphia, citing their actions in introducing Books of Discipline. In the commercial field he disagrees with her view of Quakers as risk averse when entering contracts and suggests that her view of the censure of bankruptcy as being a late eighteenth-century development ignores such well-known events as the bankruptcy and subsequent disownment of Charles Lloyd in 1727.

Though London was the most important merchant centre, both Bristol and Liverpool were involved in the Atlantic trade. Kenneth Morgan has described how Bristol was an early

⁴⁵ Esther Sahle, *Quakers in the British Atlantic World, c.1660-1800* (Woodbridge: The Boydell Press, 2021); Esther Sahle, 'A Faith of Merchants: Quakers and Institutional Change in the Early Modern Atlantic, c.1660-1800' (unpublished PhD, London School of Economics and Political Science, 2016).

⁴⁶ Fincham, 'Origins of Commercial Success', pp.141-44.

entrant into the trade and by 1700 was trading in most foreign markets.⁴⁷ However, Bristol failed to address the challenges of changing markets and by the 1780s had been overtaken in the American trade by Liverpool. Morgan contrasts the comparative complacency of Bristol merchants who invested in comparatively remote South Wales and failed to improve their harbours with the energy in Liverpool, where docks were built and industry developed near the port. Bristol's position was also eroded by their move to privateering in wartime, thus losing their focus on trade which harmed them when peace resumed.⁴⁸ The growth of Liverpool is further illustrated in Jon Stobart and Andrew Hann's examination of eighteenth-century retailing in North-West England.⁴⁹ They describe this early Liverpool as 'London in miniature', the growth of which was driven by the docks and commercial activity and which had become the North-West's biggest retail centre and largest town by the end of the century.⁵⁰

Priya Satia has looked deeply at the developing trade in guns in the eighteenth-century United Kingdom.⁵¹ The three parts of this book examine the increasing involvement of the British government in the nascent arms trade, the gradual intrusion of guns into society and their use as currency in African trading, and the changing moral stance on gun ownership and making. The framework for these three sections is the emergence of Birmingham as a centre for engineering and, in particular, the involvement of the Quaker Galton family as a major gun manufacturer and trader. The dilemma of whether gun production at that time was

⁴⁷ Kenneth Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century* (Cambridge: Cambridge University Press, 1993).

⁴⁸ Kenneth Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century*, pp.219-20.

⁴⁹ Jon Stobart and Andrew Hann, 'Retailing Revolution in the Eighteenth Century? Evidence from North-West England', *Business History*, 46.2 (2004), 171-94.

⁵⁰ Stobart and Hann, 'Retailing Revolution in the Eighteenth Century?', pp.177-78.

⁵¹ Satia, 'Empire of Guns'.

completely reprehensible is discussed through the relationship of the Galton family with the Society of Friends and with the changing patterns of use and ownership of guns. Prior to the eighteenth century, guns were rare and relatively unreliable and so were not especially important in war or crime. As manufacturing techniques delivered improved products, they became more important in war, especially in the British army, and so more familiar. It was only later in the eighteenth century that the threat of gun violence emerged in civil society. In West Africa guns became a valuable currency, but their value was as much provided by the status of ownership, and the perceived potential for the expression of power, as by any actual violent use.

The studies above concern the Atlantic trade in general and include references to Quaker involvement (substantially so for Satia). The studies briefly noted here are Quaker centred but much more specific in range and so have limited relevance to the wider range of my study apart from providing examples of participants. Quakers are well known for their influence in food manufacturing with the success of the Cadbury and Rowntree enterprises – but these were nineteenth-century stories, recently revisited by Deborah Cadbury.⁵² The story of Joseph Fry and his earlier cocoa processing firm predates them.⁵³ Similarly, Huntley and Palmers were early entrants into industrial biscuit making.⁵⁴

⁵² Deborah Cadbury, *Chocolate Wars: From Cadbury to Kraft - 200 Years of Sweet Success and Bitter Rivalry* (London: Harper Press, 2010).

⁵³ Robert Fitzgerald, 'Fry, Joseph Storrs (1826–1913), Cocoa and Chocolate Manufacturer', *Oxford Dictionary of National Biography*, 2021, <<https://doi.org/10.1093/ref:odnb/33284>> [accessed 25 January 2021].

⁵⁴ T. A. B. Corley, *Quaker Enterprise in Biscuits: Huntley and Palmers of Reading, 1822-1972*. (London: Hutchinson, 1972).

1.2.3 How this Study Extends the Knowledge

The studies reviewed above are all limited by sample size, geography, occupational spread or intent. This study is unique in presenting a nationwide view of Quaker economic activity and not being limited to a particular area of economic activity. As such, it is necessarily broad and will not be able to provide the detail others do. However, to be able to say, for example, that many Quakers worked as retailers all over the country is extremely valuable in itself and as a comparator for another researcher carrying out detailed work on subjects such as Quaker grocers or Friends in Devonshire.

1.3 Sources and Methods

This study is based on the digested marriage records of the Religious Society of Friends.⁵⁵ These records have been widely used by Quaker historians because of the strength of Quaker procedure and record keeping.⁵⁶ An early driver for creating such lasting records was to assist in tracking the persecutions they suffered. The strength of these procedures was recognised by the formalisation of the acceptance of Quaker marriage as legal under the Hardwicke Act of 1753.⁵⁷ These digests (tabular summaries, figure 1.1) were produced in London from countrywide marriage registers submitted prior to their subsequent deposition with the Non-parochial Registers Commission in the early Victorian era.

⁵⁵ As described at footnote 33 these are summaries of the full registers of records. The set used here are the microfilmed copies held in the library of Friends House, London.

⁵⁶ Including Fincham, 'Origins of Commercial Success'; Vann and Eversley, *Friends in Life and Death*; John Stephenson Rowntree, *Quakerism, Past and Present* (London: Smith, Elder & Company, 1859).

⁵⁷ '1753: 26 George 2 c.33: Prevention of Clandestine Marriages', *The Statutes Project*, 2015 <<https://statutes.org.uk/site/the-statutes/eighteenth-century/1753-26-geo-2-c-33-prevention-of-clandestine-marriages/>> [accessed 28 September 2022], paragraph XVIII.

Figure 1.1 - An Example of Digested Marriage Record Entries

Year	Spouse 1	Spouse 2	Location	Date	Spouse 1	Spouse 2	Location
1794	25	Silvester Joseph	Sedgfield		William and	Silvester	
1794	26	Smith Hannah			William and	Silvester	
1791	80	Smith Thomas			Ralph and	Smith	
1792	141	Smith Ingledew	Stockton County		Master Mariner	Thomas and Elizabeth Smith	
1791	141	Smith John	Durham		Calib and	Smith	
1791	141	Smith John	Darlington County		Leonard and Sarah Smith		
1791	141	Smith John	Durham		Joshua and Margaret Smith		
1791	141	Smith John			Isaac and Sarah Smith		
1791	141	Smith John			Anthony and Lydia Smith		
1791	141	Smith John			John and Margaret Smith		

Year	Spouse 1	Spouse 2	Location	Date	Spouse 1	Spouse 2	Location
1791	141	Smith John	Durham		William and	Silvester	
1791	141	Smith John	Durham		Ralph and	Smith	
1791	141	Smith John	Durham		Master Mariner	Thomas and Elizabeth Smith	
1791	141	Smith John	Durham		Calib and	Smith	
1791	141	Smith John	Durham		Leonard and Sarah Smith		
1791	141	Smith John	Durham		Joshua and Margaret Smith		
1791	141	Smith John	Durham		Isaac and Sarah Smith		
1791	141	Smith John	Durham		Anthony and Lydia Smith		
1791	141	Smith John	Durham		John and Margaret Smith		

The digested records spread across two facing pages of the manuscript. This page is taken from the records for Durham Quarterly Meeting. The example shows the incompleteness of occupational recording with only Thomas Smith (Master Mariner) and John Smith (Woolcomber) being detailed. The second page includes details of the spouse and the marriage date. Note the visibility of the start of Henton and Northumberland in the upper image which shows that it is the same page as the lower.

The collection, recording, cleaning and classifying of these data are discussed in chapter 2. The database has been analysed by occupation to give a view of the occupations taken up by Quakers, and by location to investigate their geography. A further layer of analysis has provided industry-focussed interpretations. From the geographical analysis it has been possible to gain insights into the variations in patterns of recording in different regions, and to crudely estimate the impact of missing data on estimates of the Quaker population. For the assessment of the Hyde claim, some additional data for Quakers involved in the iron industry were extracted from the birth and death registers.⁵⁸ Due to constraints on access to these registers arising from the impact of the Covid-19 pandemic on libraries from 2020 to 2022 these additional records cannot be considered complete but are cross-referenced to sources from Arthur Raistrick and Edward Milligan.⁵⁹

1.4 The Structure of this Thesis

Chapter 2 covers the characteristics of the population examined. The raw data collected from the digested records of Quaker marriages required classification by occupational and geographical ordering prior to analysis. After classification, 10,179 separate entries were found. As part of the analysis of the data, it was possible to comment on previous estimates made of the size of the national Quaker population in the eighteenth century. Most of these estimates give figures of the order of 40,000 Quakers in 1700 and 20,000 – 30,000 in 1800.⁶⁰ I have extended these estimates to provide a crude estimate of the impact of missing records. The analysis also showed a variation in occupational recording rates across the country. This

⁵⁸ Hyde, *Technological Change*, p.16.

⁵⁹ Raistrick, *Quakers in Science and Industry*; Milligan, *Biographical Dictionary*.

⁶⁰ Including Rowntree, *Quakerism, Past and Present*, pp.71-86; William C. Braithwaite, *The Beginnings of Quakerism*, ed. by Henry J. Cadbury, 2nd ed (Cambridge: Cambridge University Press, 1955), p.512.

showed up in the ratio of the proportion of occupations contributed to the proportion of marriages contributed for each Meeting. I found a clear trend of a lowering of this ratio as the Meeting's distance from London increases. This conclusion has repercussions when considering the occupational make-up of a region, and when comparing regions.

The sense of Quaker community is one factor that feeds into the documentary recording of marriages, and the importance of this sense is brought out together with its impact on the development of employment opportunities that Quakers became involved in. However, this community spirit also applied to unmarried Quakers, and they are discussed, too. Behind the numbers and locations of marriages, and those who haven't married, there are implicit drivers that determine who marries and when. The review of these patterns in this chapter shows that the North-Western Europe marriage pattern (of marriage when the couple are able to set up an economic unit independent of either family) introduced by John Hajnal and re-evaluated by Tony Wrigley is applicable to eighteenth-century Quakers.⁶¹

Eighteenth-century England was still a very patriarchal society, which is shown in the very few occupational records found for women. The 86 women found (0.8%) show the extent to which women's activity was ignored. Chapter 2 concludes that the Quaker marriage records provide a fair basis for investigating occupational patterns because of the comparative quality of the surviving records and in spite of the regional variations in data recording. The marriage patterns seen whereby couples embark on the twin voyages of marriage and

⁶¹ John Hajnal, 'European Marriage Patterns in Perspective', in *Population in History*, ed. by David V. Glass and David Eversley, *Essays in Historical Demography*, 1st edn (New York, NY: Routledge, 1965), pp.101–43; E. Tony Wrigley, 'European Marriage Patterns and Their Implications: John Hajnal's Essay and Historical Demography during the Last Half-Century', in *Population, Welfare and Economic Change in Britain, 1290-1834*, ed. by Chris Briggs, P. M. Kitson, and Stephen J. Thompson (Woodbridge: Boydell & Brewer Ltd, 2014), pp.15–41.

establishment of economic independence together support the utility of the records, and assessment of the single population showed no severe distortion to any conclusions drawn.

Having established the utility of marriage records as a data source to consider Quaker occupations, chapter 3 analyses those occupations. Referring back nearly 300 years produces some difficulties. Some occupations no longer exist, such as tallow chandling (dealing with candles), and there are variations in spelling seen, such as ‘tailor’, ‘taylor’ and ‘tayler’ for tailoring. Thus the first stage of the analysis is to standardise the data.

A second specific issue involved dealing with London Freeman, or citizens. These Freemen are members of the London trade guilds, and therefore licensed to trade on their own account within the city. Their trade is nominally that of the guild they belong to, but this is not necessarily the case. In this thesis the trade has been taken as the first which was given, with a second, if any, being taken as the guild. With 610 entries in the database being described as ‘citizen’, the numbers are not overwhelmingly large, but do constitute 6% of the data.

Three sources of classification were used to provide manageable structures, and to enable comparison with previous studies on Quakers and more general populations. These sources were Richard Vann and David Eversley in their studies of British and Irish Quakers, Andrew Fincham’s classification and the Cambridge PST (Primary Secondary Tertiary) system best described by Leigh Shaw-Taylor and Tony Wrigley of the Cambridge Group for the History of Population & Social Structure (the ‘Cambridge Population Group’).⁶² The analysis carried

⁶² Vann and Eversley, *Friends in Life and Death*, pp.68-74; Fincham, ‘Origins of Commercial Success’, pp.53-6; Leigh Shaw-Taylor and E. Tony Wrigley, ‘The Occupational Structure of England c.1750-1871 A Preliminary Report’ (presented at the XIV International Economic History Congress, Helsinki 2006, Session 32, Helsinki, 2006), pp.8-12, <<http://www.helsinki.fi/iehc2006/papers1/Shaw.pdf>> [accessed 13 July 2020].

out showed that artisan and manufacturing work was the most popular labour over the whole century, and that agricultural representation was substantially lower than that found by studies of the general population. A more detailed analysis of eight sectors is then provided (agriculture, artisans, commerce, food, manufacturing, other, professional and retail), which includes variations over time across the century.

Additional analysis is provided for three significant industrial sectors (textiles, food and metals) with large and changing economic activities. These sectorial analyses reveal a fall over the century in artisan work, from 31% of the data to 22%, and an increase in manufacturing from 18% to 21%. These sectors are complementary as both concern the making and selling of artefacts, and there will be some overlap between the two. Combining them shows a fall from 49% to 43% over time. Commercial activity is the next major sector, including direct commercial activity such as merchant trading and, later, banking and retail activity. This sector rose from around 20% to 28% over time. These changes are illustrated by a shift amongst the Quaker population towards retailing in the later years of the century. The industry sector analysis shows a Quaker withdrawal from textiles over time, particularly as artisan weavers began to be replaced by factory-based systems. Involvement with selling textiles remained. The essential conclusion of this chapter is that Quakers were over-represented in the expanding fields of commerce and industry, and thus were in the vanguard of a changing, developing economy.

Knowing what Quakers were doing in the eighteenth century is important to establish their position in society but knowing where they were doing it is equally important. Chapter 4, on the geography of eighteenth-century Quakers, addresses that question by looking at what

occupations were important in which Quarterly Meetings. The larger part of the chapter contains information on a Meeting-by-Meeting basis of the patterns across the eight major occupational categories defined in chapter 3. The presentation of information is informed by the regional variation in data completeness noted, so more distant Meetings are dealt with first, before the urbanised large Meetings complete the chapter. It finds that the Quaker occupational pattern of artisanal and increasing commercial work was spread across the country, but that artisans were not the most numerous occupations in all Meetings. In strongly agricultural areas such as the Northern hills of Cumberland and Northumberland and some of the Home Counties, such as Bedfordshire, Berkshire and Hertfordshire, agriculture was the largest section. This reflection of the secular employment in the area was seen in some more specific cases. For example, there was a cluster of Quaker glovers in Worcestershire, an area that was an eighteenth-century stronghold for the industry. This pattern of artisan work persisted into the large Meetings, but they showed their urban sophistication with commercial sectors and higher levels of professional employment.

Chapter 5 presents a survey of Quakers in three major industrial sectors (textiles, metals and food), so that Quaker involvement in nationally important industries can be examined as a whole. Such reviews add an industry-focussed dimension to the occupation and geographic foci in chapters 3 and 4. The textile industry was the biggest English industry in the eighteenth century, and the country's largest exporter.⁶³ It was important to Quakers, too, with approximately one quarter of working Quakers engaged in it. Quakers were producing inputs into cloth making, cloth making and selling and production and distribution of goods.

⁶³ Keith Sugden, 'Clapham Revisited: The Decline of the Norwich Worsted Industry (c. 1700–1820)', *Continuity and Change*, 33.2 (2018), p.203.

Textile-industry Quakers were spread across the country, as the industry was before its nineteenth-century concentration into Yorkshire and Lancashire.⁶⁴

The metals industry was examined because of its importance to the industrial revolution when iron production increased by over 6 times in the last quarter of the eighteenth century, and because of Hyde's claim of Quaker control earlier in the century.⁶⁵ Quaker participation in this industry was found to be much lower than for textiles at 6.6% of records, with most participants appearing as product makers such as cutlers or nailers. Just like the textile industry, Quaker metal participants are widespread, but in this case the explanation is that many of them were making items for local use.

In the food industry (which excludes the agricultural sector) the 15% of Quakers involved were spread throughout the supply chain. Distribution was the biggest sub-sector, an example of Quaker involvement in commerce. This focus on distribution is illustrated by the concentration of participators in London, where the mechanics of operating a large, sophisticated city were served by a complex of sometimes specialised distributors.

Because of the importance of the iron industry to the social changes in the eighteenth century, and because of the hugely significant claim made by Charles Hyde, chapter 6 consists of an examination of Quakers in the iron industry.⁶⁶ The iron industry was a supreme example of the dynamism of the social and economic environments in eighteenth-century England. In the late seventeenth century, the industry still worked with solid-state materials in a craft-

⁶⁴ Sugden, 'Clapham Revisited', pp.215-18.

⁶⁵ Peter King, 'The Production and Consumption of Bar Iron in Early Modern England and Wales', *Economic History Review*, 58.1 (2005), p.7; Hyde, *Technological Change*, p.16.

⁶⁶ Hyde, *Technological Change*, p.16.

based manner. One hundred years later it was an industrial behemoth based around liquid metal. The vast increase in availability of iron resulting from this transformation was itself transformative to society, allowing the use of iron as a structural material for buildings, and in the wide application of steam power. Hyde's claim that in the early part of the eighteenth century Quakers controlled between 50% and 75% of the industry is a measure of the industry's significance and an example of claimed Quaker exceptionalism. This chapter uses data from this study and other sources to suggest that this claim is improbable, while acknowledging the importance of a Quaker contribution to the transformation.

In chapter 7 the findings from this study are compared with previous studies of Quakers by Richard Vann and David Eversley and Andrew Fincham, and to the general population by looking at the work of Leigh Shaw-Taylor and Tony Wrigley.⁶⁷ This is to establish how the national view of Quakers presented here compares with previous Quaker views and how it compares with their surrounding communities in the general population. Vann and Eversley show higher levels of commercial activity than I find, with similar levels for artisan and agricultural activity, but they do not look at manufacturing as a sector. Fincham concentrates on commercial aspects and includes manufacturing with them. Due to his merging of sectors, comparisons are at a broad level. Shaw-Taylor and Wrigley use an occupational system that splits activity into land-based primary work, material-based secondary activity and tertiary service provision. The major finding from comparison with the general population is that Quakers were far less agricultural in their economic activity than the wider English population. This gap was large enough that Quakers were automatically more common in secondary and tertiary activities.

⁶⁷ Vann and Eversley, *Friends in Life and Death*; Fincham, 'Origins of Commercial Success'; Shaw-Taylor and Wrigley, 'The Occupational Structure of England'.

Chapter 8 brings the strands of the thesis together and draws conclusions. The main findings can be grouped into three areas. These can be summarised as: the utility of marriage records as a source; a challenge to the middle-class nature of Quakers; and the presentation of Quakers as largely unexceptional in their relation to the local economy. The marriage records are shown to be a useful source, although care in their use is required because of the finding of regional variations in data recording. The use of a large database has resulted in detail differences in occupations from other studies, but most Quakers were self-employed as artisans or retailers, while comparison with the general population has shown a smaller proportion of agriculturalists. Such a presence of artisans and retailers challenges the received view of Quakers as middle-class. There was an early concentration of Quakers in large Quarterly Meetings centred on major urban areas, and within these areas Quaker occupations were more likely to be aligned to the local economy than to any Quaker thread; this mirroring of the local economies is a challenge to the view of Quaker exceptionality. That challenge is exemplified by the finding that Hyde's claim for control of the iron industry is insupportable.

1.5 Summary of the Chapter

This chapter sets out the reasons for carrying out this study and places it in the contexts of Quakers as a body and the existing knowledge of their occupations and economic activity in the eighteenth century. The questions to be answered were: what did Quakers do to survive and prosper in the eighteenth century; where did they carry out this activity; and how did they interact with surrounding communities? These questions were addressed by carrying out a

nationwide survey of the Quaker marriage records from 1691-1809 to build a more extensive occupational and locational database than had been used previously. The study concludes that most Quakers were artisans or retailers, and such a finding challenges the perception of Quakers as middle-class. This finding also challenges the view of Quaker exceptionality, in short, Quakers were not such a peculiar people.

Chapter 2: Characteristics of the Sample of Quakers Examined

This study takes as its sample all of the Quakers who are included in the Quaker Marriage Records which were ‘digested’ (collated) in the nineteenth century, and who were married between 1691 and 1809 inclusive in order to ensure that those people who were working during the eighteenth century but married just before or after its boundaries were included. This large number of 37,159 was initially reduced because of two obvious factors. Firstly, both parties to the marriage were recorded – and in the eighteenth century, working wives were rare, though not unknown. Thus, there is an expectation of a near 50% reduction in the sample. Secondly, an occupation, termed a description in the digests, was not always recorded for the reasons discussed below. Outside these intrinsic limitations there are others such as the survival of records or reasons for not recording an occupation. The final database contains 10,179 separate occupational records.

The objectives of this chapter are to detail the data collection and refinement process, to look at some implications arising from the size of the database, and to discuss the wider characteristics of the population in the sample in terms of their community and marriage patterns. There is some discussion of the excluded populations, too, which provides some consideration of factors outside the database which potentially impact the final conclusions drawn. Specific sections cover data recording, implications for estimates of the national Quaker population, data patterns within the database, the impact of Quaker community, a brief examination of the single community, some discussion of marriage patterns in the eighteenth century and a consideration of the position of women. The chapter concludes with a summary.

The analysis of the sample identified 1,102 separate occupations. Some of them were clearly different representations of the same job, and other, closely related occupations were aggregated under one standard description. This consolidated the results into 271 standardised occupations. All standard occupations were further classified into wider categories, the druggists, for example, being assigned to a 'retailing' class.

Useful insights were gained from the large number of data points. Several estimates of the national Quaker population have been made and are reviewed in section 2.2, but the size of this database has allowed an estimate of the impact of missing data to be made. By comparing relative sizes of Quarterly Meetings over time, I suggest that losses of more than 25% of marriage records might have occurred. Further analysis in section 2.3 shows that there were regional variations in occupational recording rates and that there was a systematic reduction in rates with distance from London.

The Quaker community shows marriage patterns consistent with John Hajnal's North-West Europe model. In this model, discussed further in section 2.6, married couples set up new, individual, independent economic units, and marriage occurs later than in communities with traditional contractual models. These new units are visible in the Quaker marriage records of occupations and locations which do not necessarily match those of the parents. The impact of a community of single apprentices did not affect the study as they normally appear in the marriage records after their qualification. Any unrecorded, unskilled and agricultural single population would increase the proportion of that sector in the distribution. The number of women recorded with occupations is

tiny and is covered in section 2.7, but Quaker notions of equality are a possible factor behind the comparatively high number seen in Lancashire.

2.1 Recording and Cleaning of the Data

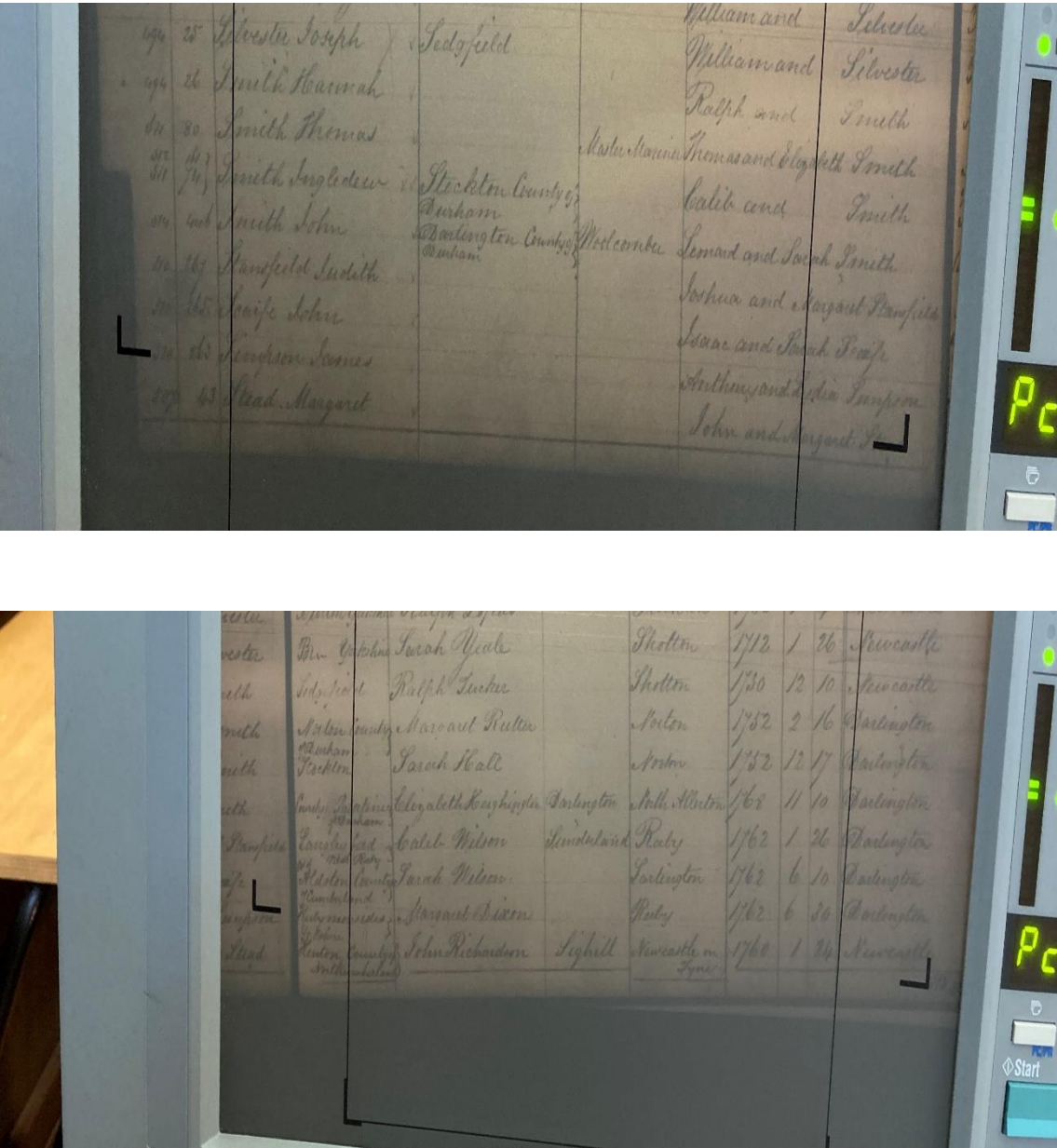
The collection, checking, cleaning and classifying of the data was a multi-step process requiring care and attention to detail. In brief, the data were first extracted from the microfilm copies of the Digested Quaker Marriage Records from 1691 to 1809 held at Friends House, London, or from digitised records produced by the Quaker Family History Society. The choice to use an extended eighteenth century for data collection was to address the possibility of people being active in an occupation in the early years of the century who had married just before 1700, and similarly being active at the end of the century prior to a marriage just after 1800. The extracted data were entered into excel spreadsheets to facilitate handling and manipulation. The data were then checked for entries that required clarification and for correctness of aggregation. The cleaning process was required to eliminate duplicate entries. Additionally, a classification exercise was carried out to standardise occupation descriptions, and to allow comparison with other studies.

a) The Data Source

The data used to compile the database consisted of the Digested Marriage Records produced by Quakers in the nineteenth century from the original marriage registers and later transferred to microfilm (figure 2.1). The raw data in the registers derives from contemporary eighteenth-century records that were initially filtered through the prism of the local recording clerk who made the decision as to what information to enter into the

register at the time of marriage. A second major filter on the data – though with no changes made – occurred during the mid-nineteenth century.

Figure 2.1 – An Example of a Microfilmed Digest Page



This figure shows the same digest page from the Durham Quarterly Meeting as in figure 1.1 but taken from the microfilm images. The images on the screen are not as clear as on the manuscript page.

Following the enactment of the Non-Parochial Registers Act 1840 and the requirement for civil registration of marriages in 1837, by 1857 the Quakers had deposited 1,566 registers with the General Register Office (now part of the National Archive).⁶⁸ This process established the Quaker records as formal evidence of legal marriage. As part of the deposition process, the Quakers produced sets of ‘digested’ records, or indexes, that included all the information from the registers. Copies of the digests were held at Friends House in London (the centre for administration for Quakers in Britain) and supplied to the Quarterly Meeting concerned. Many of these latter copies are now in regional archives.

This collection in The National Archives, numbered RG6, is the most complete collection of Quaker records. It is a collection of documents collated from various sources, originating from the collection process, noted above, which produced digested records. There is no well-known assessment of the accuracy of the digesting process, and neither is there an organised cache of registers which can be easily and systematically searched, but these records are now available through commercial channels. Hence, I was able to check samples of data from the database to records on Ancestry.com, and to select a sample from Ancestry and check it back to the database.

From the database, I took a sample of two marriages from each Quarterly Meeting. I selected the first entry listed in 1710 and 1790 from the entries in the occupational database and compared them with the data on Ancestry.⁶⁹ Of the 52 sample entries 46

⁶⁸ From ‘National Archives, Kew’ <<https://discovery.nationalarchives.gov.uk/details/r/C13331>> [accessed 24 April 2020].

⁶⁹ <https://www.ancestry.co.uk/search/collections/7097/> [accessed 11 January 2024]. This data collection is titled ‘England & Wales, Quaker Birth, Marriage and Death Registers, 1578-1837’. Ancestry.com is a commercial family history web-based resource.

marriages were identified, with 15 of those being identified by the certificate only. To similarly check the presence of Ancestry data in the database I selected a sample of three entries in each Quarterly Meeting from Ancestry. The larger sample was taken because of the lack of systematic organisation in Ancestry, which provides a list of counties rather than Quarterly Meetings. The sample was selected from the first data sub-collection in the county which contained marriage data. Again, some of the selections were supported by certificates rather than register entries, but some meetings, including Gloucestershire (Wiltshire) created a register of certificates instead of a separate stand-alone register. All 78 entries were successfully identified in the occupational database, including one entry where the dual descriptor of widower and cutler had been carried through, and one which was found in the list of duplicates excluded from the final number (see 2.1e below).

However, there is a long trail between the registers and the Ancestry records. The digests were produced from records collected by Quakers in London prior to deposition in the Public Records Office (now The National Archives). We cannot know the completion of the transfer process to the PRO, nor whether records were lost prior to their scanning, nor the completeness of this digitisation programme. The National Archives do not comment on the completeness of their records and Ancestry have not replied to requests for such a comment.⁷⁰

⁷⁰ The Ancestry website gives the RG6 collection in the National Archive as the source of their data, and some documents carry evidence of their connection to the PRO, but the Archive has no direct relationship with Ancestry (email, <RESORecordsEnquiries@nationalarchives.gov.uk>, 13 June 2024). This email notes that Ancestry do refer to the National Archive catalogue numbers but also notes the difficulty in searching their site and the consequent problems of assessing completeness.

During the late 1980s and early 1990s the London copies of these digests were copied onto microfilm, which provided the dual benefits of easier research access and improved conservation of fragile volumes. In the early twenty-first century, five Quarterly Meeting digests were digitised by the Quaker Family History Society, giving a further boost to ease of use for the records from the Suffolk, Norfolk & Norwich, Essex, London & Middlesex and Durham Quarterly Meetings.⁷¹ The data were extracted from these microfilms and digital records.

The digests allowed for the recording of the protagonist's surname and forenames, the date of the marriage, the residence of the protagonist, the description of the protagonist (the occupation or a descriptor such as 'single woman' or 'widower'), the parents' and spouses' surname forenames and residence, where the marriage took place and the Monthly Meeting recording it. It is not unusual for gaps in recording to exist.

b) Collecting the Data

The data for this research were taken from the microfilms held at Friends House, London, or the digitised records. The recorded data for this study are from marriages that record an occupation, the items recorded from the list above being limited to the protagonists' surname and forename, the year of the marriage, the residence of the protagonist and the occupation (description) of the protagonist. The sex of the protagonist was recorded by exception, there being very few women recorded as having occupations in the eighteenth century. Additionally, a count was kept of the total number of marriages, the number of those with recorded occupations, the number of

⁷¹ 'The Quaker Family History Society' <<https://www.qfhs.co.uk>>. The data I used was supplied by the society on CD, that data is now available on-line at <https://newtrial.qfhs.co.uk/?page_id=1202>, which is their updated website.

women married (records were kept for each individual, so each marriage was recorded under the name of each party separately), and the number of men with no occupation recorded. The microfilm records consisted of photographs of individual pages of the original digested records. It was therefore convenient to record these data on a page-by-page basis. It should be noted that if a woman with an occupation was recorded, then the totals of occupations, men with no occupations and women exceeded the nominal total of entries recorded for that page. Similar counts were recorded for digitised Meeting records, but they were treated as one batch per Quarterly Meeting instead of on the page-by-page basis (except for London, which, due to the size of the Meeting, was treated in batches by the first letter of the surname). As discussed in chapter 1, other studies have used the marriage records, but their data collection methodology is not recorded in detail.

The Quakers with occupations were then copied from the collected data spreadsheet (for example 'Occupations Friends House 6 Nov') to a working data file ('Data Working File') where all the entries were collated. This became the initial database but contained all the duplications arising from recordings in different meetings at different levels of the Quaker structure and duplications from small differences in name spellings or because the bride and groom were from different areas of the country. This initial database contained 10,762 entries. The Quarterly Meetings recorded are given in Table 2.1.

Table 2.1 - Quarterly Meetings Recorded

Region	Quarterly Meeting	Source
EAST ANGLIA	Cambridgeshire & Huntingdonshire	Microfilm
	Essex	Digitised
	Norfolk & Norwich	Digitised
	Suffolk	Digitised
EAST MIDLANDS	Derbyshire & Nottinghamshire	Microfilm
	Lincolnshire	Microfilm
	Northamptonshire	Microfilm
HOME COUNTIES	Bedfordshire & Hertfordshire	Microfilm
	Buckinghamshire	Microfilm
	London & Middlesex	Digitised
NORTH	Cumberland & Northumberland	Microfilm
	Durham	Both microfilm & digitised
	Lancashire	Microfilm
	Westmorland	Microfilm
	Yorkshire	Microfilm
SOUTH	Berkshire & Oxfordshire	Microfilm
	Dorset & Hampshire	Microfilm
	Gloucestershire & Wiltshire	Microfilm
SOUTH EAST	Kent	Microfilm
	Sussex & Surrey	Microfilm
SOUTH WEST	Bristol & Somerset	Microfilm
	Cornwall	Microfilm
	Devonshire	Microfilm
	Devonshire	Microfilm
WEST MIDLANDS	Cheshire & Staffordshire	Microfilm
	Herefordshire Worcestershire & Wales	Microfilm
	Warwickshire Leicestershire & Rutland	Microfilm

c) Checking the Data

Because each of the four categories ('With occupation', 'Men without occupation', 'Women' and 'Total') was separately counted on a page-by-page basis, it was possible during collection to use the total of the counts and the 'total' category on each page as a

reconciling check on the accuracy of the recording for the filmed records, and to reconcile the numbers with the list of names with occupations. Similar reconciliations of the digitised records were carried out by using counts of lines in the spreadsheet. These in-process checks served to ensure that the data were collected completely and correctly.

To provide a check on the accuracy of the digitisation of the digests, for those Quarterly Meetings where digital data were available, the Durham Meeting records were chosen for a cross-check between the two. It provided a reasonably sized sample to check without expending excessive time and effort. Such a check has not been previously reported. For Durham, the data were taken from the microfilm and successfully reconciled back to the digitised record, thus providing a successful check on the accuracy of digitisation. The digitised record contained 29 duplicated records not seen on the microfilm and ignored 5 entries seen on the microfilm, but with no year of marriage recorded.

d) Classifying the Data

Following checking, the now complete and agreed data file was taken as a fixed point for the classification and cleaning process. The first stage was to establish this fixed point by resaving the 'Data Working File' as 'Data Clean'. This 'Data Clean' file was then used to extract a list of occupations and then standardise and classify the occupations. The classifications used were chosen to aid in comparisons with other studies such as Richard Vann and David Eversley⁷² and Andrew Fincham⁷³ and were informed by the Cambridge Population Group's primary/secondary/tertiary sector

⁷² Vann and Eversley, *Friends in Life and Death*.

⁷³ Fincham, 'Origins of Commercial Success'.

system. The differences between the classifications used in these studies is discussed in chapter 3, where the results from the differing studies are compared. A full listing of the occupations as seen in the records, and the standardisation of their titles, is contained in Appendix 1, together with a list of the standardised occupations and their sectorial classification in Appendix 2. It should be noted that there are likely to be minor differences in the detailed analysis of occupational classification between the studies, which reflect the authors' differing views on the operation of business sectors. For example, retail is defined as a separate category here but is subsumed into commerce by Vann and Eversley, and neither they nor Fincham recognise manufacturing as a separate sector.

Checks were carried out to ensure that all entries had been analysed and that no dislocations in the data ordering had arisen during data manipulation. This formulation was saved as 'Data File Occupation Order', and the occupation analysis and classification incorporated into the 'Data Clean' listing and reviewed for correct insertion.

e) Cleaning the Data

Due to the organisation of the Society and because the registers recorded both parties to the marriage, marriages were sometimes recorded in more than one register, a reflection of the Quaker connections across Meetings. Hence further filtering, or cleaning, of the raw data was required to remove duplicate entries. Such cleaning required comparison of dates, names, locations and spouses to ensure that effects from differences in spelling of names and timing of recording were accounted for. The first stage of removing duplications was to sort by year and clarify any issues arising. Such issues were either

simply typographical arising from the data entry process or from records listed as, for example, 1719/20 (referred to as 'over year-end'). This became the 'Data Clean by Year' set. There were 278 of these over year-end entries, including duplications, which were deemed to be in the earlier year. This was on the rationale that information flows between geographically separate areas could be slow, and that an earlier date of occurrence and a later date of recording is more likely than the reverse. Two specific examples of this seen were for Benjamin Haytor, a maltster of Sussex & Surrey Meeting with duplicate records in 1709 and 1710, and James Dixon, a husbandman in Yorkshire with duplicate records in 1777 and 1778. However, all these entries were dated before 1752, when the change to the Gregorian calendar took place. Therefore, it is possible that these entries were an artefact of the digesting process. If they were dated from January to March then by the new calendar they would be in the later year, but it is inconceivable that the registers would have been retrospectively altered. Additionally, many registers were made with the Quaker numerical notation for months (first month *etc.*) so there is further possible ambiguity as to when this was. So, using the earlier year accounts for slow recording and retains the 12 monthly year pattern. A final impact was that 11 days in September 1752 were lost.⁷⁴ This means that 1752 was a shorter year, and therefore would be expected to show fewer marriages and resulting occupational records. The database has 10,179 records over 119 years, an average of 86 per annum, or just over 1½ per week. Thus, the loss of 11 days implies that 1752 would be 2 records short of those expected. When looking at the numerical patterns in the database, I shall show that the middle of the century was lower than average for numbers of records seen. I conclude that the change in calendar from Julian to Gregorian makes no discernible impact on the results of the study.

⁷⁴ '24 George 2 c.23: The Calendar (New Style) Act 1750' (Statute Law Database) <<https://www.legislation.gov.uk/apgb/Geo2/24/23/section/1>> [accessed 5 December 2022].

Following this operation, and now with a dataset with consistent recording of year of marriage, a second sort by name could take place ('Data Clean by Name'). This allowed a more detailed review and removal of duplicated entries to be carried out. Duplications were recorded and listed separately to allow future review. Such duplication could be a simple and clear double (or even triple) recording such as for John Bancroft, a chair maker from Stockport in Cheshire whose marriage in 1740 was recorded three times or Nathaniel Barnard, a mariner from London who was also recorded as 'Barnerd' on his marriage in 1718 – in both cases the spouse was listed as Mary Warren. For conservatism, and following on from the decision above to record the earlier year due to slow information flows, some entries were treated as duplicates if they appeared to be for the same person married in two consecutive years (for example William Lloyd, a bellows maker of Bristol in 1782 and 1783). There are fifteen such instances in the database. While it is recognised that early remarriage is possible due to occurrences such as the death of a wife in childbirth, the exclusion of all fifteen does not significantly overestimate the duplication of entry rate. These duplications were deleted from the database, but were listed and retained in a duplication list, wherein differences such as differing years or Quarterly Meetings were also noted. Remarriage within 2-4 years has been seen and noted within the database for the purpose of allowing potential filtering when examining by specific time slots. Richard Ramplen, a cutler of Ipswich in Suffolk who married in 1782 and 1785, is an example of such a case.

The final stage of clean-up was to take this cleaned 'Data List by Name' and sort it for a second time by year and review again for potential duplications. Sorting by year after sorting by name brings potentially duplicated marriage entries closer together and

makes them more visible than in a purely alphabetical list. For example, the upholsterer Josiah Casemere or Casimire in 1696 of London or Buckinghamshire, or the London turner Joseph Daynes or Dunes in 1741 were more easily seen in a year-by-year listing. Duplication identification occasionally required closer examination. Francis and James Wilson, a weaver from London, was identified as a duplicate as the same woman was named in both marriages in the same year. There were other instances of brothers in the same place and profession marrying at the same time, but their spouses were different. The resulting database at this stage is 'Data Clean by Year post name changes'.

This cleaning process produced some questions which required further checks and a final database was labelled as 'Data Clean by Year including final changes'. By recording this process and the file names there is a traceability trail through the data cleaning process which is important as not all corrections have been taken back to the original data. The ultimate version of the database used for analysis and interpretation is known as 'Data Clean Final'. 'Data Clean Final' contains 10,181 separate records and an additional 581 duplicates (5.4%). Of these 10,181 entries two had illegible occupations, thus the usable database contains 10,179 entries.

f) Multiple Recording of Marriages

It is useful to consider why duplicate entries arose. The basic reason is that, as noted in the introduction, Quakers were reasonably efficient at record keeping.⁷⁵ But that efficiency reflects the make-up of the Society. Eighteenth-century Quakers were a

⁷⁵ Vann and Eversley, *Friends in Life and Death*, p.8; Kathryn Damiano, 'On Earth as It Is in Heaven: Eighteenth Century Quakerism as Realized Eschatology' (unpublished PhD, Union of Experimenting Colleges and Universities (UECU), 1998), pp. 69, 77.

close-knit social grouping with an expected practice of marrying other Society members, disownment being the final sanction for those who married out of the Society.⁷⁶ It was noted from the marriage records reviewed that many members found their spouses outside the immediate circle of their local Meeting, either through the Monthly or Quarterly Meetings, or through wider family or Quaker business networks, such as the Lloyds described below. As noted in chapter 1, the structure of the Society of Friends was that of Quarterly Meetings made up of several Monthly Meetings, which in turn were made up of local Preparative Meetings. Quarterly and Monthly Meetings provided *fora* for social purposes including interactions leading to marriage.⁷⁷ The recording of a marriage always entailed two lines of record, one each for the bride and groom. The marriage records were collated on a Quarterly Meeting basis, thus it is entirely foreseeable that if a marriage was recorded in two Monthly Meetings within the Quarterly Meeting, then records could be duplicated. Should the parties be from different Quarterly Meetings then one might expect duplication on a national basis. Gabriel Goldney, a merchant from Bristol who married in 1741 is a good example. His marriage is recorded in the database both in the Sussex & Surrey Quarterly Meeting and in London, as Gabriel Gouldney. The latter duplication might be an example of how London's influence was extending south of the Thames. Sussex & Surrey Quarterly Meeting contained meetings in Southwark and Wandsworth which are now regarded as being in London, but even in the seventeenth century were sometimes regarded as such.⁷⁸

⁷⁶ For example Ann Roper (nee Hodgson), minuted 12/4/1780, 'Shropshire Monthly Meeting Minutes', Shropshire Archives, XNO 4430/MM/1/1; Thomas Ellis, minuted, 20/1/1796 'Shropshire Monthly Meeting Minutes', Shropshire Archives, XNO 4430/MM/1/2; Jan Dixon (nee Rodan), minuted 2/9/1762, 'Broseley Preparative Meeting Minutes', Shropshire Archives, XNO 4430/PM/1/3.

⁷⁷ Damiano, 'On Earth as it is in Heaven' p.44.

⁷⁸ Dixon, 'Quaker communities in London', pp.26-7; Landes, 'Creation of a Quaker Transatlantic Community', p.15.

g) Family Connections and Multiple Recording of Marriages

The frequency of marriages across differing Quarterly Meetings in a time of perceived lack of geographical mobility arises from the close-knit nature of the society. As families extended within the Society by marriage across meeting boundaries, so Quakers of similar interests came together and formed not only social networks but business networks too, which were then further strengthened by more marriages. An example of such a Quaker network is that of the Lloyd family of Birmingham, known for their activities in the iron and banking industries⁷⁹. The Lloyd family arrived in Birmingham right at the end of the seventeenth century when Sampson moved from mid-Wales where the iron industry had provided both success and effective bankruptcy to the family.⁸⁰ In Birmingham he was close to his brother-in-law, John Pemberton (whose family had multiple interests in the iron and goldsmithing industries), and was able to set up as an ironmonger or dealer in iron.⁸¹ After the death of his first wife, he married a daughter of Ambrose Crowley, a Stourbridge Quaker ironmaster (whose son Ambrose became a major figure in the iron industry as a maker, importer and seller of iron based in the North-East of England).⁸² The success of Sampson in Birmingham saw growth of the family businesses to include forges and slitting mills, alongside the iron trading.⁸³

The children of this generation then married into more families in similar activities and the existing Midlands-based Lloyd-Pemberton-Fido-Parkes-Carless-Champion

⁷⁹ Judy Lloyd, 'The Lloyds of Birmingham' pp.43-49.

⁸⁰ Judy Lloyd, 'The Lloyds of Birmingham', p.43; Raistrick, *Quakers in Science and Industry*, p.108.

⁸¹ Raistrick, *Quakers in Science and Industry*, p.119.

⁸² Michael W. Flinn, *Men of Iron* (Newcastle on Tyne: Land of Oak and Iron, 2019). p.29; Judy Lloyd, 'The Lloyds of Birmingham', Appendix 1a.

⁸³ Raistrick, *Quakers in Science and Industry*, p.119.

network became connected to the Darby-Reynolds-Champion-South Wales network.⁸⁴ Sampson Lloyd II (son of Sampson above) and his brother Charles saw how finance was important to the small businesses they were dealing with and formed a partnership with John Pemberton (their cousin, a goldsmith) and his partner John Taylor (a button manufacturer with family connections to the silver trade) to set up a banking business.⁸⁵ This was the forerunner of today's Lloyds Bank and became notable in 1770 for setting up a London bank – the first bank from outside the capital to successfully compete in that market. There were, of course, more Quaker connections involved.⁸⁶ John Pocock had acted as the Lloyds' London bill discounter, and two other new partners were William Bowman and Osgood Hanbury. The latter had married Sampson II's sister and was also connected to the Crowley family, and his family were further connected with the Barclays, another Quaker banking family.⁸⁷ Following the successful move into banking, the Lloyd family then became interested in the newly emerging canal transport sector.⁸⁸

2.2 Analysis of Patterns of Data Recording Across the Nation

The final database contains 10,762 identified Quakers who were recorded as having an occupation upon marriage in the period 1691 to 1709 inclusive. The microfilmed digests contain 37,159 records of marriage. The odd number is at first sight strange as each spouse married is recorded and an even number would be expected. But there are duplicate entries as described above. There were 581 duplicate entries with

⁸⁴ Raistrick, *Quakers in Science and Industry*. p.120; Judy Lloyd, Appendix 1a.

⁸⁵ Raistrick, *Quakers in Science and Industry*, p.120; Windsor. p.31.

⁸⁶ Raistrick, *Quakers in Science and Industry*, p.120; Price, pp.378-80.

⁸⁷ Windsor, *Quaker Enterprise*, p.32.

⁸⁸ Windsor, *Quaker Enterprise*, p.32.

occupations identified, including four women, and there were two men whose occupations proved undecipherable from the microfilm and have been included in the 'No Occupation group'. This leaves 10,179 entries with usable occupations and 36,578 in total. The database and numerical analysis derive from counts recorded for these persons with occupations ('Given'), men without occupations ('Men with no occupation'), women, and the total on each page of the digital records. Individual counts were required because any women recorded as having an occupation were counted as both 'Given' and 'Woman'. The rarity of women having an occupation at that time meant that this was a fair way of recording the data. Each woman's recorded occupation was noted as a reconciling item in the count, and of 10,179 recorded and legible occupations only 86 were for women – so just under 0.5% of women were so recorded. Table 2.2 shows the distribution of recording of marriages across England and Wales in the period, both after accounting for the identified duplications. From the 'Given' and 'Men...' columns in Table 2.2 we see that there is an overall occupational recording rate of a little below 56% for men.

This table shows a considerable variation in the number of marriages across the various Quarterly Meetings. This is reflective of the physical sizes and populations of the areas covered, notably in London, a populous centre even then; Yorkshire, by far the largest English county; and Herefordshire Worcestershire & Wales, where the Welsh Quaker population was thinly spread.

Table 2.2 - Distribution of Recording of Marriages from 1691 to 1809 inclusive

Quarterly Meeting	Given	Men with no occupation	Women	Total	No. of women in Given
Bedfordshire & Hertfordshire	189	100	298	585	2
Berkshire & Oxfordshire	581	112	708	1,395	6
Bristol & Somerset	692	405	1,099	2,194	2
Buckinghamshire	205	27	242	473	1
Cambridgeshire & Huntingdonshire	92	52	150	294	0
Cheshire & Staffordshire	332	186	508	1,025	1
Cornwall	44	270	302	616	0
Cumberland & Northumberland	168	720	867	1,752	3
Derbyshire & Nottinghamshire	119	154	268	539	2
Devonshire	59	115	170	343	1
Dorset & Hampshire	261	290	561	1,110	2
Durham	168	272	438	877	1
Essex	270	332	522	1,119	5
Gloucestershire & Wiltshire	415	208	636	1,255	4
Herefordshire Worcestershire & Wales	172	445	634	1,249	2
Kent	85	25	101	211	0
Lancashire	665	679	1,400	2,731	13
Lincolnshire	95	194	289	575	3
London & Middlesex	2,812	167	3,135	6,096	18
Norfolk & Norwich	387	213	598	1,194	4
Northamptonshire	51	204	261	516	0
Suffolk	142	68	197	406	1
Sussex & Surrey	369	142	531	1,041	1
Warwickshire Leicestershire & Rutland	252	296	571	1,119	0
Westmorland	264	856	1,128	2,245	3
Yorkshire	1,290	1,493	2,846	5,618	11
Totals	10,179	8,025	18,460	36,578	86

However, a deeper examination begins to show more interesting patterns. As would be expected, the proportions of men and women marrying are very close to 50%, though the fraction of women is slightly under 50%. This is likely to be due to two factors, these being duplication of entries and the women with recorded occupations who appear both in the ‘Women’ and ‘Given’ totals. The 86 women in the latter category do not significantly distort the 10,179 recorded occupations. As previously noted, duplication

of entry occurs because of marriages between couples from different Meetings, either within the same Quarterly Meeting or across different Quarterly Meetings. However, when we look at the proportion of people with recorded occupations against the total number of marriage records or the number of men with occupations against the total men, we see a variation in the recording rate (the rate of recording in the male population is in all cases close to double that of recorded occupations against the total marriage records, as would be expected with the low level of women with occupations). Figure 2.2 shows the distribution in a more graphic form with Bedfordshire & Hertfordshire in the 12 o'clock position and the Quarterly Meetings listed alphabetically round to Yorkshire.

The rate of recording of men's occupations is shown in Table 2.3 and ranges from 14% in Cornwall to 94% in London & Middlesex. Percentage given (recorded with an occupation) refers to the total number of marriage records, so the percentage of men given is about twice that of the total. The areas where recording rates are lowest are characterised by being rural and far from London. Cornwall and Cumberland & Northumberland are the two extreme ends of England, and Wales is the western extremity of the realm. The highest rate of recording is seen in Meetings in and around London, where I suggest that there was a higher regard for the utility of recording data and an increased awareness of the presence of authorities, both secular and Quaker.

Figure 2.2 - Distribution of Marriage Register Entries

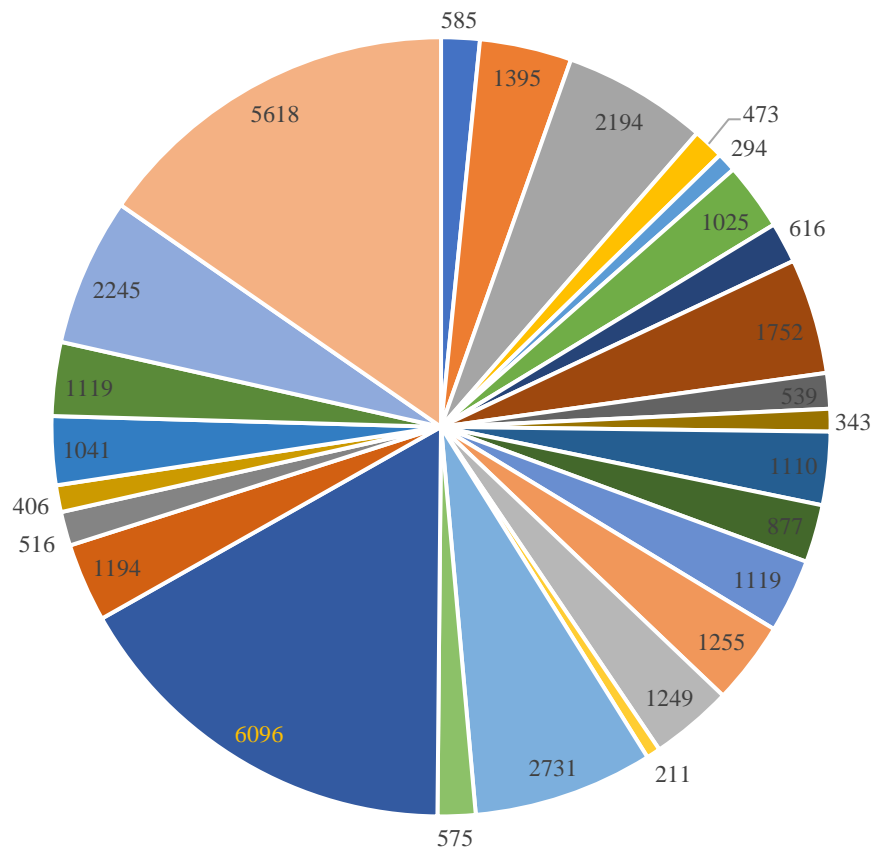


Table 2.3 - Proportion of Recorded Occupations in Quaker Marriages 1691-1809

Quarterly Meeting	%age given	%age men given	%age not given	%age women	%age women given
Cornwall	7.1	14.0	43.8	49.0	0.0
Cumberland & Northumberland	9.6	18.6	41.1	49.5	0.3
Northamptonshire	9.9	20.0	39.5	50.6	0.0
Westmorland	11.8	23.3	38.1	50.2	0.3
Herefordshire Worcestershire & Wales	13.8	27.6	35.6	50.8	0.3
Lincolnshire	16.5	31.8	33.7	50.3	1.0
Devonshire	17.2	33.3	33.5	49.6	0.6
Durham	19.2	38.0	31.0	49.9	0.2
Derbyshire & Nottinghamshire	22.1	42.9	28.6	49.7	0.7
Essex	24.1	44.0	29.7	46.6	1.0
Warwickshire Leicestershire & Rutland	22.5	46.0	26.5	51.0	0.0
Yorkshire	23.0	46.0	26.6	50.7	0.4
Dorset & Hampshire	23.5	47.0	26.1	50.5	0.4
Lancashire	24.4	48.5	24.9	51.3	0.9
Bristol & Somerset	31.5	62.9	18.5	50.1	0.2
Norfolk & Norwich	32.4	63.8	17.8	50.1	0.7
Cambridgeshire & Huntingdonshire	31.3	63.9	17.7	51.0	0.0
Cheshire & Staffordshire	32.4	63.9	18.1	49.6	0.2
Bedfordshire & Hertfordshire	32.3	64.7	17.1	50.9	0.7
Gloucestershire & Wiltshire	33.1	66.0	16.6	50.7	0.6
Suffolk	35.0	67.1	16.7	48.5	0.5
Sussex & Surrey	35.4	72.0	13.6	51.0	0.2
Kent	40.3	77.3	11.8	47.9	0.0
Berkshire & Oxfordshire	41.6	83.0	8.0	50.8	0.8
Buckinghamshire	43.3	87.9	5.7	51.2	0.4
London & Middlesex	46.1	93.8	2.7	51.4	0.6
Totals	27.8	55.4	21.9	50.5	0.5

In the eighteenth century London was becoming a modern commercial hub. The Bank of England had been established in 1694, and trading of financial instruments (particularly bills

of exchange) had become accepted.⁸⁹ Thus mechanisms were in place to facilitate trade, including overseas trade with trusted partners. But in such a young and unregulated market disaster could happen – the South Sea Bubble scandal of 1720 being the trigger for the relegation of the use of joint stock companies to a minor role until the introduction of the Joint Stock Companies Act (1844) and the Limited Liability Act (1855).⁹⁰ Additionally, Parliament continued to develop its understanding and application of its powers following changes arising from the ‘Glorious Revolution’ of 1688.⁹¹ Party politics emerged with the mercantilist Tory grouping and the freer-trade opinions from the Whigs.⁹² Robert Walpole’s appointment in 1721 brought the first recognised Prime Minister into office.⁹³ A London-centred cloud of influence developed, where government and economics came together. During the eighteenth century, this Parliament-led developmental cloud provided increasing stability, which, in turn, generated popular trust (at least amongst those with some resources that they wished to protect) that the Government would meet its obligations.⁹⁴ This trust was reflected by the existence of a benign and relatively positive economic environment. It was only late in the century that disturbances began to occur as enclosure reduced widespread small-scale agriculture and the population was displaced into newly industrialising towns. Disturbance materialised as food riots and the rise of movements such as Luddism.⁹⁵

⁸⁹ Ann M. Carlos and Larry Neal, ‘Amsterdam and London as Financial Centers in the Eighteenth Century’, *Financial History Review*, 18.1 (2011), pp.23-5.

⁹⁰ Ron Harris, ‘The Bubble Act: Its Passage and Its Effects on Business Organization’, *The Journal of Economic History*, 54.3 (1994), 610–27.

⁹¹ Douglass C. North and Barry R. Weingast, ‘Constitutions and Commitment: Evolution of Institutions Governing Public Choice in Seventeenth Century England’, *Journal of Economic History*, 49.4 (1989), 803–32.

⁹² Christopher Dudley, ‘Party Politics, Political Economy, and Economic Development in Early Eighteenth-Century Britain.’, *Economic History Review*, 66.4 (2013), p.1086.

⁹³ Paul Langford, ‘Prime Ministers and Parliaments: The Long View, Walpole to Blair’, *Parliamentary History*, 25.3 (2006), 382–94.

⁹⁴ Anne L. Murphy, ‘The Financial Revolution and Its Consequences’, in *The Cambridge History of Modern Britain, Vol 1 1700-1870*, ed. by Roderick Floud, Jane Humphries, and Paul Johnson (Cambridge: Cambridge University Press, 2014), p. 324; Martin J. Daunton, *Progress and Poverty, an Economic and Social History of Britain, 1700-1850* (Oxford: Oxford University Press, 1995), p.245.

⁹⁵ John Archer, *Social Unrest and Popular Protest in England 1780-1840* (Cambridge: Cambridge University Press, 2000), pp.37, 42-56.

As London began to develop its more modern systems for financing trade and government and Quakers in London also became the *de facto* head of the British Quaker network (the Yearly Meeting, Meeting for Sufferings and Morning Meeting all having been established in the 1670s⁹⁶), it is not surprising that recording of occupations in the marriage records was diligently carried out in the capital. If we take the view that Quaker networks had a parallel purpose in facilitating business development, as suggested by Andrew Fincham, then recording of family connections becomes useful.⁹⁷

Outside London and the South-East, other factors were in play. The United Kingdom had only come into being by the Acts of Union of 1706 (England with Scotland) and 1707 (Scotland with England).⁹⁸ Not only was there residual resentment in Scotland at the loss of independence, but there were several failed attempts to foment revolution notably that of 1745 when Charles Stuart took Edinburgh and then invaded England.⁹⁹ However this invasion of England, which gained support in the North and reached as far south as Derby, was unsustainable without French support, and the rebellion was finally defeated at the Battle of Culloden. While there is no suggestion of Quaker support for the Jacobites, this instability in the North surely reduced the commitment to London-centric bureaucracy away from the capital. In the case of Quakers, required returns were made to London Yearly Meeting and the Queries answered (the Queries being the annual series of questions asked by the Yearly Meeting to assess the position of the Society of Friends¹⁰⁰), but what the commitment to this

⁹⁶ John Punshon, *Portrait in Grey*, 2nd ed (London: Quaker Books, 2006), pp. 106-7; William C. Braithwaite, *The Second Period of Quakerism*, ed. by Henry J. Cadbury, 2nd ed (York: William Sessions Ltd, 1979), p. 281.

⁹⁷ Fincham, 'Origins of Commercial Success', p. 266.

⁹⁸ *Union with Scotland Act 1706*, 1706 C11 6 ANN <www.legislation.gov.uk> [accessed 5 September 2017]; *Union with England Act 1707*, MDCCVII C.7 <www.legislation.gov.uk> [accessed 5 September 2017].

⁹⁹ Peter Ackroyd, *The History of England, Volume IV, Revolution* (London: Macmillan, 2016), p.142.

¹⁰⁰ *Quaker Faith & Practice*, 5th ed (London: The Yearly Meeting of the Religious Society of Friends (Quakers) in Britain, 2013), section 1.04.

reporting was by a small Meeting in the depths of the Northumberland hills, where visitors were rare, must be questioned.

Cornwall was a similarly remote part of the country and had its own cultural and independence leanings. The Cornish language was still well established in Tudor times, and a minor rebellion occurred when Cranmer introduced his English language prayer book in 1549.¹⁰¹ The Cornish folk were happy using Latin and their own language for the creed. Some level of autonomy was present in the tin-mining industry through the royally granted Stannary Parliament.¹⁰² However by the eighteenth century, the Cornish language was in decline, and the Stannary Parliament met for the final time in 1753. There was a Cornish element to the failed Jacobite rebellion of 1715.¹⁰³ Later in the century the industrial revolution changed the mining industry and Methodism became the preferred church.¹⁰⁴ Just like further north, there was a community which was strong minded in its independence and actively against central government. It is not surprising that a small Quaker community, well known to each other, did not provide statistics for a geographically, politically and probably spiritually remote central office.

Time variations

But recording rate variations changed not only with location but with time. By grouping data into cohorts of marriages around 1710, 1750 and 1790 it is possible to look at the proportion

¹⁰¹ Mark Stoye, 'Cornish Rebellions, 1497-1648', *History Today* (London, United Kingdom, London: History Today Ltd, 47.5 1997), p.26.

¹⁰² Rod Lyon, *Cornwall's Historical Wars: A Brief Introduction* (Sheffield: The Cornovia Press, 2012). The Stannary Parliament was a group of 24 'Stannators' established by charter from King John who were able to grant rights and tax exemptions to those working in the Cornish tin industry.

¹⁰³ Margaret Diane Sankey, *Jacobite Prisoners of the 1715 Rebellion: Preventing and Punishing Insurrection in Early Hanoverian Britain* (Aldershot: Ashgate, 2005), pp. 9-10.

¹⁰⁴ Roger Burt, 'Industrial Relations in the British Non-Ferrous Industry in the Nineteenth Century', *Labour History Review* (Maney Publishing), 71.1 (2006), 57-80.

of the database contained within the cohorts as a whole and by Quarterly Meeting. Each cohort consists of data for the 10 years around the given date, the 1710 range containing data from 1706 to 1715, with the 1750 and 1790 cohorts covering similar ranges. This pattern of data cohorts will be used throughout this thesis. This proportion, together with the cohort numbers, provides some pointers as to the geographic variations in the data. It is also necessary to consider the fall in Quaker numbers discussed above, based at 100% in 1710, dropping to 60% in 1750 and 55% in 1790. Table 2.4 shows the sizes of the cohorts across the nation.

The cohort population shows a Quaker population reducing from 1710 to 1750 and partially recovering again to 1790, 521 being 42% of 1,231 and 759 being 61%. This pattern will be shown again in the consideration of the national population below in section 2.3. There will be a suggestion of under-representation nationally in 1750, and this shows more strongly in some Quarterly Meetings.

Bedfordshire & Hertfordshire, Buckinghamshire and Cambridgeshire & Huntingdonshire all show very low levels of mid-century marriages, and in Suffolk none are recorded – the latter indicating a possible loss of records. Other Meetings show significantly higher proportions for later marriages than would be expected. Cumberland & Northumberland recorded 27 marriages in 1790 against 2 in 1710, Dorset & Hampshire 23 and 14, Durham 18 and 13, Essex 34 and 17, respectively, and Herefordshire Worcestershire & Wales, Warwickshire Leicestershire & Rutland and Westmorland showed similar patterns of apparent under-recording earlier on.

Table 2.4 - Sizes of Geographical Cohorts for 1710, 1750 and 1790

Quarterly Meeting	Total in Meeting	Cohorts		
		1710	1750	1790
Bedfordshire & Hertfordshire	189	31	3	10
Berkshire & Oxfordshire	581	78	48	23
Bristol & Somerset	692	74	43	54
Buckinghamshire	205	25	4	11
Cambridgeshire & Huntingdonshire	92	18	1	11
Cheshire & Staffordshire	332	57	19	9
Cornwall	44	5	0	7
Cumberland & Northumberland	168	2	3	27
Derbyshire & Nottinghamshire	119	6	1	17
Devonshire	59	8	0	8
Dorset & Hampshire	261	14	15	23
Durham	168	13	4	18
Essex	270	17	21	34
Gloucestershire & Wiltshire	415	77	16	22
Herefordshire Worcestershire & Wales	172	6	4	28
Kent	85	3	2	17
Lancashire	665	74	37	65
Lincolnshire	95	8	2	8
London & Middlesex	2,812	402	158	118
Norfolk & Norwich	387	43	18	16
Northamptonshire	51	4	0	13
Suffolk	142	23	0	12
Sussex & Surrey	369	67	19	25
Warwickshire Leicestershire & Rutland	252	25	12	39
Westmorland	264	16	1	22
Yorkshire	1,290	135	90	122
Totals	10,179	1,231	521	759

A possible explanation lies in the introduction of more formal membership recording later in the century. The first codification of membership arose in 1737 when guidelines on where a Quaker's membership lay were issued prior to the London Yearly Meeting of that year.¹⁰⁵

¹⁰⁵ Punshon, *Portrait*, p. 155; Braithwaite, *Second Period*, p.459.

This was for the secular purposes of assessing ‘poor relief’. In 1777 it was followed by the transfer of responsibility for the supervision of record-keeping to Quarterly Meetings.¹⁰⁶

However care is required in making such statements. While the relative size of the cohorts of Cumberland & Northumberland, Dorset & Hampshire, Durham, Herefordshire Worcestershire & Wales and Westmorland are all lower than the average, potentially supporting a recording deficit, those for Essex and Warwickshire Leicestershire & Rutland are higher.

A different pattern is seen in Cheshire & Staffordshire, Gloucestershire & Wiltshire, London & Middlesex, Norfolk & Norwich and Sussex & Surrey. Here the relative cohort size has dropped more quickly than in the overall population, both for 1750 and 1790 (excepting Norfolk & Norwich, where the 1750 cohort remained above 40%). This is not an easy pattern to rationalise and will need more detailed work to establish the required evidence. But these areas are all associated with major population centres. Cheshire & Staffordshire Meeting is connected to the Black Country, the Potteries, Liverpool and Manchester. Gloucestershire & Wiltshire Meeting contains communities now incorporated into Bristol. London & Middlesex Meeting is self-explanatory, and overlaps on the South bank of the Thames into Sussex & Surrey Meeting, while Norfolk & Norwich Meeting contains Norwich, England’s second city until well into the eighteenth century.¹⁰⁷ These regions all hold sophisticated urban populations and as such can be postulated to be areas where Quakers could be influenced by the worldly attractions arising from wealth, and as such diverted from the path of Truth more than elsewhere – hence the faster fall in Quaker proportional numbers.

¹⁰⁶ Rowntree, *Quakerism, Past and Present*, p.77.

¹⁰⁷ E. Tony Wrigley, *People, Cities and Wealth: The Transformation of Traditional Society* (Oxford: Basil Blackwell, 1987).

They are not internally homogenous, though. Norwich was a city losing its importance at that time, as shown by its slide down the table of largest cities,¹⁰⁸ while Bristol and Liverpool were growing as ports,¹⁰⁹ and the manufacturing areas were beginning their ascent to prosperity. A note should be made of Berkshire & Oxfordshire, which showed a superficially similar pattern to this class of Meeting, but without the close urban connection, and with a noticeably larger 1750 cohort.

Bristol & Somerset and Yorkshire Meetings show a different pattern of increasing proportions of occupied, married Quakers. Following from the speculative argument given above, they are both areas with strong urban hearts, and both benefitted from increasing prosperity through the century. Bristol benefitted from the development of the Atlantic trade, although later in the century it lost out to Liverpool and Glasgow,¹¹⁰ and Yorkshire saw the commercial growth of the West Riding eclipsing the older political importance of York itself.¹¹¹ So the pattern here is potentially explained by the growth in population attracted by economic opportunities.

The percentage of men with recorded occupation by Meeting gives an indication of the geographical effect on recording rate but that can be refined by considering the ratio of the contribution of each Meeting to the proportion of occupational recordings and the marriage recordings (the Occupations-to-Marriages ratio). This is shown in Table 2.5, with the ratio in the final column.

¹⁰⁸ Wrigley, *People, Cities and Wealth*, p.160.

¹⁰⁹ Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century*, pp. 219-20.

¹¹⁰ Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century*, pp. 219-20.

¹¹¹ Wrigley, *People, Cities and Wealth*, p. 160.

The range of figures for this ratio is 1.66 for London & Middlesex to 0.26 for Cornwall. This is a measure of the quality and diligence of record-keeping in the various Meetings, with the rate of occupational recording (possibly perceived as optional by the clerks) being compared to the statutory recording of marriage required. There is a clear pattern of the ratio reducing with the distance from London (noting the comments below on Northamptonshire and Essex), providing numerical support for the argument advanced above and graphically visualised by mapping the ratio (figure 2.3).¹¹² The ratio illustrates the possible distortion in the national pattern arising from differences in recording rates. The clearest example is also the largest population, London & Middlesex, which provided slightly more than a sixth of the marriage entries but over a quarter of the occupational records. Northamptonshire and Essex are outliers showing lower than expected ratios.

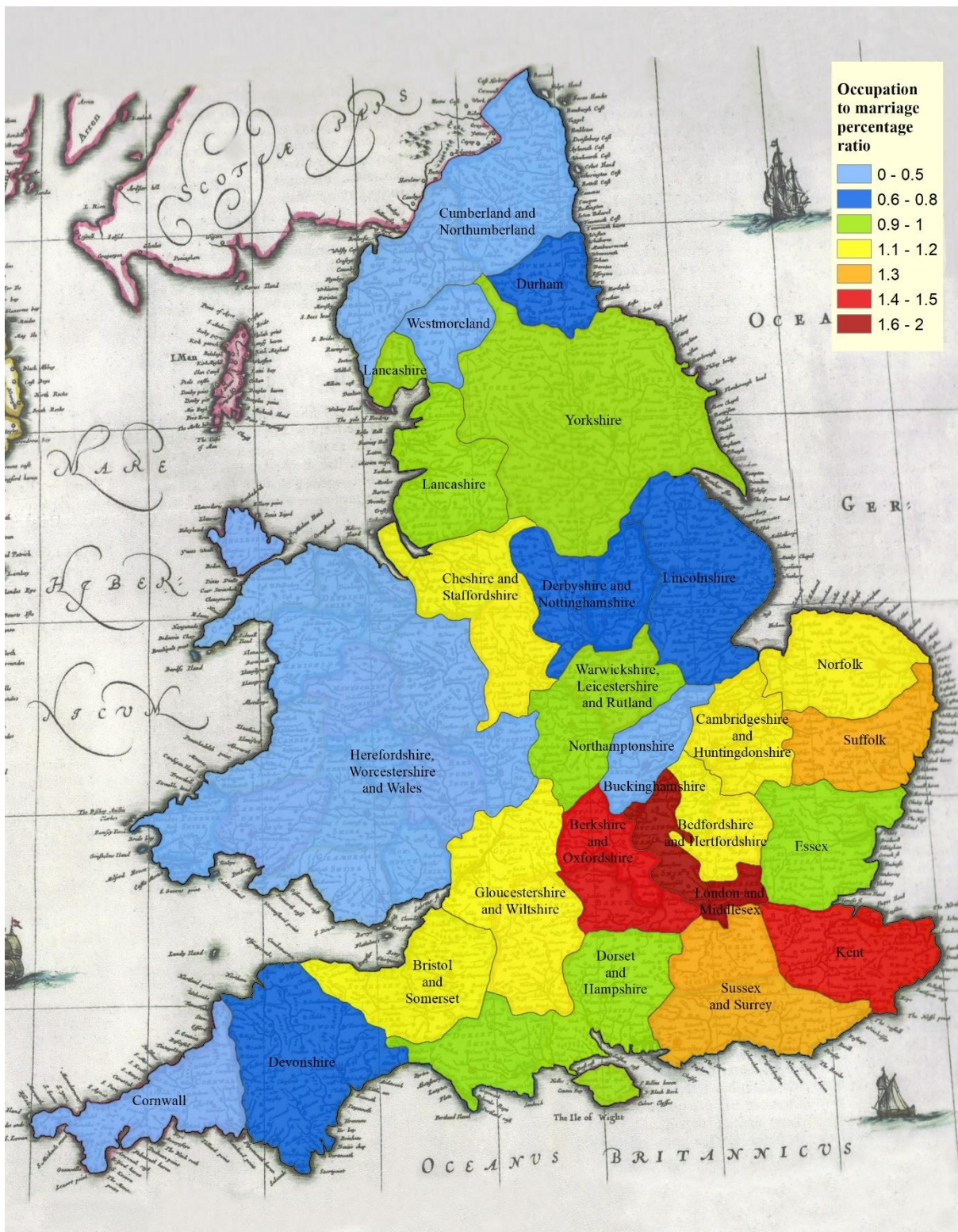
Northampton is a small contributor to the database, and this is one likely distorting factor. The other factor common to both counties is their relatively high agricultural population. This is a sector where Quaker numbers are considerably lower than the national population. Some factors explaining this are discussed in chapter 7 where the Quaker and national populations are compared, but it is also possible that Quaker agriculturalists were simply more reticent in declaring their status in marriage documentation.

¹¹² The map was constructed by overlaying the ratio data for the Quaker Quarterly Meetings onto a seventeenth-century map of England and Wales. Shropshire was included in the Herefordshire Worcestershire & Wales Meeting, so does not appear as a separate county.

Table 2.5 - Quarterly Meetings by Number of Recorded Marriages from 1691 to 1809 inclusive

Quarterly Meeting	Total marriages		Recorded occupations		Occupation %age to marriage %age ratio
	Number	%age of total	Number	%age of total	
Cornwall	616	1.70%	44	0.40%	0.26
Cumberland & Northumberland	1,752	4.80%	168	1.70%	0.34
Northamptonshire	516	1.40%	51	0.50%	0.36
Westmorland	2,245	6.10%	264	2.60%	0.42
Herefordshire Worcestershire & Wales	1,249	3.40%	172	1.70%	0.49
Lincolnshire	575	1.60%	95	0.90%	0.59
Devonshire	343	0.90%	59	0.60%	0.62
Durham	877	2.40%	168	1.70%	0.69
Derbyshire & Nottinghamshire	539	1.50%	119	1.20%	0.79
Warwickshire Leicestershire & Rutland	1,119	3.10%	252	2.50%	0.81
Yorkshire	5,618	15.40%	1,290	12.70%	0.83
Dorset & Hampshire	1,110	3.00%	261	2.60%	0.84
Essex	1,119	3.10%	270	2.70%	0.87
Lancashire	2,731	7.50%	665	6.50%	0.88
Cambridgeshire & Huntingdonshire	294	0.80%	92	0.90%	1.12
Bristol & Somerset	2,194	6.00%	692	6.80%	1.13
Bedfordshire & Hertfordshire	585	1.60%	189	1.90%	1.16
Cheshire & Staffordshire	1,025	2.80%	332	3.30%	1.16
Norfolk & Norwich	1,194	3.30%	387	3.80%	1.16
Gloucestershire & Wiltshire	1,255	3.40%	415	4.10%	1.19
Suffolk	406	1.10%	142	1.40%	1.26
Sussex & Surrey	1,041	2.80%	369	3.60%	1.27
Kent	211	0.60%	85	0.80%	1.45
Berkshire & Oxfordshire	1,395	3.80%	581	5.70%	1.5
Buckinghamshire	473	1.30%	205	2.00%	1.56
London & Middlesex	6,096	16.70%	2,812	27.60%	1.66
Totals	36,578	100.0%	10,179	100.0%	

Figure 2.3 - Map of the Geography of the Occupations-to-Marriages Ratio



In the other direction Westmorland provided 6% of the marriages but only 2½% of the occupations, with neighbouring Cumberland & Northumberland at almost 5% and less than 2% respectively. Looking at the relative sizes of the various Meetings, the total marriages are less distorted, with a range of 0.6% to 16.7% of the total, and an average of 3.8%, whereas the occupational recordings range from 0.4% to 27.6%, but with the same average of 3.8%. However, the median figure (the value for the middle entry in the range) drops from 2.9% for marriages to 2.2% for the occupational records, where the London & Middlesex weighting is felt more.

As part of the codification of the Society's practise, printed forms were introduced in the later eighteenth century to attempt to unify the registering process for marriages (and births and deaths).¹¹³ The database has shown a trend across Quarterly Meetings of a dip in numbers during the first half of the eighteenth century, followed by an increase in the latter half. If this increase was influenced by the use of these pre-printed forms then there could also be an impact on record keeping quality, specifically the recording of occupations. I used the Quarterly Meetings of Durham and Essex to assess this (Table 2.6). These Meetings were selected as being a Northern and Southern meeting, and with access to total marriage data by virtue of their records being digitised. In Durham, the total number of marriages fell and rose as noted above, from 81 in the 1710 cohort, to 44 in 1750 and 73 in 1790. The numbers of occupations flowed suit from 13 to 4 to 18 respectively. In Essex the numbers of marriages recorded fell through the century from 98 in 1710 to 86 (1750) and 80 (1790), but

¹¹³ Robynne Rogers Healey discusses the bureaucratisation of the Society in Healey, 'Quietist Quakerism' pp.52-5 and a date of 1776 is suggested by the National Archives for the introduction of these forms, <https://discovery.nationalarchives.gov.uk/details/r/C13331>.

recorded occupations rose from 17 to 21 to 34 respectively. So, occupational recording rates in Durham showed a fall and rise, but in Essex showed a rise throughout the century. Occupational recording rates in Essex were always higher than in Durham, albeit marginally in 1710.

Table 2.6 - Recording Rates with Time						
Quarterly Meeting	Cohort	From database		Occupation recording rate	Recording ratio to 1710	Occupation %age to marriage %age ratio
		Number with Occupations	Total Marriages			
Durham	1710	13	81	16%	1.0	0.58
	1750	4	44	9%	0.6	0.33
	1790	18	73	25%	1.5	0.89
Essex	1710	17	98	17%	1.0	0.62
	1750	21	86	24%	1.4	0.88
	1790	34	80	43%	2.5	1.53

So, these figures indicates that the introduction of printed registration forms may have assisted in enhancing data recording when marriages were registered. The final column in the table contains the occupations-to-marriages ratio for these populations as used in table 2.5. Although this ratio has changed with time, the regional bias in occupational recording that I showed previously continues to exist throughout the century and has not been significantly impacted by the introduction of printed stationery.

2.3 The Size of the National Quaker Population

It is pertinent to give some thought to the size of the Society nationwide at that time because it is impossible to properly comment on occupational or geographic populations without knowing something of the whole that they are subsets of. There have been attempts to estimate how many Quakers there were in the eighteenth century, the most widely acknowledged being that of John Rowntree in 1859.¹¹⁴ That document suggests a population of approximately 40,000 Quakers in 1680 by the use of a factor of 140 Quakers per marriage.¹¹⁵ He then estimates a Quaker membership population of 19,800 in 1800 by applying a factor of 150 to a number of marriages adjusted from the recorded marriages to take account of marriages 'contrary to rule'. He quantified the adjustment for these unrecorded marriages by looking at the records of Ackworth scholars, Ackworth being a Quaker school which educated around one-third of Quaker sons.¹¹⁶ For the earlier, late seventeenth-century population, Rowntree notes a figure of 100,000 Quakers given in the anonymous *The Snake in the Grass*.¹¹⁷ This tract was written to stir up sentiment against Quakers and appears to be no more than a guess. The figure of 50,000 given by John Dalrymple is based on an equal attribution between various groups of an estimated total of 200,000 non-conformists.¹¹⁸ A second attempt at a quantification of the Quaker population was made by William Braithwaite who concurs with an estimate of 40,000 for the late

¹¹⁴ Rowntree, *Quakerism, Past and Present*, pp.68-88.

¹¹⁵ Rowntree, *Quakerism, Past and Present*, p.71.

¹¹⁶ Rowntree, *Quakerism, Past and Present*, pp.78,86.

¹¹⁷ Anon, now attributed to Charles Leslie, *The Snake in the Grass* (London: Charles Brome, at the Gun at the West End of St. Paul's, 1696).

¹¹⁸ Sir John Dalrymple, *Memoirs of Great Britain and Ireland* (Dublin: David Hay, 1773), appendix p.13.

seventeenth century, with figures derived from records of imprisoned Quakers and an estimate of typical family size.¹¹⁹

More recent estimates have been made by Michael Watts, Clive Field and Andrew Fincham.¹²⁰ Watts estimates 39,510 in ‘the early eighteenth century’ based on Quaker burial records. Field gives figures of 42,500 in 1720, reduced to 35,000 in 1760 and 27,800 in 1800. Field is heavily influenced by the works of Rowntree and Braithwaite referenced above. Fincham himself carries out some detailed modelling but starts from Richard Vann’s *Social Development of English Quakerism* of 1969, which he cites as the first modern critical examination of Rowntree’s work.¹²¹ His modelling gives population figures of 40,133 (1710), 24,000 (1750) and 22,141 (1790). Taking these Fincham figures and basing them as 100% in 1710, then there is a population reduction to 60% by 1750 and a further reduction to 55% in 1790. The date-based cohorts used in this thesis contain 1,231 individuals in 1710, 521 in 1750 and 759 in 1790. Making a similar comparison for these totals to that for the Fincham data gives 1710 – 100%, 1750 – 42% and 1790 – 61%. Compared to Fincham’s calculations, this distribution appears to indicate that data are sparse in the middle of the century, and slightly overweight at the end – when the Society of Friends recording of data was more codified than in earlier years.¹²²

¹¹⁹ Braithwaite, *Beginnings*, p.512.

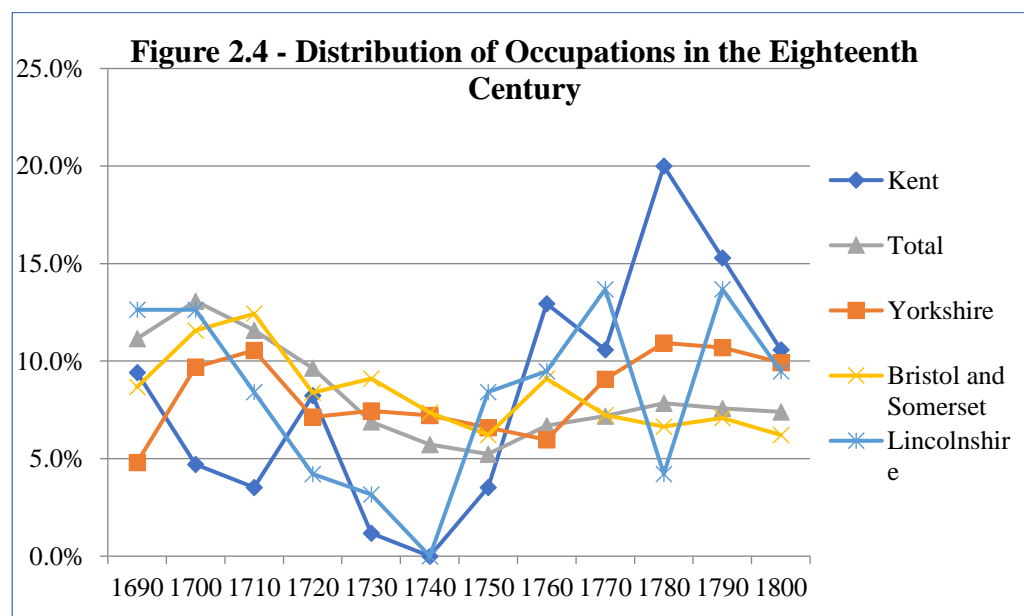
¹²⁰ Michael R. Watts, *The Dissenters – From the Reformation to the French Revolution* (Oxford: Oxford University Press, 1985), pp. 269-70, 505-9; Clive Field, ‘Counting Religion in England and Wales: The Long Eighteenth Century, c. 1680 – 1840’, *Journal of Ecclesiastical History*, 63.4 (2012), 693–719; Andrew Fincham, ‘Faith in Numbers – Re-Quantifying the English Quaker Population during the Long Eighteenth Century’, *Religions*, 10.2 (2019), 83–97.

¹²¹ Vann, *Social Development*.

¹²² Punshon, *Portrait*, pp. 163-5.

However, some care is required in comparing and contrasting these estimates and comparisons. Rowntree's work is explicitly based on the same Quaker marriage records as used here, although he was able to add some quantification by extrapolation back from more formal membership counts from the 1840s. The data used here has, of course, benefitted from an additional century and a half of analysis and discovery. The other figures in Rowntree from Anon (Leslie) and Dalrymple have little backing. Braithwaite and Watts differ in their derivation. Watts uses the burial records and an average age derived from them to obtain his figure of 39,510 – but recognises the limitations from problems with his average age and missing records. Braithwaite moves from 4,200 Quaker imprisonments to 6,000 – 8,000 adult males, and thence to 30,000 – 40,000 in total. He merely claims the figure as a 'rough estimate'. Fincham's work is also based on the marriage records but modified by inputs from the birth and death registers to attempt to account for the deficiencies in the records that have survived, although he ultimately produces figures not very far from Rowntree's 40,000. But all the population derivations, apart from the estimates/guesses and Braithwaite, are essentially based on the marriage records. Thus, if this study draws any conclusions concerning occupational or local population distributions compared with a national Quaker population, there is the possibility of a circular argument as all the data are, ultimately, from the same source. It is fair to compare against the total as long as it is recognised that the comparison lies within a limited whole – but it is important to realise that the whole population has limitations arising from its derivation, and that by using the married population, there is likely to be an element of self-selection. Section 2.5 addresses this by considering the impact of the community of single Quakers.

Of the estimates that are not pure guesses only that of Braithwaite is not based on the marriage records (he started from records of imprisoned Quakers).¹²³ Use of the marriage records that have survived brings about three potential issues; how many records did not survive, how many marriages were not recorded, and what happened when a Quaker did not marry according to Quaker propriety (for example marrying in church). Some attempt at addressing these questions was made by both Rowntree, with his use of Ackworth records, and Fincham, by incorporating birth and death rates, but neither of them explicitly address record survival rates.¹²⁴ With the database used in this study and analysing the data into ten-year cohorts, I have been able to look at the distribution of records over time on a geographical basis. The percentage is the proportion of that population's marriage records (for example, Kent) that lies within that particular decade, defined as the date +/- 5 years. Figure 2.4 presents these curves for the total population, two large Meetings (Bristol & Somerset and Yorkshire) and two smaller Meetings (Kent and Lincolnshire).



¹²³ Braithwaite, *Beginnings*, p. 512.

¹²⁴ Fincham, 'Faith in Numbers'.

From the graph the variability of individual Meetings compared to the whole is visible, and there is a consistent pattern of numbers falling to the mid-century then rising again. By making some assumptions, it is possible to develop a tentative model that estimates the impact of missing records. The first assumption is based around the number of marriages making up a single percentage point of a Meeting's data, normalised to the national distribution. This is achieved by dividing the population from a ten-year cohort, taken from data in Appendix 3 (A in Table 2.6), by the national percentage from the total line in figure 2.3 to give B. This assumes that the national percentage is valid across all Meetings. The second assumption is the heart of the model. It assumes that the highest of the three calculated numbers for B per percentage in 1710, 1750 or 1790 represents the state and size of that Meeting across the century – inferring that the highest number represents the most complete set of records. That high number, taken as C, is then used to adjust the population. The population also requires adjusting for the ratio of total marriages to those with recorded occupations. This ratio is derived from the data in Table 2.2. The 'total' number is reduced by the duplication rate of 5.4% found in cleaning up the occupational data (from section 2.1e) and then halved as both spouses in the marriage are recorded (assuming that duplication rates in the total register are the same as those found in the records with occupations). The ratio (D) is this adjusted total divided by the number of given occupations. There is an in-built assumption that this ratio does not change with time. Having normalised the cohort populations, these are then multiplied by a population per marriage rate (E) as used by Fincham in building his Quaker population estimates.¹²⁵ Table 2.7 contains illustrative Quarterly Meeting examples and the estimated national Quaker population. The population for a particular Meeting in a particular year is given by $A \times C \times D \times E / B \times 10$ using the appropriate

¹²⁵ Fincham, 'Faith in Numbers', p.91.

values for A, B, C, D and E and dividing by 10 to account for the ten-year span of the cohort.

Figures in the table are rounded for presentation.

These national figures in Table 2.7 of 51,761 in 1710 and 33,948 in 1790 are higher than Fincham's figures of 40,133 and 22,141. They are derived from the highest numbers per percentage for each Meeting, which includes the assumption that this high figure is derived from the most complete set of records available. The comparison with the Fincham calculation suggests possible losses of records of 25% and 50% respectively for the populations at each end of the century. The mid-century result is stranger with this model giving a lower figure than Fincham's 24,000 – but Cornwall, Devon, Northamptonshire and Suffolk all had zero records with occupations in this period, and this model cannot build from a zero base.

Three of these Meetings had low occupational to total records ratios, suggesting poor record-keeping, as previously discussed, but Suffolk had a higher value for this. The low mid-century figure, the lack of data from some counties and the pattern of the curves are all suggestive of a significant loss of records around 1750. Esther Sahle has suggested that Quaker discipline was tightened during the second half of the century which would explain the rise in numbers from 1750 to 1790 and supports my contention of poor record-keeping in the mid-century.¹²⁶ The alternative explanation is that there was a more rapid drop in Quaker numbers between 1700 and 1750 and then an increase as the Society entered its introverted, Quietist phase later in the century. This growth appears unlikely in a group that is not looking outwards for new members.

¹²⁶ Sahle, *Quakers in the British Atlantic World*, pp.96-100.

Table 2.7 - Quaker Population Model for 1710, 1750 and 1790				
County	National	Bristol & Somerset	Gloucestershire & Wiltshire	Lancashire
<i>1710</i>				
%age	11.6			
Number (A)		74	78	74
No. per %age (B)		6.38	6.72	6.38
<i>1750</i>				
%age	5.2			
Number		43	16	37
No. per %age		8.27	3.08	7.12
<i>1790</i>				
%age	7.6			
Number		54	22	65
No. per %age		7.11	2.89	8.55
Max rate (C)		8.27	6.72	8.55
Total/given ratio (D)		1.50	1.43	1.97
<i>Normalised 10 year cohort</i>				
1710		143.44	111.57	195.06
1750		64.30	50.01	87.44
1790		93.98	73.10	127.80
<i>Normalised marriages per year</i>				
1710		14.34	11.16	19.51
1750		6.43	5.00	8.74
1790		9.40	7.31	12.78
<i>Marriage rate (E)</i>				
1710	178.37			
1750	150.00			
1790	178.56			
<i>Final Quaker population estimate</i>				
1710	51,761	2,558	1,990	3,479
1750	17,964	964	750	1,312
1790	33,948	1,678	1,305	2,282

2.4 The Impact of Quaker Community Spirit

One characteristic of Quaker Meetings is their sense of community. In the early days of Quakerism, this was evidenced by the support of Friends suffering from persecution relating to tithes paid to ‘hireling priests’ or oaths, in particular their refusal to take the loyal oath in court.¹²⁷ The visiting of those in Prison by Henry Coward of Lancaster and the use of the ‘Kendal Fund’ established by Margaret Fell for nationwide relief are two examples of such support.¹²⁸ The community support extended to the provision of apprenticeships for young men in the Meeting, as well as support for those in distress.¹²⁹ The radical beliefs of Quakers, notably their objections to the need for an intermediary clergy in their relations with God¹³⁰ and the paying of tithes to that clergy, made for an uncomfortable relationship with the conservative local power groupings.¹³¹ Prior to the Toleration Act of 1689, confiscation of goods and imprisonment were a common occurrence, which led to the recording of such instances and the establishment of the national Meeting for Sufferings, the purpose of both being to mitigate the suffering of the persecuted families.¹³² In the early eighteenth century the reality of persecution had declined but the fear was still present. The Toleration Act

¹²⁷ *The Journal of George Fox*, ed. by John Nickalls (Cambridge: Cambridge University Press, 1952), pp.272, 381.

¹²⁸ Raistrick, *Quakers in Science and Industry*, p.62; Nicholas Morgan, *Lancashire Quakers and the Establishment, 1660-1730* (Halifax: Ryburn, 1993), p.14.

¹²⁹ Son of Robert Bradley apprenticed 12/1/1749, minuted 2/9/1762, ‘Broseley Preparative Meeting Minutes’, Shropshire Archives, XNO 4430/PM/1/3, Edmund Darby, Samuel Darby, both 19/10/1796 and John Gilpin, 16/1/1799 apprenticed, minuted 12/4/1780, ‘Shropshire Monthly Meeting Minutes’, Shropshire Archives, XNO 4430/MM/1/1, entries for Magdalene Enoen, 17/4/1750, Widdow (sic) Ellis, 12/4/1752, Jane Bradley, 23/6/1753, 14/10/1753 and Widow Bradley, 1st mth 1754 in Coalbrookdale Women’s Meeting Accounts book, ‘Coalbrookdale Womens Meeting Records’, Shropshire Archives, XNO 4430/PM/2/1.

¹³⁰ *Barclays Apology in Modern English*, ed. by Dean Freiday (Philadelphia, PA: Friends Book Store, 1980). p.244.

¹³¹ Sally Gold, ‘Quakerism, Localism and Law - a Critical Consideration of the History of Quakers in the North West of England and the Religious and Political Policy of the Restoration’ (unpublished PhD, University of Reading, 2019).

¹³² Morgan, *Lancashire Quakers*. p.279; Besse, *Sufferings*; Rosemary Moore, *The Light in Their Consciences: Early Quakers in Britain, 1646-1666* (University Park, PA.: Pennsylvania State University Press, 2000). p.159.

applied to ‘orthodox’ non-conformists who disagreed with the established church but were still loyal protestants (effectively Baptists, Congregationalists and Presbyterians) – but the orthodoxy of the Religious Society of Friends was not universally accepted. The members were still nervous of public views and conscious of the persecution that had been meted out, although attacks were now more often in printed works.¹³³ The writings of Charles Leslie, a non-juring, ex-Irish Church preacher who wrote much in defence of religious orthodoxy were well-known examples of such attacks.¹³⁴ They are typified in the pamphlet ‘*The Snake in the Grass*’ originally issued anonymously in 1696,¹³⁵ which was wittily written and widely read. Thus, we can perceive a sense of a group of people united in their religious beliefs, who were in an inward-facing community for social purposes and who were justifiably still concerned about real persecution. They knew each other well and were intimately linked through marriage and business. Later in the eighteenth century as the Society of Friends moved to its introspective ‘Quietist’ phase, that sense of self-community was heightened.¹³⁶

The recording of Quaker marriages began early on. In 1668 George Fox exhorted Friends to ‘buy convenient Books for Registring (*sic*) the Births and Marriages and Burials, that every one may be ready to give Testimony and Certificate thereof, if need requires, or any be called thereunto’.¹³⁷ But the quality of recording of marriages was inconsistent across the

¹³³ A. Neave Brayshaw, *The Quakers: Their Story and Message*, 3rd ed (London: George Allen & Unwin Ltd, 1953), p.178; Murphy, *William Penn*, pp.299-300.

¹³⁴ Robert D. Cornwall, ‘Leslie, Charles (1650–1722), Nonjuring Church of Ireland Clergyman’, *Oxford Dictionary of National Biography*, 2007, <<https://doi.org/10.1093/ref:odnb/16484>> [accessed 5 December 2022].

¹³⁵ Anon, now attributed to Charles Leslie, *Snake in the Grass*.

¹³⁶ This period is covered by Robynne Rogers Healey in ‘Quietist Quakerism’, in *The Oxford Handbook of Quaker Studies*, 2013, edited by Stephen W. Angell and Pink Dandelion. The divide between Quaker and public spheres at that time is discussed by Dandelion, ‘Guarded Domesticity’ and Naomi Pullin, *Female Friends and the Making of Transatlantic Quakerism, 1650–1750*, Cambridge Studies in Early Modern British History (Cambridge: Cambridge University Press, 2018), pp. 252-61.

¹³⁷ George Fox, ‘Friends Fellowship Must Be in the Spirit, and All Friends Must Know One Another in the Spirit and Power of God.’ (Society of Friends, 1668), p.10. Although this is a printed document the following electronic source provides easy access, <<https://quod.lib.umich.edu/e/eebo2/A40127.0001.001?rgn=main;view=fulltext>> [accessed 28 March 2023].

country, even though there were clear advantages to doing so (in establishing inheritance or solving disputes, for example), and the introduction of checking the propriety of proposed marriages, especially by Women's Meetings, proved controversial.¹³⁸ Occupational recording may not have been seen as valuable in communities where the marrying parties were well-known – not in any sense of celebrity, but as being familiar within the community. Eventually the Quaker marriage discipline was recognised as being demonstrably sound by its escape from the proscription of non-conformist marriages under Hardwicke's Marriage Act of 1753, and thus Quaker marriages were officially accepted as being not only legal but sufficiently scrutinised as to be acceptable for all civil purposes.¹³⁹ The inconsistency eventually led to the formalisation of marriage records in the Society by London Yearly Meeting in 1774.¹⁴⁰

If we then add in the factor of remoteness from the centres of government for populations in regions such as Cornwall or Northumberland at a time when communications were at best difficult – the speed of stage coach travel was rarely more than double walking pace even after the introduction of steel springs and turnpike roads in the latter eighteenth century, and its cost at 2p/mile was significant.¹⁴¹ As central government exercised a peripheral impact (taxation being collected through excise duties paid as goods exited bonded warehouses by traders, or on land where the owners paid, so tax was largely invisible to the general

¹³⁸ Rosemary Moore, 'Gospel Order', in *The Quakers 1656-1723, The Evolution of an Alternative Community*, ed. by Rosemary Moore and Richard C. Allen (University Park, PA: Pennsylvania State University Press, 2018), pp. 54–75; Kristianna Polder, *Matrimony in the True Church: The Seventeenth-Century Quaker Marriage Approbation Discipline* (London: Routledge, 2016).

¹³⁹ '1753: 26 George 2 c.33: Prevention of Clandestine Marriages', The Statutes Project, 2015 <<https://statutes.org.uk/site/the-statutes/eighteenth-century/1753-26-geo-2-c-33-prevention-of-clandestine-marriages/>> [accessed 28 September 2022]. This is known as 'Hardwicke's Marriage Act'.

¹⁴⁰ 'Directions for a More General Uniformity in Keeping Records and The Method to Be Observed in Recording Marriages, Births, and Burials' (London Yearly Meeting, 1774), Lancashire Archives FRP-16-60.

¹⁴¹ Dorian Gerhold, 'The Development of Stage Coaching and the Impact of Turnpike Roads, 1653–1840', *The Economic History Review*, 67.3 (2014), pp.821–2.

public¹⁴²), it is then a short step to picture communities with little regard for ‘instructions’ coming from London. This is supported in the debate over the affirmation wording for the 1696 Quakers Affirmation Act where there was a clear disagreement between Lancashire Quakers and Friends in the ‘metropolitan’ centres (specifically London) who were the central administrators.¹⁴³ These remote, inward-looking communities would have little drive to record any information that was not seen as immediately necessary and useful. Jordan Landes, too, recognises the independence of remote communities, citing the case of Pennsylvania in the early 1700s and the negative impact of visitors from London to Maryland some 25 years earlier.¹⁴⁴

The idea of Quaker community within urban areas should not be forgotten. Although it is easy to understand how a group seen as ‘different’ by a conservative rural community would pull closely together and be supportive, there are similar pressures in towns. In faster moving, more commercially minded urban environments, the need to know, and trust, whom you are dealing with is just as important. The development of trade across the Atlantic Ocean illustrates this. Both Nuala Zehediah and Karin Wulf discuss the benefits of having a ‘trust’ or family network to smooth operations and assist in risk reduction in long-distance trading, and both refer specifically to Quakers as a vital part of those networks.¹⁴⁵ Andrew Fincham has very recently discussed the utility of Quaker networks for their trading members,

¹⁴² J. V. Beckett and Michael Turner, ‘Taxation and Economic Growth in Eighteenth-Century England’, *The Economic History Review*, 43.3 (1990), pp. 381, 391-4.

¹⁴³ Morgan, *Lancashire Quakers*, pp.279-80; ‘William III, 1695-6: An Act That the Solemn Affirmation & Declaration of the People Called Quakers Shall Be Accepted Instead of an Oath in the Usual Forme’ <<https://www.british-history.ac.uk/statutes-realm/vol7/p152>>.

¹⁴⁴ Landes, ‘Creation of a Quaker Transatlantic Community’, pp. 84-6, 104-5.

¹⁴⁵ Nuala Zahedieh, *The Capital and the Colonies: London and the Atlantic Economy, 1660-1700* (Cambridge and New York, NY: Cambridge University Press, 2010) pp.106, 108-11; Karin Wulf, ‘Of the Old Stock, Quakerism and Transatlantic Genealogies in Colonial British America’, in *The Creation of the British Atlantic World, Anglo-America in the Trans-Atlantic World*, ed. by Elizabeth Mancke and Carole Shammas (Baltimore, MD and London: Johns Hopkins University Press, 2005), pp.308-9.

concluding that the denseness or closed nature of the network facilitated trading success.¹⁴⁶ Trade Guilds were also important examples of closed business networks, although, as noted below with reference to apprenticeships, their importance was lessening by this time. But the importance of trust was still recognised, and with the introduction of international trade, was growing. In the world outside Quakerism, financial system development was beginning, and the idea of tradeable paper bonds to reduce vulnerable cash movement was emerging.¹⁴⁷ But as Quakers became more accepted and persecution declined, the impact of their perceived probity became an advantage. In tandem with their reputation for dealing within their own community, they became known for fair dealing and honest trading, and the general public began to use Quaker businesses when they required a trustworthy intermediary, often to hold cash balances.¹⁴⁸ Thus, the Quaker community, with its self-regulation and internal focus, gradually became a more integrated part of the general community, and in particular a trusted part of the business community. That trust led to Quaker groups becoming the financiers for local businesses for their retail banking needs, as previously noted with the Lloyd family in Birmingham. But the success of these urban communities and their increased exposure to general society also brought pressures as individual Quakers were exposed to the shallow pleasures of non-Quaker living, and some were tempted away from the disciplined Quaker path.¹⁴⁹

¹⁴⁶ Fincham, 'Origins of Commercial Success', pp.248-83.

¹⁴⁷ Carlos and Neal, 'Amsterdam', p.25.

¹⁴⁸ Raistrick, *Quakers in Science and Industry*, pp.319-31.

¹⁴⁹ Raistrick, *Quakers in Science and Industry*, pp.340-3.

2.5 The Community of Single Quakers

By definition, the dataset contains only those Quakers who marry. In late seventeenth- and early eighteenth-century England marriage was a more important institution than in the twenty-first century. That the common twenty-first century option of co-habitation on a long-term basis was not widely accepted is demonstrated by the prevalence of clandestine marriages and common-law rites, exemplified by, but not limited to, ‘Fleet’ marriages in London (‘Fleet’ marriages were those conducted outside of the formal Anglican rules, normally by priests, though ones often without a church position, and without the publicity of the banns. The London Fleet was an area around the Fleet prison which was notorious for clandestine marriages, but was only one of hundreds of such venues nationwide).¹⁵⁰ At the beginning of the eighteenth century, marriage was beginning to change from the economic model that was still prevalent then in which marriages were arranged for economic or political advantages.¹⁵¹ This is examined further at section 2.6 below. Therefore, if little or no economic advantage is gained from a marriage, then the new couple must be able to look after themselves – they will need some form of trade or expertise to earn a living.

The single male population outside the aristocracy effectively had two routes to independence. Firstly, they could stay at home with their parents and become employed either within or outside the family concern. This sector of singletons was heavily impacted by social changes in the eighteenth century: at the turn of the century, the numbers never

¹⁵⁰ John R. Gillis, *For Better, for Worse: British Marriages, 1600 to the Present* (New York, NY and Oxford: Oxford University Press, 1985), pp.84-105.

¹⁵¹ Stephanie Coontz, ‘Getting Hitched -The History’, *Psychology Today*, 38.3 (2005), 84–85.

marrying peaked,¹⁵² but the onset of the agrarian revolution and land enclosure and the industrial revolution led to a freeing up of social interactions and a rising marriage rate.¹⁵³ Spikes of agricultural marriages are reported at the end of the harvest season when workers were paid off and therefore were comparatively wealthy.¹⁵⁴ Changing marriage patterns are detailed further later in this chapter.

The second popular route, discussed below, was for a young man to be apprenticed into a trade. At the end of an apprenticeship, the single man would have the skills to earn a living and had seen something of life.¹⁵⁵ He would be in a reasonable position to marry. There was a third section of people, those who were neither relatively poor nor went into external training. The most obvious class of people in this category were young people who stayed within a family business without an apprenticeship. These young adults were those least likely to be able to take advantage of the freer relations between the sexes. The middle-classes held onto their standards and the monogamous family unit throughout the century, and the control exerted within it restricted independence and marriage opportunities.¹⁵⁶

The skill pattern in the eighteenth century differed from that of today. Almost all employment requiring a level of skill was craft-based and relied on what has been called

¹⁵² E. Tony Wrigley and Roger Schofield, *The Population History of England 1541-1871: A Reconstruction* (London: Edward Arnold for the Cambridge Group for the History of Population and Social Structure, 1981), p.255.

¹⁵³ Gillis, *For Better, for Worse*, pp.110-23.

¹⁵⁴ E. Tony Wrigley, 'British Population during the "Long" Eighteenth Century, 1680-1840', in *The Cambridge Economic History of Modern Britain: Volume 1: Industrialisation, 1700-1860*, ed. by Paul Johnson and Roderick Floud (Cambridge: Cambridge University Press, 2004), pp. 77-8.

¹⁵⁵ Marc Klemp and others, 'Picking Winners? The Effect of Birth Order and Migration on Parental Human Capital Investments in Pre-Modern England', *European Review of Economic History*, 17 (2013), p.210.

¹⁵⁶ Gillis, *For Better, for Worse*, p.135.

‘tacit’ skills – skills learned from watching, talking with and imitating a master.¹⁵⁷ Such ‘tacit knowledge’ has been defined as ‘the aim of a skilful performance is achieved by the observance of a set of rules which are not known as such to the person following them’.¹⁵⁸ These skill sets were gained by completing an apprenticeship – a period of time spent with a master for the purpose of learning a trade. Apprenticeships were common across Europe, but in England they had been codified by the eighteenth century. The formal codification was the Elizabethan Statute of Artificers of 1563 which required a seven-year term for an apprenticeship and was not repealed until 1814.¹⁵⁹ The importance of such a codification is recognised by the defining of apprenticeship by Sir William Blackstone in his contemporary treatise on the law of England as ‘....apprentices (from the French *apprendre*, to learn) are usually bound for a term of years, by deed indented or indentures, to serve their masters, and be maintained and instructed by them.... This is usually done to persons of trade, in order to learn their art and mystery’.¹⁶⁰ These apprenticeships reflected the model used by the Trade Guilds, notably in London, primarily to limit the entry of people into the crafts and protect their livelihoods.¹⁶¹ The quality of training was variable, depending on the traits of the employing master, but apprentices learned not only their trade but life skills too – on release, they should have been able and qualified to practise their trade and administer the basics of a business anywhere in England.¹⁶² They would also be ready for another step up in life. We can conclude that having lived outside the family for some years, seen something of the

¹⁵⁷ Joel Mokyr, ‘The Economics of Apprenticeship’, in *Apprenticeship in Early Modern Europe*, ed. by Prak Maarten and Patrick Wallis (Cambridge: Cambridge University Press, 2019), p.20.

¹⁵⁸ Michael Polanyi, *Personal Knowledge: Towards a Post-Critical Philosophy* (London: Psychology Press, 1998), p.51.

¹⁵⁹ Patrick Wallis, ‘Apprenticeship in England’, in *Apprenticeship in Early Modern Europe*, ed. by Prak Maarten and Patrick Wallis (Cambridge: Cambridge University Press, 2019), p.249.

¹⁶⁰ William Blackstone, *Commentaries on the Laws of England* (Oxford: Clarendon Press, 1765), p.414.

¹⁶¹ Wallis, ‘Apprenticeship in England’, pp.249-50.

¹⁶² Wallis, ‘Apprenticeship in England’, p.250.

outside world (especially if the apprenticeship had been in a larger town or city) and now being skilled and qualified, they would be looking to use their trade to earn money and marry.

Apprenticeships had a further impact on society by virtue of the labour mobility involved. New estimates for the numbers of apprenticeships reported by Patrick Wallis suggest that even at the start of the eighteenth century, London provided the bulk (*circa* 75%) of the urban opportunities for structured training.¹⁶³ This changed during the century such that by 1790, the corresponding figure was *circa* 35%.¹⁶⁴ However, the measurement metric had altered, and my crude estimate for the effect of this change suggests a figure of 46% as more appropriate.¹⁶⁵ This was a representation of the increasing population in England, and increasing urbanisation with a spreading of industrial opportunities across the country, but there was also an increase in visibility of apprenticeships in crafts in rural areas, such employment further diluting the centralising effect of London.¹⁶⁶ Wallis estimates that in 1790 London had 1,019 premium-paying apprentices, the ‘other urban’ number being 1,887 and the ‘rural’ number, in settlements of fewer than 1,000 people, being 3,746.¹⁶⁷ One factor in the significance of this late rural number is that apprenticeship was declining in the newly booming, industrialising areas in the North of England. This widening of the reach in the market in apprenticeships implies a widening of mobility in the young labour market – though possibly with a shortening of the distance of migration. Klemp et al. also suggest that a significant number of non-local apprentices returned to their birth parishes to establish family

¹⁶³ Wallis, ‘Apprenticeship in England’, pp.255-63.

¹⁶⁴ Wallis, ‘Apprenticeship in England’, p.256.

¹⁶⁵ The estimate is based on Wallis, ‘Apprenticeship in England’, Table 9.2, p. 256, and comparing his figures for apprentices and premium paying apprentices in 1700 and 1710 and applying the resulting ratio to his 1790 figures.

¹⁶⁶ Wallis, ‘Apprenticeship in England’, p.259.

¹⁶⁷ Wallis, ‘Apprenticeship in England’, p.256, Table 9.2.

life – or at least for a major family event such as marriage.¹⁶⁸ 25% of London-trained provincial apprentices and 35% of non-local province-trained ones reappeared in their birthplace parish records.¹⁶⁹

Another factor in the expansion of apprenticeships across the country was the decline in the restrictive influence of the medieval craft guilds on who could trade in a given area (Guilds were bodies of tradesmen who controlled and regulated their trade in their town). The later influence of Guilds can be seen in the drafting of the Statute of Artificers, which reflected the London practice for taking on apprentices – which had already been broadly standardised across the City's merchant guilds (the 'custom of London').¹⁷⁰ As London provided most of the apprenticeship openings, and already provided the model for many provincial contracts, the introduction of the Statute made little practical difference.¹⁷¹ But it did increase the standardisation of contracts, so that eighteenth-century apprenticeships were almost indistinguishable from each other, whether they were enacted in a sophisticated city or a sleepy rural hamlet. This standardisation impacted the influence of Guilds in the incorporated towns, particularly by establishing a nationally valid qualification that was defended in law by the secular magistrates.¹⁷² Not only were such towns coming under competitive pressure from unincorporated boroughs as new ways of working emerged, but experiencing internal friction on innovation from conservative, controlling Guilds cannot have helped. But Guilds should not be given all the blame. Eric Hopkins in his study on the emergence of Birmingham as the centre of manufacturing points out that though Birmingham was unincorporated and free of

¹⁶⁸ Klemp and others, 'Picking Winners', p.225.

¹⁶⁹ Klemp and others, 'Picking Winners', p.225.

¹⁷⁰ Wallis, 'Apprenticeship in England', p.249.

¹⁷¹ Wallis, 'Apprenticeship in England', pp.255-6, 249.

¹⁷² Wallis, 'Apprenticeship in England', p.250.

Guilds, neighbouring Wolverhampton (also unincorporated) was not as successful, and Coventry (which was incorporated) was open to immigrants from the surrounding area (who were not part of the town system).¹⁷³ Alan Crosby notes the decline of the Guilds as well, citing Preston as being the best example of a town where unauthorised trading went unpunished by the middle of the eighteenth century and the Guilds' functions had mutated into that of acting as a trade association.¹⁷⁴

The impact on this study is that there was a probable unmarried population of working Quakers who were either of modest means and scraping a living as unskilled workers, or who were in early adulthood and would be expected to appear in the marriage registers, before long, as they completed their apprenticeships. The impact of the unskilled part of this unmarried cohort on the occupational profile of the Society is difficult to gauge but would be likely to increase the representation of unskilled workers. Some information might be available from the birth (via recording of parental data) and death records, or from unsystematic mentions in minutes. An example of the latter is Samuel Rhodan of Coalbrookdale Preparatory Meeting, who is mentioned as a gravedigger in a minute of 16th May 1749.¹⁷⁵ If we make the assumption that the apprentices (and those smaller numbers who either independently set up a business or stayed within a family business) married sometime in their twenties (which is within the normal marriage patterns for those who achieve economic independence, discussed below¹⁷⁶) then within the single population we have a cohort of young economically active Quakers aged from their later teens to their mid-

¹⁷³ Eric Hopkins, *Birmingham: The First Manufacturing Town in the World 1760-1840* (London: Weidenfeld & Nicolson, 1989), p.5.

¹⁷⁴ Alan Crosby, *The History of Preston Guild* (Lancaster: Carnegie Publishing, 2012), p.13.

¹⁷⁵ 'Broseley Prep Mtg, Shropshire Archives, XNO 4430/PM/1/3.

¹⁷⁶ Wrigley, 'British Population 1680-1840', pp.73-9; Vann and Eversley, pp.87-8.

twenties. If we assume a productive working life from 20 to 40 years of age then this cohort of ages from 20-25 represents an additional 25% of potentially recordable occupations. But most of them will appear in the records when older from marriages in their later twenties, and their occupation is unlikely to have changed, hence there is unlikely to be a significant impact on the occupational profile from this group of young men undergoing training.

2.6 Marriage Patterns

The characteristics of marriage in the eighteenth century are an important part of the characteristics of the population studies here. John Hajnal's seminal study of European marriage is still relevant.¹⁷⁷ A more recent consideration of his study re-introduces the idea of the North-Western Europe marriage pattern, which Hajnal saw in countries around the North Sea basin, including the United Kingdom.¹⁷⁸ This pattern, which emerged in the sixteenth century in elite households and then spread down the social scale, saw couples delaying marriage until they were able to set up their own household. This ties in with the discussion on the single community above. Such a pattern is a measure of the growth of the idea of economic independence and individual freedom.¹⁷⁹ The latter idea, which took hold in the Anglo-Saxon world, emerged from the Protestant revolutions of the sixteenth- and seventeenth-centuries and was part of the thinking that allowed the Dutch and British

¹⁷⁷ Hajnal, 'European Marriage Patterns', pp.101-43.

¹⁷⁸ Wrigley, 'European Marriage Patterns', pp.15-41.

¹⁷⁹ Jan Luiten Van Zanden and Tine De Moor, 'Girlpower. The European Marriage Pattern (EMP) and Labour Markets in the North Sea Region in the Late Medieval Period', in *The Long Road to the Industrial Revolution: The European Economy in a Global Perspective, 1000-1800*, ed. by Jan Luiten Van Zanden (Leiden: Brill, 2009), pp.105-10.

economies to make their early advances.¹⁸⁰ This pattern of newly married couples setting up individual homes and businesses had the effect of delaying marriage for women, too. The effect on the women was that they were often past peak fertility at marriage. Children were often born into a more stable family life and to parents who had made contributions to the country's economic life.¹⁸¹

The contrasting pattern of marriage outside the countries of the North Sea basin was that marriages were contracted at younger ages, and the couple lived with one set of parents or joined with other couples in multiple occupancy households.¹⁸² This pattern produced cheaper living costs, but with a lower stability of living conditions. The stresses of living in a less economically sound household and the earlier arrival of children likely made for a less smooth transition to a stable nuclear family position. The contracting of earlier marriages is also likely to have contained a higher element of familial arrangement than a marriage agreed between two relatively independent single people, one of whom was quite possibly already living out of a family environment. Thus, while the North-West Europe marriage pattern (hereafter NW Europe) points towards the future of independently contracted love matches, the remnant pattern harks back to the older tradition of matches arranged for familial benefit.

The NW Europe pattern of later marriage is demonstrated in the general population in England. Tony Wrigley has written much on the developing population of England in the era of the seventeenth to nineteenth centuries. In his 2004 work he provides data on marriage

¹⁸⁰ Jan Luiten Van Zanden, 'The Emergence of Modern Economic Growth in the North Sea Region', in *The Long Road to the Industrial Revolution: The European Economy in a Global Perspective, 1000-1800* (Leiden: Brill, 2009), p.262.

¹⁸¹ Wrigley 'European Marriage Patterns', pp.21-2.

¹⁸² Wrigley, 'European Marriage Patterns', p.19.

ages in relation to fertility and population growth.¹⁸³ Pertinently for this study, Wrigley graphically shows a mean age for first marriage dropping during the eighteenth century from 27 ¼ to 25 ½ for males and from 26 to 24 for females.¹⁸⁴ These ages demonstrate a concurrence with post-economic independence marriage as in Hajnal's model, and a very clear and consistent reduction in age of marriage over the century. The connection between economic status and marriage suggested by the Hajnal model has now become established. Relevant figures, again from Wrigley, show a correlation between marriage rates (for a given age cohort) and real wages, both rising during the eighteenth century.¹⁸⁵ The connection to be made is one of falling marriage age as real wages rise, and economic independence is achieved sooner (inflation not being an issue in the eighteenth century, so prices remained stable¹⁸⁶). Such a connection is not surprising as increases in the numbers of marriages after good harvests and delays in marriage after poor ones have long been known across Europe.¹⁸⁷

The position in the English Quaker community has been investigated by Richard Vann and David Eversley (who also made comparisons with Irish Quakers).¹⁸⁸ Their work is still regarded as definitive in terms of setting out the parameters of eighteenth-century Quaker marriage. Analysis of the seventeenth-century position is complicated by the high numbers of converts to Quakerism, many of whom were already married. Although conversion (or 'convincement' in Quaker language) was still happening, most Quakers who married in the eighteenth century were born into the faith.¹⁸⁹

¹⁸³ Wrigley, *British Population*, pp.73-9.

¹⁸⁴ Wrigley, *British Population*. p.74, Table 3.5.

¹⁸⁵ Wrigley, *British Population*, p.78, Table 3.7.

¹⁸⁶ Thomas Piketty, *Capital in the Twenty-First Century*, trans. by Arthur Goldhammer (Cambridge, MA: The Belknap Press of Harvard University Press, 2014), pp.131-3.

¹⁸⁷ Wrigley, *British Population*, p.77.

¹⁸⁸ Vann and Eversley, *Friends in Life and Death*.

¹⁸⁹ Vann and Eversley, *Friends in Life and Death*, pp.67,78,84.

The analysis shows that prior to 1750, the Quaker marriage pattern was similar to the rest of the English population and conformed to Hajnal's NW Europe model.¹⁹⁰ The Vann and Eversley study was based on two groups of Quakers. The first was derived from marriage records with surnames starting with B in the London & Middlesex, Westmorland and Yorkshire Quarterly Meetings, and B or S in the Cheshire, Sussex & Surrey and Herefordshire Worcestershire & Wales Quarterly Meetings. The second group comprised families formed in the Quarterly Meetings of Bedfordshire & Hertfordshire, Berkshire & Oxfordshire, Bristol (excluding rural Somerset), Buckinghamshire, Cambridgeshire & Huntingdonshire and Norfolk & Norwich (separating out Norwich). These areas were then grouped into Northern England, Southern England (which were separated by a line between the Humber and Severn rivers) and Urban.¹⁹¹

Vann and Eversley do not give an English country-wide average for age of first marriage, but their regional ranges for the first and second halves of the eighteenth century are 27-29 and 27-30 respectively. The average age of first marriage for British and Irish Quakers is 28.2 for the first quarter of the century and 29.4 for the last quarter.¹⁹² These compare to Wrigley's national figures of 27 and 25 ½ quoted above. There are variations between the regions. Urban marriages are seen earlier than in the North and South groupings, and there was even a slight fall in age late in the century (from 26.7 to 26.4).¹⁹³ Northern men married later at 29 rising to 30, and Southern men fell in the middle at 27 to 28.¹⁹⁴ No specific reasons are

¹⁹⁰ Vann and Eversley, *Friends in Life and Death*, pp.87-90.

¹⁹¹ Vann and Eversley, *Friends in Life and Death*, pp.32,36.

¹⁹² Vann and Eversley, *Friends in Life and Death*, p. 87, Table 3.1, p.88 Table 3.2.

¹⁹³ Vann and Eversley, *Friends in Life and Death*, p.88, Table 3.2.

¹⁹⁴ Vann and Eversley, *Friends in Life and Death*, p.88, Table 3.2.

advanced by Vann and Eversley for these regional shifts, but economic independence is a possible cause. The new urban life-style was one of greater activity and energy than a rural life¹⁹⁵ and held attractions for the young, and a more rapid gain (a rise in real wages) in wealth leads to earlier marriage (it is easier to reach an affordability threshold).¹⁹⁶

This pattern of increasing age of first marriage for Quakers for both men and women is very unusual for women, but parallels for the male position exist.¹⁹⁷ The women's position is thought by Vann and Eversley to be a reflection of the decreasing numbers of members of the Society over the century, which led to a decrease in the ratio of men to women. This coupled with the Quaker culture of economic self-sufficiency before marriage, and Quaker males' tendency to take spouses of similar ages would push the marriage age of women up.¹⁹⁸ The male position is more complicated. The rising age of marriage, while being counter to trends in the general English population, is reflective of the position of the English aristocracy, and also of societies such as the Geneva bourgeoisie of the eighteenth century.¹⁹⁹ Two possible factors in this position are inheritance of capital and occupation, discussed below.

Accumulation of capital to set up a household or a business was a necessary part of attaining economic independence. One common means of achieving this was by inheritance, or in-lifetime gifting, the latter probably being more significant as life expectancy had risen and the inheritance age was postponed. There are very few general statistics on inheritance in the

¹⁹⁵ As evidenced by the relative material gains for the unskilled, Gregory Clark, *A Farewell to Alms: A Brief Economic History of the World*, Princeton Economic History of the Western World (Princeton, NJ: Princeton University Press, 2007), pp.273, 277; and the rise in intellectual and cultural life in towns and cities, Joel Mokyr, *The Enlightened Economy, an Economic History of Britain 1700-1850* (New Haven, CT: Yale University Press, 2009), pp.47-54.

¹⁹⁶ Wrigley, *British Population*, p.78.

¹⁹⁷ Vann and Eversley, *Friends in Life and Death*, pp.104-7.

¹⁹⁸ Vann and Eversley, *Friends in Life and Death*, pp.124-5.

¹⁹⁹ Vann and Eversley, *Friends in Life and Death*, p.104.

eighteenth century (France is the only country to have fiscal figures from that time arising from the estates and gift tax established in 1791²⁰⁰), although surviving probates are a source of specific information. The relevant datum for the passing of capital for the purpose of setting up a business by inheritance is the age of the inheritor. Data for this, from the French case, is given by Thomas Piketty.²⁰¹ His graph commences in 1820 and shows two useful indicators. Firstly, there is a consistent gap of approximately thirty years between the age of the deceased and the inheritor (the generational duration) from 1820 to 2010. We can reasonably extrapolate this gap back into the eighteenth century. Secondly, the age of inheritance is stable at 25 up to 1840, and then rises slowly to 30 by 1900. United Kingdom life expectancy at birth rose by about 5 years from just under 40 to a little over 40 in the period 1765 to 1875,²⁰² and for those reaching their teenage years from 1841 to 1871, an additional 17 years was expected.²⁰³ The resulting adult life expectancy of 57 in the mid-nineteenth century is similar to that reported by Piketty for France.²⁰⁴ Therefore, I suggest that it is not unfair to translate Piketty's data across to Britain. And I further suggest that an inheritance age of 25 is a reasonable extrapolation for most of the eighteenth century, though we should recognise that a consequence of a decrease in life expectancy would be a decrease in inheritance age. Thus, receiving an inheritance upon completing an apprenticeship and gaining some independence is plausible. A rising marriage age governed by receipt of an inheritance implies a rising age of death, causing a wait for the receipt of the capital. This provides an explanation for the Vann and Eversley Southern group, where the specific life

²⁰⁰ Piketty, *Capital*, p.426.

²⁰¹ Piketty, *Capital*, p.491, fig. 11.3.

²⁰² Data from 'Life Expectancy (from Birth) in the United Kingdom from 1765 to 2020', *Statista.Com* <<https://www.statista.com/statistics/1040159/life-expectancy-united-kingdom-all-time/>> [accessed 1 June 2020].

²⁰³ Office of National Statistics, 'Life Expectancy over Time' <<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/articles/howhaslifeexpectancychangedovertime/2015-09-09>> [accessed 1 June 2020].

²⁰⁴ Piketty, *Capital*, p.491.

expectancy rose by about eight years over the century – but it does not work for their Urban or Northern groups, where there was no corresponding increase in life expectancy and therefore delay in receipt of the inheritance.²⁰⁵

The second factor considered was whether the rise in marriage age was an artefact of occupation. In the Vann and Eversley sample, professional people tended to marry later than those involved in agriculture.²⁰⁶ Vann and Eversley state that in their sample, for known occupations, ‘the mean age at first marriage remained remarkably stable, not changing at all before 1800 outside the cities and in the cities showing a very gradual tendency to fall after 1750’.²⁰⁷ They suggest that this indicates that the rise in marriage age comes from the marriages with unknown occupations, and that there is no pure compositional effect from occupations.²⁰⁸ While this is clear from their overall figures, within the overall stable average, some occupations show movements. For the first and second halves of the century, the overall average marriage ages for men are 30.1 and 30.1 (rural) and 28.8 and 28.2 (urban).²⁰⁹ But within those figures we have in the rural set: textiles, 28.7 and 29.6; professionals, 31.3 and 31.0; artisans, 30.8 and 29.3; and in the urban set: textiles, 28.1 and 27.5; professionals, 29.8 and 27.8; artisans, 28.0 and 28.5.²¹⁰ The position is not so clear cut, and some compositional effect cannot be ruled out.

²⁰⁵ Vann and Eversley, *Friends in Life and Death*, pp.115-6.

²⁰⁶ Vann and Eversley, *Friends in Life and Death*, pp.111-4.

²⁰⁷ Vann and Eversley, *Friends in Life and Death*, p.114.

²⁰⁸ Vann and Eversley, *Friends in Life and Death*, p.114.

²⁰⁹ Vann and Eversley, *Friends in Life and Death*, p.112, Table 3.12.

²¹⁰ Vann and Eversley, *Friends in Life and Death*, p.112-3, Table 3.12.

It appears as though the main driver for Quaker marriage patterns was the prevailing culture within the Society.²¹¹ But there is one final factor that Vann and Eversley did not comment on. There are numerous instances and recordings of networks within the Society of Friends that connect families and businesses. These were clearly advantageous to those in them but whether there was conscious thought of economic gain is not addressed. Thus, the final question of whether marriage patterns were cultural or influenced by economics was not clarified by them. Recent work by Andrew Fincham suggests that there was, in some cases at least, hard-headed business opportunism at work in the world of eighteenth-century Quaker marriage.²¹²

2.7 Quaker Women

In the eighteenth century, women were not expected to be a separate and recordable part of the workforce. In the Quaker movement in the eighteenth century, women worshipped with men and were accepted as ministers, pamphleteers and evangelists,²¹³ and a system of Women's Meetings had been established in the later seventeenth century, largely dealing with pastoral affairs.²¹⁴ A Women's Yearly Meeting was only established in 1784,²¹⁵ and the Society did not bring in full equality of participation in Meetings until 1896.²¹⁶

The position of women in the workplace is not clear. John Gillis, in his study of marriage customs, suggests an opening up of the workplace to women in the proto-industrial areas

²¹¹ Vann and Eversley, *Friends in Life and Death*, p.115.

²¹² Fincham, 'Origins of Commercial Success', pp. 319-22.

²¹³ Punshon, 'Portrait', p.75.

²¹⁴ Braithwaite, *Second Period*, pp.272-3.

²¹⁵ Punshon, 'Portrait', p.107.

²¹⁶ *Quaker Faith & Practice*, section 6.01.

appearing in the later eighteenth century when he writes of the freeing up of contacts between the sexes, and he also notes the urban phenomenon of the cottage industry dependent on the whole family's input.²¹⁷ In her study of women in eighteenth-century London, Amy Erickson asserts that most married women were involved in the productive economy, though often at low skill levels, but some employment in the domestic arena allowed other women to be more leisured.²¹⁸ Christine Wiskin gives a figure of 6% for businesses in 1790s trade directories being owned by women.²¹⁹ The findings for the wider country, outside London, of a later opening of opportunities for women support the observation that few women are represented in the database for this study, but the Erickson findings for London suggest that more entries would be expected from there. There are 86 separate entries out of 10,181, so women comprise 0.8% of the database. Of the 86, 18 are from London & Middlesex, 13 from Lancashire and 11 from Yorkshire. Table 2.8 shows their distribution amongst the seven major occupational categories used in the analysis of the data.

Table 2.8 - Occupational Spread of Women in the Database, 1690 to 1809

Occupational Class	Number	%age
Agriculture	3	3.5%
Commerce	3	3.5%
Artisan	25	29.1%
Food	3	3.5%
Manufacture	5	5.8%
Other	11	12.8%
Professional	3	3.5%
Retail	33	38.4%
Total	86	100.0%

²¹⁷ Gillis, *For Better, for Worse*, pp.116-9, 169.

²¹⁸ Amy Louise Erickson, 'Married Women's Occupations in Eighteenth-Century London', *Continuity and Change*, 23.2 (2008), 267–307.

²¹⁹ Christine Wiskin, 'Industry, Investment and Consumption: Urban Women in the Midlands' in *Towns, Regions and Industries – Urban and Industrial Change in the Midlands, c1700-1840*, ed. by Jon Stobart and Neil Raven, (Manchester: Manchester University Press, 2005), p64.

The three largest occupations listed are 20 retailers (shopkeepers), 12 milliners and 10 servants, in Retail, Artisan and Other, respectively. A comparison with the entire database, as shown subsequently in Table 4.1, shows that women are overrepresented in Retail and Other and are slightly higher in Artisan, too. None of these three occupations were strange ways for women to make a living, but those of mariners, carpenters and masons are more unusual. Erickson's figures for occupations show 27% clothes making (artisan), 12% shopkeeping (retail), 12% catering and victualling (food and retail), 11% hawking and carrying (retail/other) and 13% laundry (not represented in the Quaker database).²²⁰ Thus Table 2.8 and Erickson are not far apart.

Looking at a wider industry-based analysis of the figures behind Table 2.7, we find that 34 (40%) of the women are concerned with the textile industry and 6 (7%) with the food industry (both excluding general retailers). This is a higher proportion than the total Quaker population in textiles, though the food fraction is lower. There is some suggestion that women were more prevalent in the data in the earlier years, Table 2.9. Most of the time-based analysis gives cohorts for 1710 and 1790 of approximately the same sizes, with a smaller 1750 cohort. The data (from these small cohorts) indicate less of a drift towards commerce than for all Quakers, but possibly a higher showing for textiles, although the two women involved with textiles in 1790 both have selling and commercial elements to their drapery and tailoring businesses.

²²⁰ Erickson, 'Married Women's Occupations'. The figures given have been derived from weighted average combination of her figures in Table 5.

Table 2.9 - Analysis of Women and Cohorts through the Eighteenth Century

Sector	Database		Cohort					
	Number	% age	1710	% age	1750	% age	1790	% age
All women	86		11		6		5	
Agriculture	3	3.5%	0	0.0%	1	16.7%	0	0.0%
Commerce	24	27.9%	0	0.0%	4	66.7%	1	20.0%
Food	6	7.0%	0	0.0%	0	0.0%	1	20.0%
Other artisan	3	3.5%	0	0.0%	0	0.0%	0	0.0%
Sundry	16	18.6%	3	27.3%	0	0.0%	1	20.0%
Textiles	34	39.5%	8	72.7%	1	16.7%	2	40.0%

One final comment concerning the position of women arises from the changes in the second half of the eighteenth century as industrialisation began. As noted above, in the northern areas of proto-industrialisation in the textile industry, inter-sex mixing became more open and less controlled as women entered the workforce. Also noted above is Erickson's view that most married women (in London) were economically active. But although these changes probably provided more freedom of employment for some women, they are not clearly visible in the Quaker records. This appears to be an indication of the lack of working-class Friends, but definitive conclusions are difficult to draw from such a small sample.

As seen above, the population of women with a recorded occupation was less than 1%, 86 of the total of 10,179 recorded occupations. What we can see is that these women were spread around the country. Comparing the employed women with total women, there was only one Meeting showing a recording rate of above 1% (Lincolnshire). Three of the four 'Large' Meetings had a women's population in double figures, these Meetings accounting for 42, or 47%, of the whole, which equates with the 47% of the overall occupations that these three

Meetings contained. Using the proportion of 86 women with occupations in 10,179 total occupational records, I have made a prediction of the expected number of women in each Quarterly Meeting. Table 2.10 is a selective presentation of data for those Meetings with a higher proportion of occupied women, and the larger Meetings, where a 1% threshold would predict three or more occupied women.

Table 2.10 - Selected Data for the Distribution of Employed Women in Eighteenth-Century Quarterly Quaker Meetings

Quarterly Meeting	No. of women in Given	Women	%age women in Given	No. of Given	Predicted women in Given	Approx. %age of predicted
Lincolnshire	3	289	1.04%	95	1	300%
Lancashire	13	1,400	0.93%	665	5	260%
Essex	5	522	0.96%	270	2	250%
Norfolk & Norwich	4	598	0.67%	387	3	133%
Berkshire & Oxfordshire	6	708	0.85%	581	5	120%
Gloucestershire & Wiltshire	4	636	0.63%	415	4	100%
Yorkshire	11	2,846	0.39%	1,290	11	100%
London & Middlesex	18	3,135	0.57%	2,812	24	75%
Cheshire & Staffordshire	1	508	0.20%	332	3	33%
Sussex & Surrey	1	531	0.19%	369	3	33%
Bristol & Somerset	2	1,099	0.18%	692	6	33%
All	86	18,460	0.47%			

A difficulty with attempting to draw conclusions about the occupational activities of women in the Society is the small size of the sample. Lincolnshire shows the highest rate of recording of occupied women but was a small Meeting where a single random occurrence makes a big difference. Their presence is still noteworthy, especially when considered in relation to other Meetings such as Cheshire & Staffordshire, both being strong agricultural counties. Lancashire was a stronghold for Quakerism, and the testimony of Quakers to

equality is probably a factor here.²²¹ The case in Essex is less clear. The five women were all involved in retail, with no apparent connection. However, three of them married within a two-year period, so there might have been some mutual reinforcement of attitudes within the Meeting at that time. The lower level of occupied women in the large urban Meetings in London & Middlesex and Bristol & Somerset is likely to reflect the patriarchal nature of society, and particularly of business society, at that time.

2.8 Summary of the Characteristics of the Sample

The objectives of this chapter were to set out the characteristics of the dataset in terms of its origins, the problems that required attention before analysis commenced, and some thoughts about the numbers in the database and the community surveyed that are not part of the subsequent analysis. The dataset is based on recorded marriages within the Society of Friends from 1691 to 1809 inclusive. The final dataset contained 10,181 separate records of occupations after elimination of 581 duplicates - a duplication rate of 5.4%. Male occupational recording was at a rate of little more than a half of the possible. Although most estimates of the eighteenth-century Quaker population provide figures of *circa* 40,000, none of them specifically address the problem of lost or destroyed records. My estimates presented here provide population figures of approximately 50,000 in 1710 and 34,000 in 1790, which imply losses of records of between 25% and 50%. The pattern seen here of low mid-century numbers, zero records and a resulting estimate below other models is suggestive of a combination of poor record-keeping and losses. The data show that the proportion of declared occupations ranged from 14% of men declaring in Cornwall to 94% in London &

²²¹ The modern testament to equality is neatly summarised in section 1.02/33 of Quaker *Faith & Practice*, 5th edition, 2013. Section 1.02 contains the Advices and Queries that British Quakers use.

Middlesex (Table 2.5). By comparing the ratio of contributions to the totals of marriage and occupational records I have been able to assess the relative quality of record-keeping in Quarterly Meetings and could clearly conclude that there is a pattern of poorer recording of information in the marriage registers as the distance from London increases. This low level of recording of occupations is seen as being due to two factors. Firstly, in close Quaker communities the marrying parties were well known – not in any sense of celebrity, but as being familiar within the community. Thus, a recording of an occupation had no value in that community. Secondly, in Meetings far from London with Friends who worked and worshipped together, the requirement from a remote governing body to record information would not make sense and was not seen as useful. Therefore, less attention was paid to it than in more crowded, metropolitan areas where living and working communities were not so intertwined. A disadvantage of the use of marriage records is that the single population is ignored. In the 1700s this can be taken to have two significant components: agricultural workers, probably on low wages and reliant on periodic hiring contracts, and apprentices. Many of the latter group in particular would eventually marry and appear in the records, so this population has not been seen as a distorting factor.

In the early modern world marriage patterns were important indicators of potential population shifts and personal economic development. Quaker marriage patterns tracked the general population until circa 1750, after which there was a divergence. A pattern of marrying and forming new independent households was seen. While marriage ages began to fall in the general population, those amongst Quakers continued to rise. Vann and Eversley suggested several factors that might have been at work to influence this, and occupational patterns were one of them.

There were very few women identified in the sample – 86 or 0.8% of the population.

Conventional thought would not be surprised at this given the belief that women at the time were confined to the domestic setting. The make-up of the working Quaker women seen here shows two significant areas of activity, retail and artisanship, which translate into involvement with textiles and commerce.

Therefore, the sample examined in this study is one of a Quaker population who married and were economically independent. They were spread across the country but were formed into close, localised communities. There were signs that these close communities were more important to their members than the connection with the national society. But the national character of the Society of Friends was strong enough that networks were formed across regions, and marriages were contracted across these regions. These marriages were sometimes recorded in the home Meetings for both bride and groom, necessitating a critical review of the database to eliminate such duplicated entries. The lack of included data from the unmarried population is recognised – it is a necessary failing in a study based on marriage records. But I suggest that most individuals would be recorded later on when they married, so the impact would be on the timing rather than the absolute numbers.

Chapter 3: Occupations of Quakers in the Eighteenth Century

This chapter provides the analysis of eighteenth-century Quaker occupation by examining the sectors and areas of employment. The survey presented is based on a much larger and more comprehensive database than the previous studies already noted. It provides a sounder base for the conclusions drawn concerning the employment and economic activity of the nationwide Quaker body across the eighteenth century than has previously been possible. To understand Quaker working, employment and economic activity patterns at that time, it is necessary to have a view of the occupational spread within the Society of Friends and the geographical spread of those occupations. This chapter provides the first of those two needs by considering the whole Quaker body, while the geographical spread follows in chapter 4, where questions of distribution of Quakers and activities are addressed.

The chapter opens with a discussion of the occupation classification scheme followed, and how this scheme connects with other studies of contemporary occupation, both within Quakers and among the general population. It then goes on to examine in more detail the eight sectors identified in the classification scheme (agriculture, commerce, artisan, food, manufacture, other, professional and retail). It ends with a section which pulls the various strands presented together and concludes that Quakers were under-represented in agriculture throughout the eighteenth century, although the wider food industries became more important as the century progressed. This is an example of the broader conclusion that Quakers were heavily involved in the changes occurring in a developing economy, being increasingly involved with the manufacturing, commercial and professional fields.

3.1 Standardisation and Classification of Occupations

The working database for analysis contains 10,179 records. Many of the entries had differing spellings for the same occupation and others gave more detailed descriptions for the same basic occupation. Not all occupations reported are familiar today. ‘Bodice makers’ made upper body garments for women, a ‘calenderer’ applied a rolling process to cloth to give a smooth, glossy finish, a ‘grazier’ looked after grazing animals, a ‘heckler’ straightened and separated flax fibres before weaving (a ‘wool comber’ carried out a similar operation on wool), an ‘iron monger’ sold iron, often in bar form, a ‘lorimer’ manufactured metalwares for horse harness applications, and ‘oilmen’ and ‘tallow chandlers’ supplied light when oil lamps and candles were still the only sources of artificial light.

a) Standardisation

The standardisation of these 1,102 recorded occupations resulted in 271 standardised occupations. Appendix 1 contains a list of the recorded descriptions and their standardisation. Standardisation was the simpler of the two processes of standardising terminology and classification into broader categories of work. It was the process of removing variations from differences in spelling (including typographical misstatements) and setting terminology for occupations which were either the same or where description were detailed. Good examples of the former are the various spellings of tailor (‘tailor’, ‘taylor’, ‘tayler’) or surgeon (‘chirurgion’, ‘chisurgeon’, ‘chiuerurgeon’, ‘chyrurgeon’, as well as ‘surgeon’). The latter are represented by druggists (‘apothecary’, ‘chemist’, ‘chymist’, ‘druggist’ and ‘drugster’) and the inclusion of stuff- and silk-weavers within the weavers’ category.

b) London freemen

A particular aspect of standardisation that requires some interpretation concerns the occupations of those Quakers who were also freemen, or citizens, of London. Here the designation 'citizen' refers to membership of one of the City of London livery guilds whose historical role was to control and regulate trade in their particular discipline. The guilds, which were not confined to London, were associations of practitioners of a trade which regulated and controlled that trade in towns and cities which were incorporated.

Incorporation was an ancient means whereby towns gained a measure of independence and self-governance,²²² but paid for that power by being obligated to both Parliament and the Crown.²²³

Adam Smith describes the evolution of towns as places where practitioners of various trades gathered and gained mutual benefits,²²⁴ but incorporation allowed measures of self-protection to emerge (including controlling trade guilds). Such measures allowed the town governance to be dominated by a few powerful families who gained wealth and bore the costs of governance, and whose governance, in the words of Asa Briggs, was of 'oligarchic character....which excluded the many and carried with it costly obligations for the few'.²²⁵ In the case of London, these guilds were numerous and wide-ranging, though the traditional view is that their influence was waning from the mid-seventeenth century, led by such events

²²² H. W. R. 'The Origin of Municipal Incorporation', *The Yale Law Journal*, 12.3 (1903), 161–3.

²²³ Anthony R. Bridbury, 'English Provincial Towns in the Later Middle Ages', *The Economic History Review*, 34.1 (1981), p.4.

²²⁴ Adam Smith, *The Wealth of Nations, Books I-III* (Harmondsworth, Middlesex: Penguin Press, 1986), p.481.

²²⁵ Asa Briggs, *A Social History of England* (London: Book Club Associates, 1984), p.173.

as the use of non-Guild craftsmen²²⁶ in the wake of the 1666 Great Fire of London.²²⁷ But this was not a complete picture as new Guilds were emerging at the same time, such as the Tin Plate Workers Company in 1670.²²⁸

Through the eighteenth century the position of the guilds changed significantly. In those dominated by merchant interests, the mercantile elites removed their Guilds from their regulatory positions – a reflection of the merchants’ increasing desire for free trade. The craftsmen’s Guilds were more conservative in guarding their positions, but by the turn of the eighteenth into the nineteenth century, the Guilds were actively pulling back from restricting entry to trades, and the actions of the journeymen members were beginning to look more like those of a modern trade union.²²⁹

The Guilds mutated so that some began to represent the newly emerging radical politics by asserting their rights of election of town and city officers, while the ‘grander’ Guilds (and particularly the ‘twelve great’ Guilds), especially in London, became social, dining and philanthropic organisations concerned with the pageantry of the City.²³⁰ Guild membership became less important as a badge of trade. The Royal Commission of 1837 noted that in the Carpenters Guild, ‘the majority of Masters of the Company are not Carpenters by Trade. There are persons of most other trades belonging to this Company, and persons of business,

²²⁶ In this study the description ‘artisan’ will normally be used as an alternative to ‘craftsman’. This sidesteps any issues of gender identification in discussion focussed on the occupation. However, there are some occasions when the latter descriptor is appropriate, such as here, and in the discussion to come of Andrew Fincham’s work when he uses Craftsmen as one of his data categories.

²²⁷ Michael Berlin, ‘Guilds in Decline? London Livery Companies and the Rise of a Liberal Economy, 1600–1800’, in *Guilds, Innovation and the European Economy, 1400–1800*, ed. by S. R. Epstein and Maarten Prak (Cambridge: Cambridge University Press, 2008), pp. 316–42.

²²⁸ Berlin, ‘Guilds in Decline?’, p.329.

²²⁹ Berlin, ‘Guilds in Decline?’, pp.331–3.

²³⁰ Berlin, ‘Guilds in Decline?’, pp.339–41.

and private gentlemen’, and in the Joiners it was reported that ‘persons of that trade do not prefer the Company, and in fact very few belong to it’.²³¹ For Quakers in the eighteenth century, Guild membership changed from being a licence to operate a trade to an opportunity to influence the direction of progress of that trade.

This study contains 610 instances of Quakers who had ‘citizen’ as part of their occupational description. The usual form of such a description is, for example, skinner and citizen or merchant tailor and citizen. In these cases the occupation has been taken as that given, with the designation citizen considered a badge of Guild membership (noting that in the particular case of Merchant Taylors, the occupation has been taken as merchant, the Merchant Taylors being one of the ‘twelve great’ Guilds renowned for mercantile activity, being re-designated as such from Taylors in 1503 to reflect this mercantile activity²³²). In some cases, a description such as draper and citizen or baker and citizen was seen. In these cases, the first descriptor has been taken as the occupation and the second as the seat of Guild membership. In other cases (cheesemonger and citizen is an example), the occupation does not give an indication of which Guild the Quaker is a member of. The appearance of trades within Guilds that are not connected to the Guilds’ primary focus is not surprising given the trends described above, but neither is it unreasonable to assume that a man’s trade is represented by his Guild, unless otherwise stated.

²³¹ *Report of the Royal Commission on Municipal Corporations (England and Wales): London and Southwark; London Companies* (London: House of Commons, 1837) <<https://parlipapers.proquest.com/parlipapers/>> [accessed 15 December 2022], pp.95,202.

²³² Matthew P. Davies, *The History of the Merchant Taylors’ Company* (Leeds: Maney, 2004), p.71.

c) Classification

Even 271 standard occupations is a large number to deal with for analysis purposes, so some further grouping is necessary. Classification is also necessary if any comparison between this study and other studies in similar areas is to be attempted. Therefore, the process of classification requires the development and application of principles, and some interpretation of the roles described.

There are three studies that I intend to make comparisons with: the work on Quaker occupations carried out by Richard Vann and David Eversley (as part of their work on Quaker Marriage Patterns),²³³ the work of the Cambridge Population Centre reported by Leigh Shaw-Taylor and Tony Wrigley,²³⁴ and Andrew Fincham's work on Quaker interactions with the world of commerce.²³⁵

Vann and Eversley

The Vann and Eversley study is a synthesis of complementary work carried out separately by the authors. Besides the English data considered here, the work also presents some studies about the Irish Quaker population. Their dataset was discussed in chapter 1, but for this chapter it should be remembered that their occupational analysis pattern used a mixture of sectorial definitions. Textiles, food and leather are based around products, agriculture around an industry, commerce around selling, artisans represented craft-level manufacture, and professional and clerical not only includes medical and educational professions but

²³³ Vann and Eversley, *Friends in Life and Death*.

²³⁴ Leigh Shaw-Taylor and E. Tony Wrigley, 'Occupational Structure and Population Change', in *The Cambridge Economic History of Modern Britain, Volume 1, 1700-1870*, ed. by Roderick Floud, Jane Humphries, and Paul Johnson (Cambridge: Cambridge University Press, 2014), pp. 53–88.

²³⁵ Fincham, 'Origins of Commercial Success'.

merchants and gentlemen. This classification provides a higher-level basis for occupational analysis but is lacking in systematic consistency.

Cambridge PST Classification

The Cambridge Population Group's classification is based around the Primary/Secondary/Tertiary (PST) system described by Leigh Shaw-Taylor and Tony Wrigley in their paper entitled *The Occupational Structure of England c.1750-1871, A Preliminary Report*,²³⁶ and later used in their discussion of occupational and population change in the 2014 edition of the *Cambridge Economic History of Modern Britain*.²³⁷ This system is based on an economic flow analysis whereby the 'Primary' sector concerns products from the land, the 'Secondary' sector concerns processing of materials and the 'Tertiary' sector concerns the provision of services. Subsequent allusions to primary, secondary and tertiary sectors refer to these definitions. Thus, agriculture and mining activities are primary activities, manufacturing, and textile and food processing are secondary activities and transporting of goods, the provision of legal services and finance are tertiary activities.

The system is good for examining broad trends at a sectorial level but detail is lost. It also needs to be recognised that there is some overlap between the categories, which Shaw-Taylor and Wrigley themselves recognised – 'much Tertiary employment was an adjunct to Secondary production and not therefore an indicator of Tertiary demand'.²³⁸ In this thesis 122 millers are identified and there is a technical probability that some of these millers are selling the flour or meal produced as retailers directly to the users. This is an example of a

²³⁶ Shaw-Taylor and Wrigley, 'The Occupational Structure of England'.

²³⁷ Shaw-Taylor and Wrigley, 'Occupational Structure and Population'.

²³⁸ Shaw-Taylor and Wrigley, 'The Occupational Structure of England', p.10.

difficulty as to whether the miller should be classified as a secondary sector operator who is processing an agricultural product, or as a tertiary sector seller of products to a user.

The utility of the Shaw-Taylor and Wrigley information to the present work is that the data investigated is external to Quakers and thus provides a measure of control by presenting a picture of the general English population. Their time period is from 1750 to 1871. At the later end of this period data are available from the British censuses. But the earlier part of the period is before the emergence of the census system. In the second half of the eighteenth century, Shaw-Taylor and Wrigley used militia ballot lists, which recorded occupations, and baptism registers. From 1813-1820 the latter were required to record occupations under Rose's Act of 1812.²³⁹ Before 1813 occupational recording was voluntary, but Shaw-Taylor and Wrigley were helped by the tendency for registers in Lancashire and West Yorkshire to contain such data, as surviving militia ballot records for the region are rare.²⁴⁰ Being able to analyse the population of an area so involved in the changes occurring in England at that time was important to their study. This particular study gives some comparative general population information for Hertfordshire, Lancashire, Northamptonshire, Yorkshire's West Riding and London.

Andrew Fincham's Thesis

Andrew Fincham's work is focussed on the propensity of early Quakers to be involved in commercial activity. He questions the motives of some Quakers to be part of the Society, pointing out that there are significant commercial advantages to being part of a network that

²³⁹ '1812: 52 George III C146, The Parochial Registers Act', 1812 <<https://www.wiltshire-opc.org.uk/Items/Wiltshire/Wiltshire%20-%20Rose's%20Act%201812.pdf>> [accessed 14 July 2020]. This act standardised the recording of births, marriages and deaths across the country in the Church of England.

²⁴⁰ Shaw-Taylor and Wrigley, 'The Occupational Structure of England', p.7.

deals internally and contains much economic activity.²⁴¹ His analysis is, therefore, concentrated on commercial-facing categories. He uses three classes, which are then further divided into eight sub-classes. These are Commerce (divided into retail, citizen/manufacture and merchants), Craftsmen (divided into craftsmen and food) and Other (divided into agriculture, professional and other).²⁴² These sub-classes appear to be influenced by those in Vann and Eversley but can be read across to the Wrigley PST system. His work has used the Quaker marriage records of the Essex, Suffolk, Norfolk & Norwich, and London & Middlesex Quarterly Meetings, a sample which includes rural records, but is heavily weighted towards an urban population by the presence of what were the two largest English cities in 1700. However, his reappraisal of previous work on early Quakers, such as that of William Beck and Frederick Ball, provided some additional insights.²⁴³

Classification Method

Taking note of the classification regimes used by the authors discussed above, there are two basic conundrums to be addressed. These are the boundary between making craft artefacts (such as shoes) and manufacturing industrially, and that between making and selling. In pre-industrial societies, selling was an essential part of everybody's route to making a living, be they a labourer for hire in agricultural hiring fairs or an artist seeking patronage to be able to construct their works. By the end of the eighteenth century and the emergence of the beginnings of the consumer society, selling had become a specialised activity, in part, and the retail sector was emerging as supply chains lengthened in a growing population. Kate Smith discussed this growth of distancing between producers and consumers during the eighteenth

²⁴¹ Fincham, 'Origins of Commercial Success'.

²⁴² Fincham, 'Origins of Commercial Success', p.54.

²⁴³ Beck and Ball, *The London Friends' Meetings*.

century.²⁴⁴ Within this change in the world of the supply of goods, the making environment was developing. Prior to industrialisation, artisans used hand tools to make individual items and became known and respected because of the skill that they demonstrated. The first impact of industrialisation was in splitting complicated manufacturing processes into simpler units and then organising the operation of these processes to make final products. This was the basis of Adam Smith's 'Division of Labour' exemplified by his analysis of pin making, but also seen in the development of the 'putting out' schemes of textile production in West Yorkshire.²⁴⁵

Thus, in the classification of occupations in this study, I have attempted to look at the title given and identify an essence of the tasks involved. A 'seamster' or 'seamstress' has been taken as an artisan as the work, at that time, was unmechanised. But a 'frame knitter' has been taken as a manufacturer due to the use of a frame to support the garment being knitted, with the resulting increase in productivity. A 'leather cutter' has been taken as part of a distributed process of making leather goods and is therefore described as manufacturing, but a 'leather dealer' is selling leather (either as a material or finished goods) and has been classified under commerce.

Textiles are a sector heavily represented – not surprisingly as England was a wool-based economy before its emergence into the trade- and engineering-based British Empire, and the early empire growth contained a significant element based around a cotton industry. But textiles are a difficult area to classify. A 'cotton goods dealer' is clearly selling goods, and a

²⁴⁴ Kate Smith, *Material Goods, Moving Hands – Perceiving Production in England, 1700-1830* (Manchester: Manchester University Press, 2014).

²⁴⁵ Smith, *Wealth of Nations*, pp.109-11; Peter Mathias, *The First Industrial Nation: An Economic History of England, 1700-1914*, 2nd ed, (London: Methuen, 1983), pp.114-6.

‘cotton manufacturer’ is manufacturing. But a ‘cotton carder’ or a ‘cotton spinner’ is each carrying out one operation in a long sequence and has therefore been classified as a cotton worker involved in manufacture. Weavers, in all their forms, have been listed as artisans. Weaving is a specific craft with much tacit knowledge involved in the production of a piece of cloth with an even structure and tightness of weave and, at a higher level, the incorporation of colour and pattern. Such cloth is a definable product with multiple uses, and many weavers would specialise in producing a specific cloth. The database in this study identifies seventeen standardised weaver occupations, including broad, narrow, fustian, silk and stuff weavers (Appendix 2). But as noted above, they were often part of a Smithian distributed labour process, driven in West Yorkshire by the emerging woollen cloth manufacturing merchants.²⁴⁶ Therefore, there is a strong counter-argument to treat weavers as manufacturers. I have finally chosen the artisan designation because of the presence of many economically independent weavers who sold their cloth through open markets in such venues as the Halifax Piece Hall.²⁴⁷

In summary, I have taken Andrew Fincham’s sub-class structure as the basis of my classification but have used the class titles of Agriculture, Commerce, Artisan, Food, Manufacture, Other, Professional and Retail.²⁴⁸ These slightly modified class categories are also able to feed into the Cambridge PST system.²⁴⁹ Agriculture being classed as Primary, Artisan, Food and Manufacture as being Secondary and the remainder, Tertiary. The combination of occupations within the PST Secondary sector provides one advantage because

²⁴⁶ Mathias, *The First Industrial Nation*, p.115.

²⁴⁷ John Smail, ‘The Sources of Innovation in the Woollen and Worsted Industry of Eighteenth-Century Yorkshire’, *Business History*, 41.1 (1999), 1–16.

²⁴⁸ Fincham, ‘Origins of Commercial Success’, p.54.

²⁴⁹ Shaw-Taylor and Wrigley, ‘The Occupational Structure of England’, pp.8-12.

the tension between classifying an occupation as craft (artisanal) or manufacturing disappears as they are both concerned with material processing. There is one other issue though. Due to the nature of the 'Other' category, which contains the less easily definable occupational groups, most of which are small, there is the potential for misclassification when secondary analysis and classification are carried out; this is discussed below.

3.2 Occupational Analysis of Data

3.2.1 Basic Distribution of Occupations

The most basic analysis of the data is to examine the spread of classes of occupation. As described above, these classes are agriculture, commerce, artisan, food, manufacture, other, professional and retail, which were chosen as fairly representing spreads of work across differentiated classes and which allow some comparison with other studies. But before delving into the data it is sensible to comment on the Other category (which is analysed further at section 3.3.6) and assess the impact of potential problems which arise from the mixture of occupations within it. The Other class represents 4.7% of the total database, a figure which varies between 3½% and 5% through the century. The eleven primary sector workers, miners, included here are 0.11% of the total, and the five secondary sector workers are 0.05% of the total. In terms of the PST system the database contains 1,607 primary entries (15.8%), 5,363 secondary (52.7%) and 3,209 tertiary (31.5%), see Table 3.1.

Accounting for these distortions, the primary figure changes to 15.9%, the secondary does not change, and the tertiary reduces to 31.4%. Given the uncertainties elsewhere in the data, such as the position of the 610 Citizens of London discussed above and frequency of marriage

records where no occupation was disclosed, these changes are insignificant for the numerical conclusions, and the utility remains of the Other class to the qualitative discussion to follow.

Table 3.1 shows the distribution of Quaker occupations over the allotted classes, and their links to the Cambridge PST system. This is a summary of the whole database, so the total is the complete set of records recorded and the classes give the split of those people across their broad areas of work.

Table 3.1 - Occupational Spread in the Database, 1691 to 1809

Occupational Class	Number	%age	PST Class
Agriculture	1,607	15.8%	P
Artisan	2,709	26.6%	S
Commerce	1,142	11.2%	T
Food	804	7.9%	S
Manufacture	1,850	18.2%	S
Other	478	4.7%	T
Professional	173	1.7%	T
Retail	1,416	13.9%	T
Total	10,179	100.0%	

As these numbers are the total in the database, they represent the occupational activity of the identified Quakers who were active across England for the entire eighteenth century, a time of great change in social and economic conditions. For such a broad spread across time and distance, comments with reference to the broad categories of the PST system are more relevant than close detail. The primary sector of land-based employment, listed here as agriculture, but also noting the comments concerning mining from the Other section above, is just under 16% of the total. This is substantially less than suggested for that sector elsewhere for the population of England as a whole. Leigh Shaw-Taylor and Tony Wrigley suggest a

figure of around 55% of the male workforce occupied in agriculture in 1700, which drops to 40% in 1800.²⁵⁰ Before 1800 these are estimates for pre-census times and are therefore not based on solid evidence. The figure quoted for 1700 is derived from earlier work by Wrigley which draws upon and develops from earlier work by Nicholas Crafts and the contemporary original survey by Gregory King.²⁵¹

The data derived from King's work in particular is dependent on assumptions made concerning the proportion of labourers who are agricultural and the number of paupers. If we assume that half of King's labourers are agricultural (which is probably low given Wrigley's figure for an urban population in 1700 of 17% ²⁵²) and that half of the group of cottagers and paupers are engaged in agriculture (as Wrigley did), then the agricultural workforce drops to 51%. Looking at King's figures from another perspective, John Dodgson's more recent work suggests a contribution to the national income of 41% from agriculture.²⁵³ The figure in Shaw-Taylor and Wrigley for 1800 of 40% is based on the first census from 1801. It is clear from the above that Quaker employment in agriculture is considerably lower than that in the general population.

In carrying out a similar exercise for the secondary sector, that of processing materials, one of the great trends of the eighteenth century intrudes, that of industrialisation. For this analysis,

²⁵⁰ Shaw-Taylor and Wrigley, 'The Occupational Structure of England', p.5.

²⁵¹ Nicholas F.R. Crafts, 'The Industrial Revolution', in *The Economic History of Britain since 1700, Vol.1, 1700-1860*, ed. by Roderick Floud and Donald N. McCloskey (Cambridge: Cambridge University Press, 1994), pp. 44–59, specifically pp. 45, 46, Tables 3.1, 3.2; Gregory King, 'A Scheme of the Income and Expense of the Several Families of England, Calculated for the Year 1688', in *Essay upon the Probable Methods of Making a People Gainers in the Balance of Trade*, by Charles Davenant (London: James Knapton at the Crown, St. Pauls, 1699).

²⁵² E. Tony Wrigley, 'Urban Growth and Agricultural Change: England and the Continent in the Early Modern Period', *The Journal of Interdisciplinary History*, 15.4 (1985), p.688.

²⁵³ John Dodgson, 'Gregory King and the Economic Structure of Early Modern England: An Input–Output Table for 1688', *The Economic History Review*, 66.4 (2013), p.1012, Table 4.

artisans (small-scale craft makers) and industrial concerns (larger-scale manufacturers) both appear in the PST Secondary sector. At the beginning of the period there is less certainty about the manufacturing numbers. Holmes criticises King for including ‘thousands of master manufacturers’ in ‘shopkeepers and tradesmen’ as he had nowhere else to place them,²⁵⁴ and Lindert and Williamson used a figure of 170,000 households for manufacturing in their re-evaluation of King over the original figure of 60,000 artisans for manufacturing, building and mining.²⁵⁵ This figure of 170,000 households represents approximately 12% of the total, but as with agriculture above, there will be a contribution from cottagers, paupers and labourers. For the secondary sector this is likely to be lower than for the primary as processing materials requires some skill element, so we might estimate the contribution as 25% each of the labourers and cottagers/ paupers. The final secondary sector element to include is that of construction, which was not identified by King, but was split out by Lindert and Williamson.²⁵⁶ Noting these comments, the figures point to about 34% of households being involved in manufacturing and construction at the start of the eighteenth century.²⁵⁷ Dodgson’s view suggests that 31% of the national income arose from manufacturing.²⁵⁸ Shaw-Taylor and Wrigley suggest a secondary sector of a little over 40% in 1800 as a national figure for secondary sector employment – but with significant regional variations.²⁵⁹ Comparison of these figures with Table 3.2 suggests that the Quaker population was more

²⁵⁴ G. S. Holmes, ‘Gregory King and the Social Structure of Pre-Industrial England’, *Transactions of the Royal Historical Society*, 27 (1977), p.56.

²⁵⁵ Peter H. Lindert and Jeffrey G. Williamson, ‘Revising England’s Social Tables 1688–1812’, *Explorations in Economic History*, 19.4 (1982), 385–408, specifically p.388, Table 1.

²⁵⁶ Lindert and Williamson, ‘Revising England’s Social Tables’, p.388, Table 1.

²⁵⁷ The numbers used to derive this figure, and comparable percentages for the Secondary and Tertiary sectors discussed below are taken from Lindert and Williamson, ‘Revising England’s Social Tables’, p.388, Table 1, as above, and from Arkell, p.49, Table 5, (Tom Arkell, ‘Illuminations and Distortions: Gregory King’s Scheme Calculated for the Year 1688 and the Social Structure of Later Stuart England’, *The Economic History Review*, 59.1 (2006), 32–69). The figures for King’s scheme agree in both sources but differ in minor details of presentation.

²⁵⁸ Dodgson, p.1012.

²⁵⁹ Shaw-Taylor and Wrigley, ‘The Occupational Structure of England’, p.25.

involved in manufacturing at the start of the century than the general population, but that the changing dynamics on a national scale had narrowed, but not closed, the gap by the end of the century.

The tertiary sector of service provision was an area of great expansion in the eighteenth century. Figures for the opening period, again based on King, suggest a proportion of around 7%, made up of merchants and shopkeepers and seamen, who provided transport services. There is room for discussion here. The transport sector grew hugely over the century as the turnpike road and canal system became operational, leading to the carriage of more goods and the specialisation of the labour force in such carriage. Therefore, the inclusion of a proportion of the 'labourers' should be considered. If 50% of the labourers are added, which is likely to be a generous assumption when taken in tandem with the assumptions made above, then this would add 5-7% onto the tertiary share, depending on the analysis of King used. Towards the end of the century, Shaw and Wrigley suggest a rise from 13% of the workforce in 1750 to 18% in 1800.²⁶⁰ These proportions suggest that either a significantly lower proportion of labourers worked in the transport sector, or that they were not counted in the analysis. The Quaker proportion of 20% in Table 3.2 is therefore marginally ahead of the general population in this broad analysis.

3.2.2 Changes Over Time

Table 3.2 shows the distribution and changes over time of the major occupational classes in this study's data. As specified previously, each cohort consists of data for the 10-year

²⁶⁰ Shaw-Taylor and Wrigley, 'The Occupational Structure of England', p.27

periods 1706-15, 1746-55 and 1786-95 inclusive. While clear and visible changes are discussed below, these individual sample sizes are not large, so no formal statistical analysis is presented due to the size of the error bars that would be generated. The percentages add up to 100% for each cohort column, thus the 375 artisans in the 1710 cohort are 30.5% of that cohort. The total numbers are the number of records found for that cohort – the pattern of lower numbers of recorded marriages in the middle of the century was discussed in chapter 2. For the cohort data in this chapter, the records have been further cleaned to remove individuals who married twice in the ten-year span covered by the cohort but did not change occupation.

Table 3.2 - Percentage of Classes of Quaker Occupation through the Eighteenth Century

Occupational Class	PST Class	1710		1750		1790	
		No.	%age	No.	%age	No.	%age
Agriculture	P	207	16.8%	67	12.9%	117	15.4%
Artisan	S	375	30.5%	144	27.6%	168	22.1%
Commerce	T	107	8.7%	56	10.7%	83	10.9%
Food	S	102	8.3%	59	11.3%	53	7.0%
Manufacture	S	218	17.7%	98	18.8%	159	20.9%
Other	T	58	4.7%	26	5.0%	26	3.4%
Professional	T	20	1.6%	8	1.5%	19	2.5%
Retail	T	144	11.7%	63	12.1%	134	17.7%
Total		1,231	100.0%	521	100.0%	759	100.0%

The clearest visible change is the 28% reduction in artisans over the century from a 30½% proportion in 1710 to 22% in 1790. This is consistent with the changing face of society with the onset of the industrial revolution and the beginnings of the consumer society. Some of this fall is no doubt due to changes in description of some Quakers from artisan to manufacturer as they changed their ways of working. The introduction of divided and

mechanised processes allowed goods to be produced that were much more reproducible in terms of shape, size and detail. A set of crockery could now all look the same.²⁶¹ Such close similarity between each piece was new and much prized – the rise of ‘imperfect’ artisan-produced pieces was not to be seen again until the turn of the twentieth and twenty-first centuries.²⁶² Alongside production in specialised ‘manufactories’ came the rise of the retailer, who acted as the middle man between manufacturer and consumer, and the best of whom were experts in their field and were able to educate consumers as to what was becoming available.²⁶³

Secondly, the rise in the activity in the tertiary sector needs to be recognised. The obvious connection between this and the fall in craft activity is the increase in retail activity, which as I have indicated is representative of a change in social behaviour. Although small in absolute terms, the rise in Quaker participation in the professions is a large change – from 1.6% in 1710 to 2.5% in 1790 is a change of 56% which is bigger than the 50% change in retailers. The third component of the PST Tertiary sector, commerce, also saw a 28% rise in its share of the Quaker workforce over the period.

In summary, in terms of the Cambridge PST system, Quakers in work who were prepared to have their occupation declared were significantly less likely to work in the Primary sector (mainly agriculture, but also mining in some regions) and were more likely to be involved in craft and manufacture and commerce.

²⁶¹ Smith, *Material Goods*, pp.88-104.

²⁶² For example, *The Economist* in 2014 reported on the growth of specialist sales of artisanal goods – ‘The Art and Craft of Business; Artisanal Capitalism’, *The Economist*, 410.8868 (2014), 50–51.

²⁶³ Smith, *Material Goods*, pp.70-74.

3.2.3 Comparison with the Fincham Classification

At this point it is useful to consider comparisons with Andrew Fincham's recent work.²⁶⁴ His work assessed the importance of commerce to the Quaker movement and postulates that some commercially minded Friends were led to membership of the Society by the advantages offered by a tight-knit economically literate network.²⁶⁵ For his purposes he used a different high-level classification, collecting the eight classes from above into three 'superclasses'. This is my terminology – he used 'class' and 'sub-class' which are my 'superclass' and 'class'. His concentration on commerce and commercial aspects drove the different groupings. Table 3.3 contains the data from Table 3.2 but re-analysed into Fincham superclasses. Fincham concluded that Quaker involvement with commerce was a steadily increasing trend across the century, and that it was accompanied by a decreasing trend for Quakers to be working as artisans. He further suggested that his data supported the contention, following Raistrick, that Quakers are more likely than the general population to be making a living from commercial activity.²⁶⁶ The discussion above where the present studies figures are analysed in comparison with the Shaw-Taylor Wrigley study likewise supports such a conclusion.

²⁶⁴ Fincham, 'Origins of Commercial Success'.

²⁶⁵ Fincham, 'Origins of Commercial Success', pp.270-72.

²⁶⁶ Raistrick, *Quakers in Science and Industry*, pp.28-30.

Table 3.3 - Percentage of Superclasses of Quaker Occupation through the Eighteenth Century

Occupational Superclass		1710	1750	1790
<i>Commerce</i>		38.1%	41.7%	49.5%
	Commerce	8.7%	10.7%	10.9%
	Manufacture	17.7%	18.8%	20.9%
	Retail	11.7%	12.1%	17.7%
<i>Craftsmen</i>		38.7%	39.0%	29.1%
	Craftsman	30.5%	27.6%	22.1%
	Food	8.3%	11.3%	7.0%
<i>Other</i>		23.1%	19.3%	21.3%
	Agriculture	16.8%	12.9%	15.4%
	Other	4.7%	5.0%	3.4%
	Professional	1.6%	1.5%	2.5%

The major difference from the process-based analysis above (in section 3.2) that this pattern of thinking introduces is that manufacturing is regarded as a commercial or money-driven process rather than as a material-processing operation. It then becomes more important to consider the interface between artisanal craft and manufacturing. It is a fine line between taking an occupation as a craft, or as part of a manufacturing process. I have discussed above my philosophy for distinguishing the two sectors, a craft being the production of a finished product, essentially by manual labour, and a manufacturing process involving multiple steps, and/or the use of equipment to a greater extent than hand tools. For Fincham's analysis this is a significant difference due to the presence or not of a commercial element. The craftsmen are selling their products, but Fincham's scheme asserts this as non-commercial. This is defensible as ultimately a craftsman (or artisan) is selling his skill, and a higher skill level would be expected to command a higher price for more desirable products. Manufacturing is deemed to contain a commercial element, and the twin strands of organisation and financing of a supply chain for raw materials, or components, and sourcing capital for machinery and premises clearly form a commercial operation with a need to persuade third parties to provide

risk capital – even if this is merely trade credit. But the consideration as to where the crossover point between the two sectors occurs is likely to contain a high element of opinion.

Fincham bolsters his case by presenting figures for Commerce plus Food. The Food sector is another one that is difficult to classify. Here the idea of scale is in the transition from ‘craft’ to ‘commercial’. Flour mills have always been relatively capital-intensive items of plant, but as transport improves and urban populations increase, it is easy to see the possibilities for increasing the scale of your mill and reducing costs while being able to ship the larger amount of product into the concentrated markets of the growing towns and cities. Similar arguments can be made for the emergence of industries such as urban wholesale abattoirs.²⁶⁷

However, the comments above cannot disguise that Fincham’s population is over-represented in the secondary and tertiary PST classes because of the inclusion of manufacturing and food processing as commercial activities.

3.3 Individual Classes of Occupation

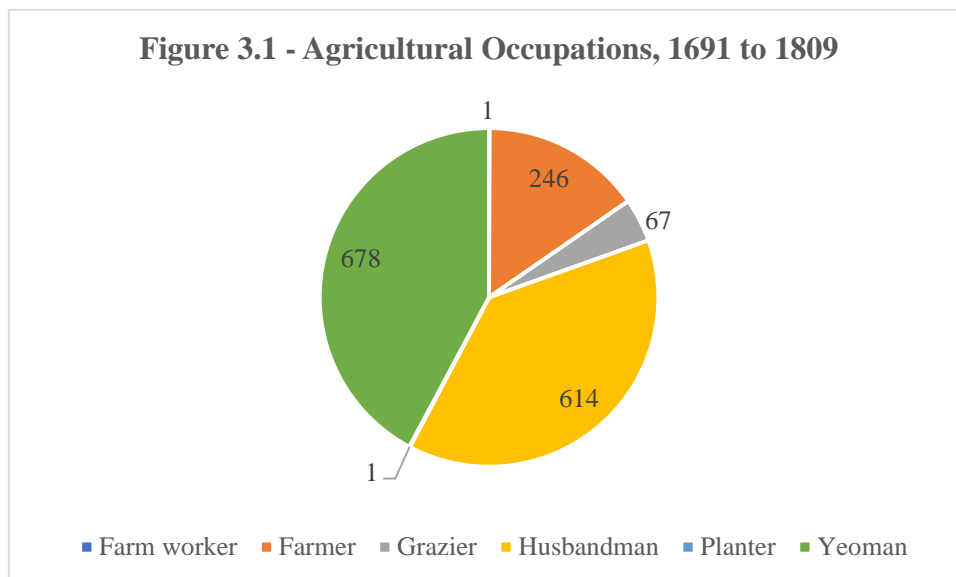
3.3.1 Agriculture

The agricultural sector contains 15.8% of the total database (1,607 entries, Table 3.1). This proportion varies slightly over the century, as can be seen in Table 3.2. Chapter 4 will go into these variations in more detail as part of the geographic analysis. Agriculture, though a large part of the economy even at the end of the eighteenth century, is relatively straight-

²⁶⁷ My own family were Worcestershire butchers who moved to the outskirts of the Black Country and set up and operated an abattoir. The business was sold when one brother was not willing to work with the other because of his work ethic and racy lifestyle.

forward to analyse. Figure 3.1 and Table A4.1 (in Appendix 4) show the occupations declared and the proportions for the whole century. The single farm worker is hardly visible.

The agricultural sector represents a shade under 16% of the database (Table 3.2) and contains both plant- and animal-based activities. The proportion of agricultural occupations dipped in the middle of the century to approximately 13% but rose again at the end. However, as discussed in chapter 2, the 1750 cohort is smaller than at either end of the century, so the mid-century dip is possibly a reflection of the reduced representation in the database.



Of the occupations given, Farmer, Husbandman and Yeoman are all involved in general farming. Farmer appears to be a newer term for the activity. Graziers raised animals, normally cattle or sheep. It is noteworthy that only one farm worker was recorded, though we can be sure that some of the labourers in the 'Other' category were working in agriculture. The planter was also noteworthy, planters having connotations of being involved in colonial agriculture with the possible use of slaves. The planter's marriage was recorded in 1701 in

London, though his location was given as Maryland. Maryland was not a hotbed of slavery use at that time, but there was slave ownership, and the prevalence of slavery was increasing.²⁶⁸ There was not yet widespread opposition to slavery in the Quaker movement in the early 1700s; William Penn still owned slaves in 1700.²⁶⁹ Table 3.4 reveals the movements in the occupational distribution over time, including the rise of the descriptors Farmer and the Grazier, using the cohort system described for Table 3.2. It includes the database numbers from Table A4.1 for completeness.

Table 3.4 - Analysis of Agricultural Sector Occupations through the Eighteenth Century								
Occupation title	Cohort	1710		1750		1790		Title total
	Database count	No.	%age	No.	%age	No.	%age	
Farm worker	1							
Farmer	246	14	6.7%	8	11.8%	34	30.3%	58
Grazier	67	2	1.4%	1	2.9%	14	11.8%	19
Husbandman	614	89	42.8%	27	39.7%	29	24.4%	145
Planter	1							
Yeoman	678	102	49.0%	31	45.6%	40	33.6%	173
Totals	1,607	207	100%	67	100%	117	100%	391

Yeoman and husbandmen are differentiated by status and scale. The yeoman was a staple of the English countryside, the term having been used for several centuries, although often imprecisely defined.²⁷⁰ They were a layer of non-gentry landowners, who carried connotations of worth and standing, dependable virtues and rooted attachment to their locality and an unchanging social order. Precise definition of yeoman status is difficult, land

²⁶⁸ Demetri D. Debe and Russell R. Menard, 'The Transition to African Slavery in Maryland: A Note on the Barbados Connection', *Slavery & Abolition*, 32.1 (2011), 129–41.

²⁶⁹ Murphy, *William Penn*, pp.268-9.

²⁷⁰ Mildred Campbell, *The English Yeoman under Elizabeth and the Early Stuarts*, (New Haven, CT: Yale University Press and London: Humphrey Milford; 1942), Yale Historical Publications: Studies, 14.

holdings of 50-100 acres is a common figure given for an economic definition but the identification of them as a status group is key.²⁷¹ Their status yeoman meant that he would be likely to be taking part in local administration in positions such as a constable.²⁷² Husbandmen were inferior to yeomen, socially and economically. They may have owned land or been a tenant but were normally farming a smaller acreage than yeomen. They aspired to make surpluses in good years, but a bad year could force them into taking waged work.²⁷³

Clearly there is overlap between yeomen and husbandmen, and between yeomen and minor gentry. This is reflected in the possibility of social mobility. Although mobility was possible for husbandmen, the structure of society meant that an upward move was probably easier for a yeoman.²⁷⁴ Generally, the long-established status of the yeoman family protected them from relegation to husbandman and their larger landholding generated surpluses above the needs of his family. Combining this with entrepreneurial skills, which were commonly seen in independent farmers and businessmen in the changing times of the eighteenth century, allowed yeomen to become wealthy.²⁷⁵ The benefits this wealth in increased lands and the ability to put younger sons into the emerging professions allowed these yeomen to make the transition to gentility as the opportunities became more open to those with wealth.²⁷⁶

²⁷¹ John K. Walton, 'The Strange Decline of the Lakeland Yeoman; Some Thoughts on Sources, Methods and Definitions.', *Cumberland and Westmorland Antiquarian and Archaeological Society Transactions*, 2, 86 (1986), p.225.

²⁷² Keith Wrightson, *English Society 1580-1680*, (London: Routledge, 2003), pp.28-9.

²⁷³ Wrightson, *English Society*, pp.39-41.

²⁷⁴ Wrightson, *English Society*, p.35.

²⁷⁵ Wrightson, *English Society*, p.143.

²⁷⁶ Wrightson, *English Society*, pp.34, 35.

A yeoman may well be farming on a smaller scale than a more competent and ambitious neighbouring husbandman. Due to their smaller landholdings husbandmen produced smaller surpluses than yeomen and so they were more at risk from reductions in yields from bad weather or other external influences. English agriculture changed during the eighteenth century with the ongoing spread of enclosure and the introduction of improvements relating to crop rotation, stock breeding and machinery.²⁷⁷ Of particular interest to this study was the introduction of improved ploughing technology by Robert Ransome, an East Anglian Quaker foundryman.²⁷⁸ These changes are still controversial, as although there were economic benefits, the benefits largely accrued to the enclosers rather than the people who previously worked the land.²⁷⁹ Hence loss of income to a husbandman, be it from bad weather, increased rents or enclosure of his land, could easily be drawn into some reliance on the wages from labouring work. But it was possible for a competent husbandman to attain yeoman status, particularly in a village environment where status and participation depended more on comparative wealth.²⁸⁰

The enclosure movement (above) was a major change in English agriculture, which when coupled with the traditional English system of a relatively open market in land,²⁸¹ led to many larger landowners appearing, and many smaller ones disappearing.²⁸² This considerable change in the English agricultural landscape may have impacted this study by the increased frequency of the appearance of the Farmer designation later in the century.

²⁷⁷ Ackroyd, *Revolution*, pp.42-5.

²⁷⁸ Raistrick, *Quakers in Science and Industry*, pp.210-12.

²⁷⁹ For example Donald N. McCloskey, 'The Enclosure of Open Fields: Preface to a Study of Its Impact on the Efficiency of English Agriculture in the Eighteenth Century', *Journal of Economic History*, 32.1 (1972), 15–36.

²⁸⁰ Wrightson, *English Society*, pp.43-5

²⁸¹ Walton, 'The Strange Decline', p.222.

²⁸² John V. Beckett 'Decline of the Small Landowner in Eighteenth- and Nineteenth-century England: some Regional Considerations', *Agricultural History Review*, 30.2 (1982), pp.97-100.

This suggestion is supported by Walton in his study of the decline of the yeomanry in Cumbria.²⁸³ Cumbria was late to the agricultural revolution, changes not occurring until the first half of the nineteenth century. He posits the problem as identifying whether the observed decline in yeomen numbers was due to an actual decline in the number of smaller farmers, or whether it was due to them using a new name. He concludes that the local directories show that it was younger farmers who were still operating, but who were using the designation Farmer rather than Yeoman, which was being increasingly seen as archaic. Thus, the supposition that the use of the designation Farmer as a sign of modernity is reasonable. Such an argument could potentially be made for the rise of Grazier too.

3.3.2 Commerce

Commerce was a growth sector in the eighteenth century as the British economy quickened its transition from the agrarian/proto-industrial state that existed in 1700 to the accelerating mechanised industrial society extant in 1800.²⁸⁴ Fincham's work concentrates on the commercial drive within the Society of Friends in this period, showing the importance of rising levels of commercial instincts within society as a whole.²⁸⁵ The emergence of financial systems and institutions was a significant component of the background of social development through the century.²⁸⁶ Thus, the proportion of Quakers involved in the sector is interpretable as an influential and dynamic part of the pattern of Quaker occupations. Figure 3.2 and Table A4.2 provide a consolidated view of this sector, which has a total of 1,142 recorded occupations (see Table 3.1).

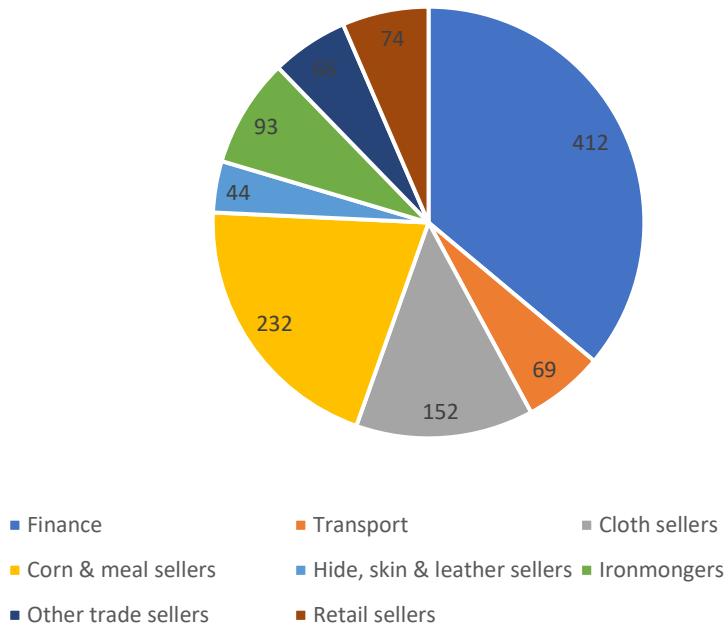
²⁸³ Walton 'The Strange Decline', pp. 225-31.

²⁸⁴ For example Mokyr, *Enlightened Economy*.

²⁸⁵ Fincham, 'Origins of Commercial Success'.

²⁸⁶ For example see Carlos and Neal, 'Amsterdam'; Zahedieh, 'The Capital and the Colonies'.

Figure 3.2 Commercial Occupations, 1691 to 1809



When discussing the classification of occupation, I gave, in section 3.2.3, the rationale of the commerce sector as being one where money is the driver of the business rather than skill or production. Here we have a direct finance sub-sector comprised mainly of merchants who were raising finance to trade goods or commodities. We also find the nascent sector of Quaker bankers here. Transport is a newly developing sector supporting a changing society by moving goods and commodities around. At this time it is dominated by maritime transport, but also contains some lightermen (the unloading of ships also being unorganised at this time). I have treated cloth sellers as sellers to trade as most cloth is then turned into other goods, such as clothing. Similarly, I saw corn and meal sellers as selling to trades such as bakers, and the skin trade as selling to product makers. Eighteenth-century ironmongers

sold iron to smiths and metal processors. In an economic development akin to the ‘putting out’ system in the textile trade, some higher-level iron mongers might have also bought small iron goods such as nails from their bar iron customers for further retail distribution, hence beginning the transition to the modern ironmonger as a retail general hardware seller. S. R. H. Jones refers to such a distribution method in the Midlands needle industry even back into the late seventeenth century.²⁸⁷ This description ties in with the Cambridge PST picture of a developing economy beginning its move to becoming a service-dominated tertiary phase one.

Table 3.5, in a similar fashion to Table 3.4, provides an analysis of the occupation pattern through time of commercially oriented eighteenth-century Quakers, again using the cohort system previously described.

Table 3.5 - Analysis of Commercial Sector Occupations through the Eighteenth Century								
Occupation title	Cohort	1710		1750		1790		Title total
		Database count	No. %age	No. %age	No. %age	No. %age	No. %age	
Finance	412	32	29.9%	17	30.4%	29	34.9%	78
Transport	69	16	15.0%	3	5.4%	1	1.2%	19
Cloth sellers	152	18	16.8%	9	16.1%	6	7.2%	33
Corn & meal sellers	232	18	16.8%	16	28.6%	25	30.1%	60
Hide, skin & leather sellers	44	5	4.7%	0	0.0%	7	8.4%	12
Ironmongers	93	8	7.5%	4	7.1%	8	9.6%	20
Other trade sellers	66	6	5.6%	2	3.6%	1	1.2%	11
Wholesalers	74	4	3.7%	5	8.9%	6	7.2%	15
Totals	1,142	107	100%	56	100%	83	100%	248

²⁸⁷ S. R. H. Jones, ‘The Development of Needle Manufacturing in the West Midlands before 1750’, *The Economic History Review*, 31.3 (1978), 354–68.

Table 3.2 showed that the proportion of Quakers involved in commerce rose from 9% to 11% as the century progressed. However, the detail of Table 3.5 shows an increase in occupations directly handling money over those other services, notably transport, which are not so directly related to customer cash. The transport sector is largely made up of Master Mariners (44 of 69) and Boatmen (19). Of the 19 boatmen, 16 were married before 1720 and of those 16, 15 were located in London. If we surmise that they were operating across the Thames, then the reduction of their sector is explicable by the building of more bridges across the river. Hannah Stockton notes that six bridges were built across the Thames in the century from 1730 to 1830.²⁸⁸ I suggest that the construction of the first two of those (Westminster in 1736 and Blackfriars in 1756) would have impacted the ferry trade in the area of the City of London and therefore been a factor in the reduction of the number of boatmen. She notes that the building of further bridges at Vauxhall, Waterloo and Southwark in the early nineteenth century led to compensation being paid to boatmen.²⁸⁹ Consideration of the Master Mariners is not so straightforward. Of the 44 all but one appear at or before 1755, and of those 43, 40 were based in Yorkshire and 1 in Durham. At this time, Simon Ville claims that moving coal from the North-East of England to fuel London was a (if not the) major transport operation in England.²⁹⁰ But this was not a declining trade. Even though other coal fields such as Shropshire were opening up, the North-East coal to London trade doubled in size through the century.²⁹¹ One possibility to explain the declining Quaker participation in such a successful trade was its interaction with the military. This was

²⁸⁸ Hannah Stockton, 'Redesigning the River: Bridge-building on the London Thames 1730–1830', *Area*, 51.1 (2019), 7–13.

²⁸⁹ Stockton, 'Redesigning the River', p.10.

²⁹⁰ Simon Ville, 'Total Factor Productivity in the English Shipping Industry: The North-East Coal Trade, 1700–1850', *The Economic History Review*, 39.3 (1986), p.357.

²⁹¹ William J. Hausman, 'A Model of the London Coal Trade in the Eighteenth Century', *The Quarterly Journal of Economics*, 94.1 (1980), 1–14.

because of its reputation as a source of trained sailors for the Royal Navy and also because of the periodic need to interact with the navy (especially during the episodes of war which occurred when merchantmen needed to engage in defensive action against attacking warships).²⁹² A second factor is the interest of Quakers in emerging technologies. A little later in 1825, the north-eastern Quaker Backhouse and Pease families made up a majority of the opening management committee of the Stockton and Darlington Railway Company.²⁹³

The two sectors where Quakers have the largest representation are Finance and Corn & meal sellers. Quaker bankers are well recognised for their contributions to a new sector of financial support for internal trade and industry (within the United Kingdom).²⁹⁴ They emerge as a group in the data in the latter quarter of the eighteenth century, although the first appearance of ‘banker’ is 1728. The larger group in the Finance sector is merchants (93% of the whole). They are in evidence throughout the century and appear across the country, although a London & Middlesex location is predominant. Most are described simply as a ‘merchant’, providing little clue as to what they trade in, although there are those who disclose membership of a city livery company – a number of members of the prestigious Merchant Tailors are seen. Corn & meal sellers are a self-explanatory group, being Quakers who are involved in selling corn or flour and other meals (such as oatmeal). This is a sector where crossover with the Food grouping is likely, discussed below, because there will be individuals who have described themselves as a ‘seller’ but who are selling direct from a mill. These dealers are overwhelmingly based in the arable agricultural areas of the southern part of

²⁹² Ville, ‘Total Factor Productivity in the English Shipping Industry’, p.357; Hausman, ‘A Model of the London Coal Trade’, p.8.

²⁹³ Maurice W. Kirby, *The Origins of Railway Enterprise: The Stockton and Darlington Railway, 1821-1863* (Cambridge: Cambridge University Press, 1993), p.184.

²⁹⁴ Raistrick, *Quakers in Science and Industry*, pp. 319-33; Windsor, *Quaker Enterprise*, pp.21-4; Paul H. Emden, *Quakers in Commerce: A Record of Business Achievement* (London, 1940), pp.97-107.

the country and, although present throughout the century, become more common in the latter years.

The small Wholesale sector is composed of sellers who are not seen to be selling into further trade or manufacture and who, from their original, pre-standardised, descriptions are not obviously just retailers.

This section demonstrates the increasing involvement of Quakers over the eighteenth century with what is now regarded as ‘pure’ commercial activity – finance and commodity trading, a sector that is a badge of a developing economy.

3.3.3 Artisans

The artisan section of Quaker employment is the largest of the sectors defined here, with 2,709 records (Table 3.1). Table 3.2 indicates that the proportion of declared occupied Quakers declined from 30½% to 22% over the century. This is a substantial group of people. The qualities required to be a successful artisan are manual skill and dexterity, an eye for design, a level of commerciality and some ability to organise and administer – combining to provide the ability to make attractive, sound goods and to be able to manage the business side. These attributes can be tied to those ascribed to Quakers and other non-conformists: they are people who think about their religion, who are open to new ideas and are prepared to act on them, sometimes at some risk to themselves.

Figure 3.3 and Table A4.3 show the range of activities that Quaker artisans were involved in. There is a clear leaning to working with textiles, the 663 weavers are notable, while 525 of the 913 clothing records are shoemakers. Even so, that gives 1,051 people listed as making cloth or using it, which is 39% of the total of 2,709 artisans listed (Table 3.1). Some of the groups are much more homogenous than others. Clockmakers, Coopers and Weavers are all single occupations. Clothing and shoemaking covers shoemakers, tailors and glovers as major constituents, but also some milliners.

To understand the grouping, it is necessary to look more deeply. Table 3.6 gives an analysis of changes over time using similar data cohorts as above.

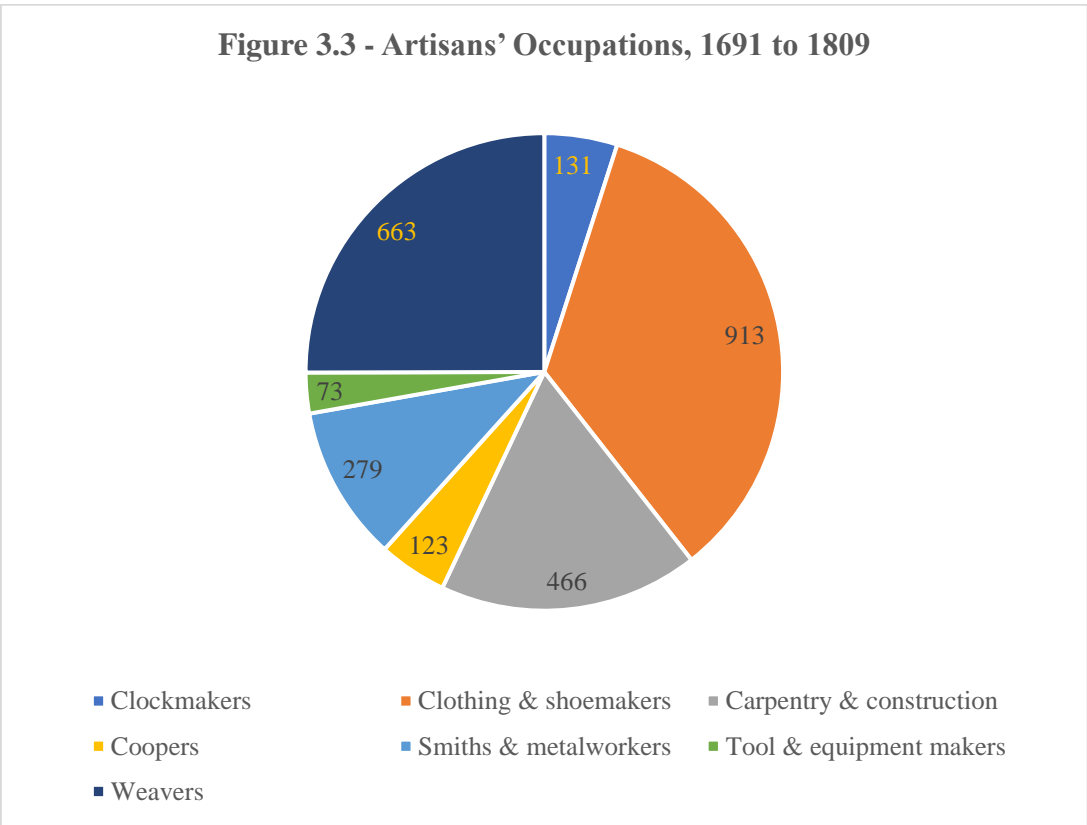


Table 3.6 - Analysis of Artisan Sector Occupations through the Eighteenth Century

Occupation title	Cohort	1710		1750		1790		Title total
	Database count	No.	%age	No.	%age	No.	%age	
Clockmakers	131	11	2.9%	7	4.9%	22	13.1%	40
Clothing & shoemakers	913	123	32.8%	50	34.7%	56	33.3%	229
Carpentry & construction	466	66	17.6%	25	17.4%	38	22.6%	129
Coopers	123	18	4.8%	2	1.4%	3	1.8%	23
Smiths & metalworkers	279	39	10.4%	16	11.1%	30	17.9%	85
Tool & equipment makers	73	3	0.8%	1	0.7%	7	4.2%	11
Weavers	663	112	29.9%	40	27.8%	9	5.4%	161
Sundry	61	3	0.8%	3	2.1%	3	1.8%	9
Totals	2,709	375	100%	144	100%	168	100%	

Looking at Clothing & shoemakers we can see that the proportion of the cohort remained steady at around 33%, but the detail shows that there has been a shift from tailoring to shoemaking. In the 1710 cohort there were 64 shoemakers and 42 tailors (52% and 34%, respectively); by 1790 the proportions had changed to 75% and 16%. We can see in all the tables in this chapter that the absolute numbers of occupied Quakers decline over the century, and for these two groups shoemakers dropped from 64 to 42 and tailors from 42 to 9. This suggests a move away from tailoring within the Society of Friends. John Hall was a Yorkshire tailor who later in life eschewed the use of lace and other fripperies.²⁹⁵ There is also a subgroup of glovers within the Clothing & shoemaking group in the cohorts above. The proportion of Glovers remained stable across the century at between 8% and 11% of the total, but their distribution changed from being spread around the country to being concentrated in Worcester, which had become the centre of the English glove trade in the later eighteenth century – this will be looked at in more detail in chapter 4.

²⁹⁵ Raistrick, *Quakers in Science and Industry*, pp.41-2.

Staying with a theme of textiles, there is a noticeable drop in the proportion and number of weavers over the century, and especially in the latter part of it. This is highly likely to be a reflection of the early impact of the industrial revolution as the textile industry was the early adopter of the characteristic organisational and technological changes. As the textile industry moved into centralised factories and water and steam-powered machinery came into use, the number of self-employed artisan weavers would fall.

Within Carpentry & construction the proportion employed was higher at the end of the century than at the beginning (23% and 18%, respectively). Within the grouping there are two main subgroups of woodwork and building and fitting and a third section of specialist wheelwrights. Woodwork was stable at just below 60% of the section, although with a higher figure in the middle of the century where the sample was smaller but building rose and wheelwrights fell. House building was another area of eighteenth-century change. Fire was a severe problem in urban environments, which led to two notable changes in the built environment. The first was the emergence of fire insurance, and the second was the move to brick chimneys.²⁹⁶ A factor in the latter development was the adoption of coal burning in houses instead of wood, which William Haussman claims took place early in the eighteenth century.²⁹⁷ Coal burns hotter than wood and with a different quality of smoke. Consequently, it was not until fireplaces and chimneys designed for the new fuel were introduced that the full benefits were realised. Brick chimneys reduced the risk of fire-related accidents, and new scientific thinking produced better chimney and fireplace

²⁹⁶ Robin Pearson, *Insuring the Industrial Revolution: Fire Insurance in Great Britain, 1700-1850* (Aldershot: Ashgate, 2004); David Pickles, 'Energy Efficiency and Historic Buildings: Open Fires, Chimneys and Flues' (Historic England, 2016), pp.3-4.

²⁹⁷ Hausman, 'A Model of the London Coal Trade', p.1.

designs.²⁹⁸ Such improvements in building design are likely to have stimulated demand in the construction sector, especially as the ideas spread from London through the country.

The last significant section under artisans is that of Smiths & metal workers. There are two factors of interest here. The first is the inclusion of three subgroups: blacksmiths, other smiths and other skilled artefact makers. Blacksmiths worked with forged iron (and latterly steel), other smiths work with non-ferrous metals such as gold, silver or pewter, and the final section are mostly blade makers. In the early part of the century, blacksmiths (49%) were more prevalent than other smiths (41%), but this decreased with time. The non-ferrous smiths' share held up better, but at the end of the century the blade makers (particularly cutlers) were the majority with a 63% share of the cohort. I noted above in the Commercial sector discussion that ironmongers also became more prevalent in the later part of the century, and these two observations tie in with the increasing per capita use of iron over the century from 5kg/head to 8kg/head per annum.²⁹⁹

Clock makers and Coopers cover single occupations. There were 131 clock and watch makers spread across the country and the century, which was 4.8% of the complete database. As with other occupations that were technical and appealed to those with the rising standards of living that were ushering in the consumer society, participation rates rose in the latter years of the period. For the 123 coopers (4.5% of the database) identified, it was a different story. Quaker participation in this trade was highest in the early part of the century and dropped to 1.8% of the 1790 cohort analysed. It is not easy to see any good reason for this unless it is an

²⁹⁸ Pickles, *Energy Efficiency*, pp. 3-4; Benjamin Count of Rumford, *An Essay on Chimney Fire-Places with Proposals for Improving Them, to Save Fuel; ... Illustrated with Engravings* (Dublin, 1796).

²⁹⁹ King, 'Production and Consumption', p.23.

exaggerated reflection of the trend in Table 3.2 where the craft sector as whole was diminishing.

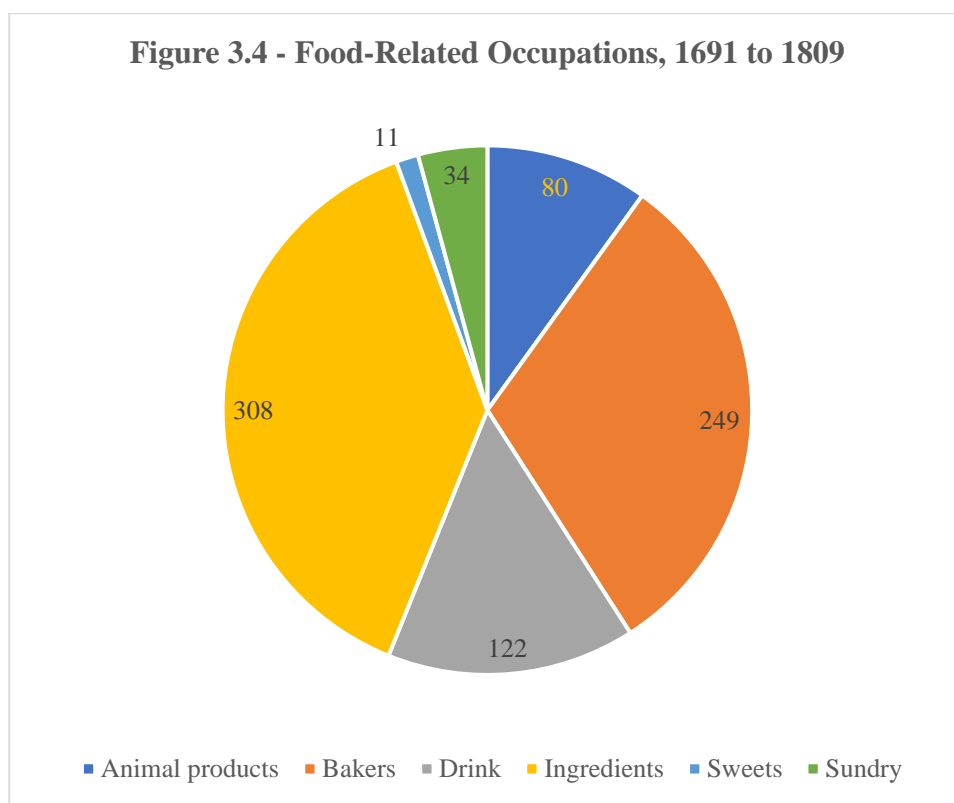
The final two sections of artisans are Tool & Equipment Makers and Sundry Artisans. Taken together, these two groupings form 5% of the total. The three significant occupations included are basket makers (1.2% or 32 entries), brush makers (0.5% or 14 entries) and upholsterers (0.6% or 16 entries). There is a tendency for the proportion to increase with time, but the samples are small. Of some interest is the inclusion amongst tool manufacturers of Daniel Doncaster, a file smith. His business developed into the internationally renowned firm of Doncasters Group, a supplier of high precision cast and forged components to the aerospace and allied industries.³⁰⁰

Artisan work was very popular with Quakers through the century, although the proportion did fall from 30½% to 22% over the period – possibly due to some artisans becoming manufacturers in the later years. Clothing & footwear was a big sector throughout, but highly skilled arts such as clockmaking and bladesmithing grew noticeably. The Quaker weavers were an evident casualty with their proportion falling with time, an indication of the industrialisation of the textile industry.

³⁰⁰ Ian Dillamore, *An Industrial Evolution* (Brighton: CompletelyNovel, 2014); ‘*Our History – Doncasters*’ <<https://www.doncasters.com/our-history/>> [accessed 26 May 2023].

3.3.4 Food

Following the format used in previous sections, Figure 3.4 and table A4.4 summarise the spread of the 804 Quakers occupied in the food sector. With a total number of records of 804, which is 7.9% of the total (see Table 3.1), the food sector is not one of the largest in the database.



Those concerned with Animal Products cover butchers and those working with poultry, fish and dairy produce, with butchers providing more than half of the class. The two major classes are Bakers, which is a homogenous class (single occupation), and Ingredients, within which maltsters (58%) and millers (40%) provide the bulk of the class. Concerning alcohol, and the widely held view of Quaker opposition to it, it is interesting to note the significant

contribution of brewers and distillers to the population. However, the standard of water cleanliness in the eighteenth century meant that beer drinking was a safer, and very widespread, alternative. Pamela Sambrook discusses this in her study 'Country House Brewing'.³⁰¹ One of the few things known by the populace at large concerning Quakers is their strength in the early chocolate industry through the Cadburys and Rowntrees. These industrial concerns are of the nineteenth century, but even so it is a little surprising to see the small number of eighteenth-century Quakers involved in confectionery and sweet foods. The relevant entry in this study for the Cadburys is that of Richard's marriage in 1796. He is listed as a draper, but it is his son who was the first to enter the food business in the first quarter of the nineteenth century.³⁰² The Rowntree chocolate business grew out of the Tuke grocery business in York founded by Mary in 1728, with the Rowntree name appearing in 1860 when William Tuke transferred his tea business to London, leaving the cocoa and chocolate beverage department in York in the charge of its manager, Henry Rowntree.³⁰³ In 1728 Mary, as a woman, was a rarity in the York commercial world and had to struggle to be recognised as a fit person to be allowed to trade in the closed world of an incorporated borough. Thus, in the period of this study we find Mary Tuke, a shopkeeper marrying in 1733 and Henry Tuke, a tea dealer, marrying in 1781.

There were changes in the pattern of food related occupation through the century, and these are illustrated in Table 3.7, with the same analyses as previously. The clearest changes over time are the decreases in involvement with animal products and ingredients (essentially

³⁰¹ Pamela Sambrook, *Country House Brewing in England 1500–1900* (London: Bloomsbury Academic, 1996).

³⁰² Windsor, *Quaker Enterprise*, pp.78-9.

³⁰³ Windsor, *Quaker Enterprise*, pp.126-9.

maltsters and millers) and the increase in bakers. The eighteenth-century flour and bread market in England was complicated.

Table 3.7 - Analysis of Food Related Sector Occupations through the Eighteenth Century

Occupation title	Cohort Database count	1710		1750		1790		Title total
		No.	% age	No.	% age	No.	% age	
Animal products	80	15	14.7%	6	10.2%	1	1.9%	22
Bakers	249	28	27.5%	21	35.6%	23	43.4%	72
Drink	122	10	9.8%	9	15.3%	8	15.1%	27
Ingredients	308	45	44.1%	21	35.6%	18	34.0%	84
Sweets	11	1	1.0%	0	0.0%	2	3.8%	3
Sundry	34	3	2.9%	2	3.4%	1	1.9%	6
Totals	804	102		59		53		

The population shifted from country to town,³⁰⁴ and agricultural practices changed as enclosure continued.³⁰⁵ Figures from Granger and Elliott show that wheat prices were higher in the last third of the century, broadly in the 40-50 shilling range, compared with a 30-40 shilling range (per Winchester quarter) in the late 1720s.³⁰⁶ The trend was not smooth, however, and there were frequent spikes and troughs. These price ranges were high enough to cause popular unrest and food riots were not uncommon.³⁰⁷ Peter Ackroyd suggests that a level of 30 shillings per quarter is a cut-off level above which disturbances were likely.³⁰⁸

Added to these pricing issues, unscrupulous actors in the industry were not above adulterating

³⁰⁴ Wrigley, *People, Cities and Wealth*, pp. 160,177,179, quoted in Dauntton, *Progress and Poverty*, p.137.

³⁰⁵ For example Ackroyd, *Revolution*, pp. 42-3.

³⁰⁶ C. W. J. Granger and C. M. Elliott, 'A Fresh Look at Wheat Prices and Markets in the Eighteenth Century', *The Economic History Review*, 20.2 (1967), 257-65.

³⁰⁷ Archer, *Social Unrest*, p.28.

³⁰⁸ Ackroyd, *Revolution*, p.41.

their products. This led to an early form of consumer action whereby community-owned mills and bakeries were set up by and for the benefit of mainly urban workers in the later eighteenth century.³⁰⁹ Therefore, with reference to the Quaker population involved with food, I suggest that the rise in the proportion of bakers is a reflection of the move to an urban population where there was a demand for fairly priced, honest goods.

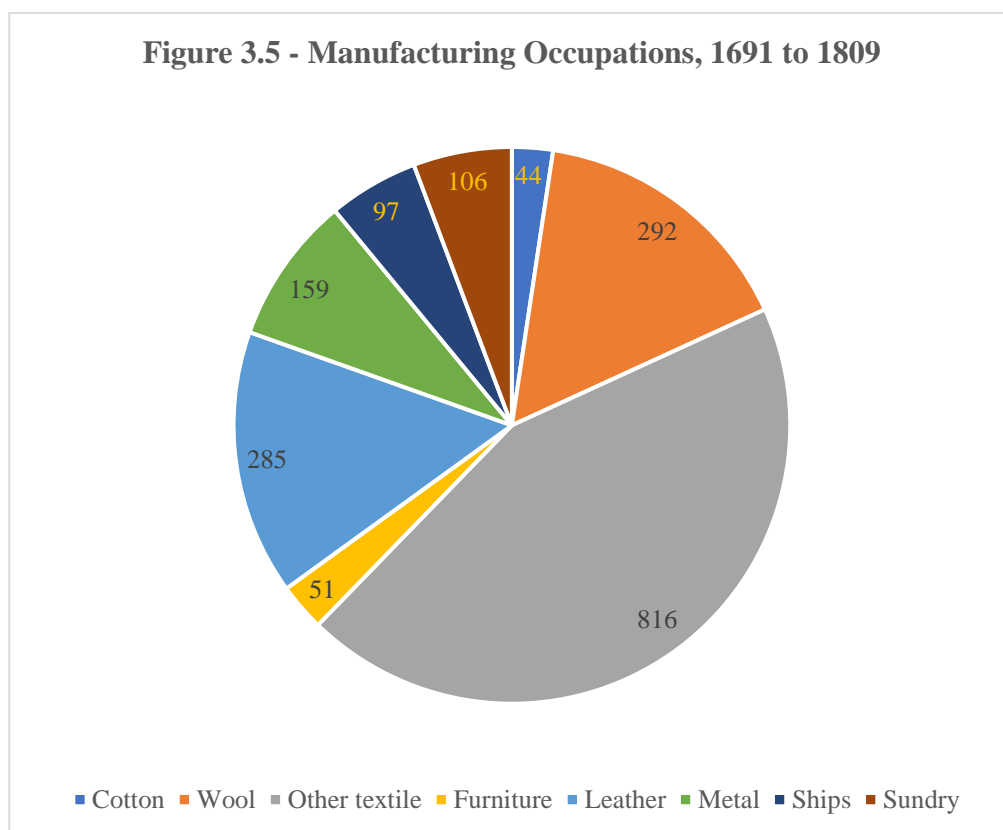
In the eighteenth-century food-processing industry, Quakers were always represented in the making of ingredients such as malt and flour, which formed at least a third of the sector. Baking was a popular option, rising from 27% to 43% over the period. The final shift to be noted was the near disappearance of the production of animal products amongst Quakers over the century. There is no obvious explanation for this, though urbanisation of the population is a possible factor.

3.3.5 Manufacturing

Manufacturing is the second largest occupational grouping identified after artisans, comprising 18% of the database (Table 3.1). Thus, the making of goods accounts for 45% of Quakers identified as having occupations. As with other groupings there is a wide range of individual occupations identified, so to be able to draw sensible conclusions, they have been brought together under industry headings, a combination process as used in other groups. Figure 3.5 and Table A4.5 give a summary of the sector.

³⁰⁹ Joshua Bamfield, 'Consumer-Owned Community Flour and Bread Societies in the Eighteenth and Early Nineteenth Centuries', *Business History*, 40.4 (1998), 16–36.

The dominance of textile-related employment is clear. The low figures for specific wool- and cotton-related occupations are surprising, but this is explicable from the detail of the classification process. The cotton-specific sector is overwhelmingly made up of calico manufacturers, cotton makers and cotton workers, namely those who are manufacturing cotton materials or are employed in specific tasks in that process. Similarly, the woollen sector is dominated by wool workers such as wool combers, again, those who are part of a larger process.



The Other textile group contains large numbers of cloth makers, cloth workers, dyers, flax workers, hosiers and hatters. Other areas of manufacturing are consequently much smaller, with only leather-making breaching the 10% of the sector level. This is a slightly surprising result given the prominence that writers such as Raistrick have given to sectors such as the

iron industry.³¹⁰ Table 3.8 gives the time-varying analysis of the sector as for the other sections and allows further comment.

Beginning again with textiles, and remembering the low fractions describing specific sectoral activity, the zero figures for cotton until the mid-part of the century are noticeable. This is a clear indicator of changes in the country's textile industry over the century as cotton was a new material to industrial Britain, and the industry was famously one which grew with the Empire, trade and slavery.³¹¹ The Quaker activity began with calico printing on imported fabric in the 1750s, mostly in London. Prior to the social and industrial revolutions of the eighteenth century, Britain was a wool-driven economy, with cities such as Norwich owing their position to their wool trade with Europe.³¹²

Table 3.8 - Analysis of Manufacturing Occupations through the Eighteenth Century								
Occupation title	Cohort	1710		1750		1790		Title total
	Database count	No.	% age	No.	% age	No.	% age	
Cotton	44	0	0.0%	3	3.1%	7	4.4%	10
Wool	292	43	19.7%	14	14.3%	16	10.1%	73
Other textile	816	97	44.5%	50	51.0%	66	41.5%	213
Furniture	51	0	0.0%	2	2.0%	6	3.8%	8
Leather	285	25	11.5%	11	11.2%	34	21.4%	70
Metal	159	17	7.8%	12	12.2%	11	6.9%	40
Ships	97	25	11.5%	3	3.1%	3	1.9%	31
Sundry	106	11	5.0%	3	3.1%	16	10.1%	30
Totals	1,850	218		98		159		

³¹⁰ Raistrick, *Quakers in Science and Industry*, pp.89-160.

³¹¹ Giorgio Riello, *Cotton: The Fabric That Made the Modern World* (Cambridge: University Press, 2013); Sven Beckert, *Empire of Cotton: A New History of Global Capitalism* (London: Allen Lane, 2014).

³¹² Sugden, 'Clapham Revisited'.

Other trends visible are the increase in the leather sub-sector, the appearance of a small furniture trade, an apparent fall in metal manufacturing after a mid-century rise, and a fall in ship and related items manufacture. Of these, the appearance of a furniture trade can be attributed to the rise of a middle-class consumer society as described by Maxine Berg,³¹³ though the changes relating to the metal industries are harder to explain. The occupations covered in the metal sector here are mostly to do with tin plate and nail manufacture. Many of the tin plate workers listed are classified as such by their membership of the Tin Plate Workers guild. This guild was founded in 1670 and, besides the relatively new craft of working with tinned plate, included wire drawers – thus, the work covered by this description will include the manufacture of items such as animal cages besides the expected table ware.³¹⁴ The second factor is the potential reduction in the number of nailmakers later in the century as the mass production principles (division of labour) espoused by Adam Smith took hold (although full mechanisation was a nineteenth-century phenomenon).³¹⁵

The proportion of Quakers in manufacturing increased slightly over the century, from just under to just over a fifth of the total population, and was dominated by the textile industry, which provided over half the sector. The surprise here was the small proportion of Quakers working with metal, below 10% throughout the period.³¹⁶

³¹³ Maxine Berg, *Luxury and Pleasure in Eighteenth-Century Britain* (Oxford: Oxford University Press, 2020), pp.195-7.

³¹⁴ 'History and Heritage', The Worshipful Company of Tin Plate Workers <<https://tinplateworkers.co.uk/about-the-company/history-and-heritage/>> [accessed 29 August 2020].

³¹⁵ Smith, *Wealth of Nations*, pp. 109-10; Guy Sjögren, 'The Rise and Decline of the Birmingham Cut-Nail Trade, c. 1811–1914', *Midland History*, 38.1 (2013), 36–57.

³¹⁶ This is considered further in chapter 6.

3.3.6 Other

The Other category includes occupations not easily fitted into other categories. Given its nature it covers widely differing types of activity, and therefore could potentially impact on the discussions above. I commented at the beginning of this chapter about these potential distortions and concluded that, if present, they would not be material or significant. The Other category is summarised in Table 3.9.

Table 3.9 - Composition of the 'Other' Category, 1691 to 1809

Occupation	Number	%age	PST Class
Barber	19	4.0%	T
Clerk	8	1.7%	T
Coal miner	5	1.0%	P
Copyist	2	0.4%	T
Engine worker	1	0.2%	S
Engineer	1	0.2%	S
Gardener	64	13.4%	T
Gentleman	29	6.1%	T
Labourer	45	9.4%	T
Lead miner	1	0.2%	P
Letter founder	2	0.4%	S
Mariner	174	36.4%	T
Mathematician	2	0.4%	T
Miner	5	1.0%	P
Minister	1	0.2%	T
Ostler	1	0.2%	T
Physician	29	6.1%	T
Refiner - silver	1	0.2%	S
Sawyer	11	2.3%	T
Servant	15	3.1%	T
Surgeon	62	13.0%	T
Total	478	100.0%	
Total - Primary	11	2.3%	
Total - Secondary	5	1.0%	
Total - Tertiary	462	96.7%	

As previously noted, the Other class represents 4.7% of the total database, a figure which varies between 3.5% and 5% through the century. The distribution of the occupations across the PST system was also discussed at the start of this section, under heading 3.2. The breadth of occupations included here is illustrated by the presence of mariners (ordinary seamen), gardeners and servants at one end of the scale and by surgeons and gentlemen at the other. The lead miner and silver refiner listed are reminders of the Quaker involvement in the ‘Great Recoinage’ ordered in 1696 to address a debased currency.³¹⁷ The silver produced by the Quaker-owned London Lead Company was of consistent purity, a rare enough quality that the coins produced from it were allowed, under Royal Warrant, to be identified by a special two roses and two feathers mark. They were colloquially known as Quaker Shillings.³¹⁸

Table 3.10 gives the view of the other category as it changes through the century but with some consolidation to focus on the categories as seen by the then contemporary society. The major categories of Gardener, Labourer and Mariner are as in Table 3.10 but barbers, physicians and surgeons have been grouped as Medical and Barber. Before the advent of specialist surgeons, the same person often carried out both tasks, and ‘barber and surgeon’ was a common description. The other occupations have been grouped as Other.

³¹⁷ Mokyr, *Enlightened Economy*, p.446.

³¹⁸ Arthur Raistrick, *Two Centuries of Industrial Welfare: The London (Quaker) Lead Company, 1692-1905: The Social Policy and Work of the ‘Governor and Company for Smelting down Lead with Pit Coal and Sea Coal’, Mainly in Alston Moor and the Pennines*, 2nd rev. ed. (Otley: Kelsall and Davis, 1988), pp. 111-2.

Table 3.10 - Analysis of Other Occupations through the Eighteenth Century

Occupation title	Cohort Database count	1710		1750		1790		Title total
		No.	% age	No.	% age	No.	% age	
Gardener	64	9	15.5%	7	26.9%	5	19.2%	21
Labourer	45	5	8.6%	2	7.7%	2	7.7%	9
Mariner	174	29	50.0%	4	15.4%	3	11.5%	36
Medical & barber	110	5	8.6%	10	38.5%	10	38.5%	25
Other	85	10	17.2%	3	11.5%	6	23.1%	19
Totals	478	58		26		26		

The first comment is that the cohort size drops from 58 for 1710 to 26 for both 1750 and 1790. For the other sectors analysed, there was a decline from 1710 to 1750, but it rose again to 1790. However, with a cohort size of 26 spread across so many varied occupations there is little likelihood of drawing any significance in this. The population of gardeners is a significant part of the Other sector and changed comparatively little throughout the century. Their presence ties in with Raistrick's identification of a Quaker interest in botany and natural history and Geoffrey Morris's more recent work.³¹⁹ The presence of a cadre of labourers shows that there was a continuing streak of less educated members of the Society, and that not all Quakers were middle-class. Similarly, the strong representation of mariners, at least in the early years of the century, shows the representation of ordinary people within the membership. The drop in the proportion of mariners is also seen in the pattern for master mariners (included in the transport category in the commerce sector) and in the ship construction figures included specifically within the analysis of manufacturing occupations above. The medical sector, including barbers, contained a majority of surgeons. Earlier in

³¹⁹ Raistrick, *Quakers in Science and Industry*, pp. 243-75; Geoffrey Peter Morris, 'From Revelation to Resource; The Natural World in the Thought and Experience of Quakers in Britain and Ireland, 1647-1830' (unpublished PhD, University of Birmingham, 2009).

the century these were barber surgeons such as Richard Penton of London, married in 1734, or Gabriel Bradley of Bristol, married in 1750, but in the second half they were replaced by surgeon apothecaries including Joseph Rickman of Maidenhead, Berkshire, married in 1772, and John Danson of Blackburn, Lancashire, married in 1794. The description of ‘physician’ appeared throughout the century. In the remaining miscellaneous occupations the appearance of ‘gentleman’ occurs in the second half of the century, as some Quakers attained wealth and respectability, and also ‘clerk’ and ‘engineer’, the latter particularly being associated with the arrival of steam power as the industrial revolution began to take off.

3.3.7 Professional

The professional sector of occupation is a small one, comprising a total of 173 entries (Table 3.1). From Figure 3.6 and Table A4.7 it is clear that teaching is the major contributor and is a reflection of the Quaker interest in education. John Punshon refers to the numerous Quaker-operated schools as far back as the late seventeenth century,³²⁰ and Stephen Angell and Clare Brown have surveyed the Quaker Education scene up to the present day.³²¹

Looking at changes over time, Table 3.11 (derived in a similar manner to Table 3.2) shows the high proportion of teachers through the period, but also reveals the emergence of other, mainly financially focussed, professions later in the century. This is consistent with the changes in society and the need for capital as industrialisation progressed. It is noteworthy that of the 173 separate listings, 31 (18%) have marriage dates within the last decade of the

³²⁰ Punshon, *Portrait*, pp.102-3.

³²¹ Stephen W. Angell and Clare Brown, ‘Quakers and Education’, in *The Cambridge Companion to Quakerism*, ed. by Stephen W. Angell and Pink Dandelion, Cambridge Companions to Religion (Cambridge: Cambridge University Press, 2018), pp. 128–46.

twelve surveyed. This late emergence is strengthened when the consistent trend of the 1790 cohort size being smaller than the 1710 cohort is accounted for.

Figure 3.6 - Professional Occupations, 1691 to 1809

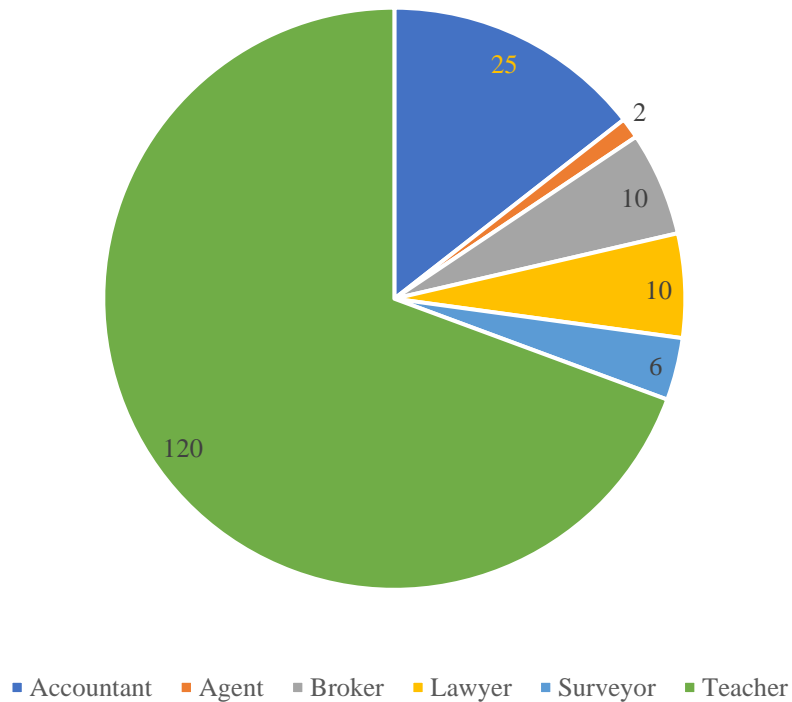
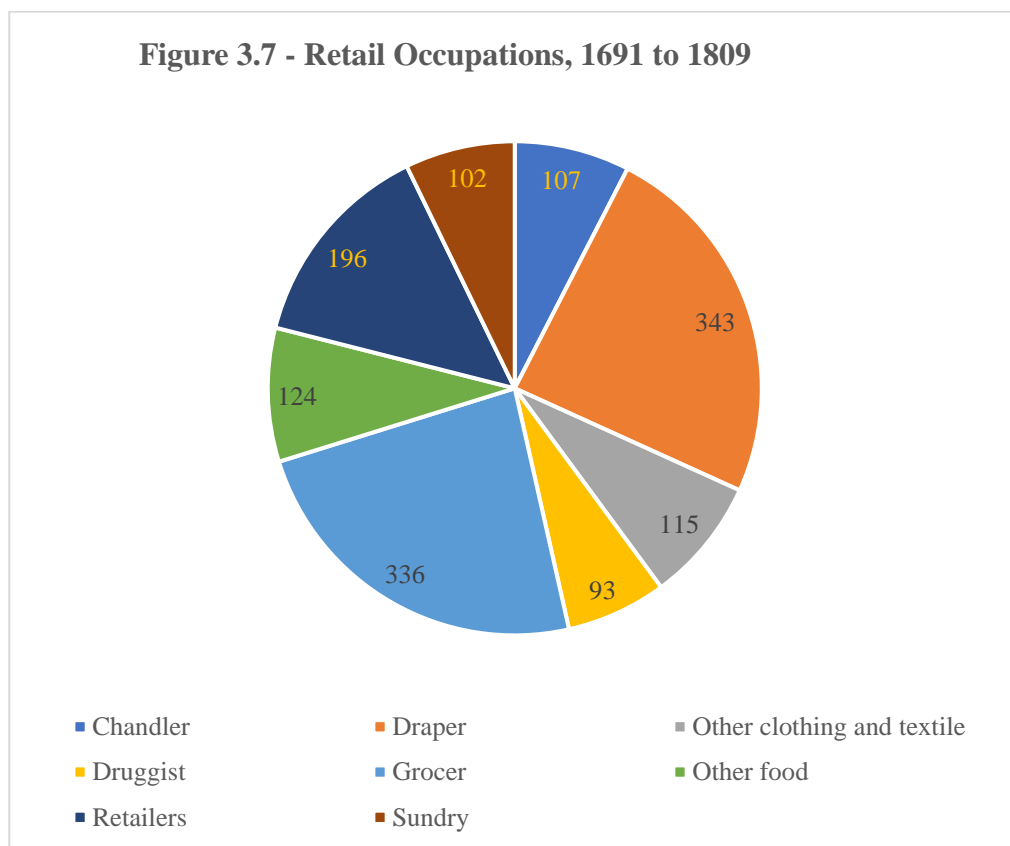


Table 3.11 - Analysis of Professional Occupations through the Eighteenth Century

Occupation title	Cohort Database count	1710		1750		1790		Title total
		No.	% age	No.	% age	No.	% age	
Accountant	25	0	0.0%	2	25.0%	3	15.8%	5
Agent	2	0	0.0%	0	0.0%	1	5.3%	1
Broker	10	0	0.0%	0	0.0%	1	5.3%	1
Lawyer	10	1	5.0%	1	12.5%	1	5.3%	3
Surveyor	6	0	0.0%	0	0.0%	1	5.3%	1
Teacher	120	19	95.0%	5	62.5%	12	63.2%	36
Totals	173	20		8		19		

3.3.8 Retail

Retail is a sector which increased as a share of Quaker economic activity over the duration of the eighteenth century from 12% to 18% (Table 3.2). Figure 3.7 and Table A4.8 show the distribution of Quaker retailers across their activities.



Of the 107 chandlers listed, 86 are labelled as ‘tallow chandlers’ and one as a ‘wax chandler’. Two of the general chandlers are listed as ‘chandler and soap boiler’. This is a sector that has now disappeared from modern life as we no longer rely on candles for lighting our buildings. The wax chandler served the luxury market, wax candles being cleaner burning than the common tallow variety. The majority of Other clothing & textile entries are for staymakers and haberdashers. Other food entries are mainly the classic pairing of cheese and wine

sellers. Retailers are essentially shopkeepers but 28 salesmen are included, and the sundry category is notable for the 64 tobacconists found there. As in all sectors there were changes in the internal pattern of occupations through the century, Table 3.12 illustrates them, using the usual method.

Table 3.12 - Analysis of Retail Occupations through the Eighteenth Century								
Occupation title	Cohort Database count	1710		1750		1790		Title total
		No.	%age	No.	%age	No.	%age	
Chandler	107	13	9.0%	5	7.9%	2	1.5%	20
Draper	343	38	26.4%	11	17.5%	37	27.6%	86
Other clothing & textile	115	20	13.9%	6	9.5%	2	1.5%	28
Druggist	93	3	2.1%	10	15.9%	15	11.2%	28
Grocer	336	28	19.4%	9	14.3%	50	37.3%	87
Other food	124	21	14.6%	5	7.9%	7	5.2%	33
Retailers	196	10	6.9%	11	17.5%	14	10.4%	35
Sundry	102	11	7.6%	6	9.5%	7	5.2%	24
Totals	1,416	144		63		134		

The presence of a significant section of undescribed Retailers is a potential source of distortion in discussing this class. As noted, Chandlers were a specialist area of Quakers working with fats and virtually all dealing in one product (tallow candles). Druggists were also specialised, they needed expertise in the impact of products on the human body. But an unclassified retailer might well be dealing in products that food or textile sellers might be interested in, and a shopkeeper such as William Cockbill of Barford, Warwickshire (married 1704), or Jacob Bowson of Cotherstone, Yorkshire (married 1785), might well be selling a wide variety of merchandise in a general store. It is therefore possible that the increase in grocers from 1750 to 1790 is partially balanced by the fall in the same period of the general retailers, or indeed that the corresponding fall and rise from 1710 to 1750 is similarly a

balancing arising from the descriptions used. However, looking at the sum of Grocers, Other food and Retailers, the figure moves from 41% of the sample in 1710 to 40% in 1750 and 53% in 1790. This is enough, I suggest, to indicate an increase in the proportion of food-related occupations at the end of the century, a suggestion strengthened by the increase in absolute numbers of grocers from 28 through 9 (in the smallest cohort) to 50 in 1790. The Quaker interest in food has been examined above (section 3.3.4), and there I noted that the well-known Quaker firms (including Cadbury's and Rowntree's) became established as food processors in the nineteenth century, although Rowntree's in particular had eighteenth-century antecedents in grocery retailing.

The second major retailing sector in the century was textiles, particularly drapery. This again is an area of overlap and possible confusion. In my analysis I have placed drapers in this retail section. This arises from the Oxford English Dictionary (OED) definition of a draper as a person who now deals in articles of textile manufacture (but it has also been used as a term for a cloth manufacturer or a cloth dealer). The occupation of a mercer, dealt with under the Commerce section (3.3.2), is defined in the OED as a person who deals in textile fabrics. The difference I have recognised is that dealing in articles is retailing finished goods and that dealing in cloths is supplying to trade users of cloths. Taking note of these distinctions, Table 3.19 shows a reduction in textile retailing activity with time. Drapers and Other textiles make up a 40% share of the cohort in 1710, which drops to 27% in 1750 and 29% in 1790. In 1750 the Other textiles held up more strongly than the Drapers, but in 1790 Drapers regained their position and Other textiles almost disappeared. There is no obvious explanation for this pattern from the database, but it was in the latter part of the century that

the cotton industry began to emerge, as noted in 4.3.5 Manufacturing. This new material was a potential stimulus for drapery activity.

A final point can be made concerning the evolution of the retail market in the eighteenth century. Maxine Berg has written about the evolution of the consumer society, and in particular the emergence of an acquisitive middle-class,³²² and Kate Smith discusses how some specialist retailers promoted themselves over their producers by building distance between retail and production.³²³ Within my database there are included amongst the Sundry retailers 8 booksellers, of whom 7 are present after 1780, 3 china and glass sellers with 2 after 1800, and 4 hardware sellers with 3 after 1790, all of whom are examples of newly emergent specialist retailers.

The rise in the proportion of Quaker retailers from 12% to 18% over the period can be seen as a reflection of employment trends in the Society of Friends. Retailing is a commercial activity often carried out by small businesses and was emerging as a specialist discipline in the eighteenth century. Thus, a rise in the proportion of retailers shows a reflection of the Quaker interest in commerce, of their affection for small, independent businesses, and their appetite for applying new skills.

³²² Berg, *Luxury and Pleasure*, pp.193-325.

³²³ Smith, *Material Goods*, pp.60-62.

3.4 Occupational Chapter Conclusions

This chapter examined the types and patterns of occupations of Quakers in the eighteenth century by using data derived from Quaker marriage records. A sample of 10,179 different occupations was extracted from the Quaker marriage records from 1691 to 1809 – the additional years being added to account for Quakers working in the century but being married outside it. There will, of course, be some Quakers who married in the 1690s who died before the turn of the century, and Quakers who married in the 1800s who were not active before 1801. These small numbers are highly unlikely to impact the overall conclusions. The 10,179 recorded occupations contained 1,102 different descriptions, some of which were merely different spellings. The classification and cleaning process applied to the data reduced this to 271 standardised occupations, which were then categorised into 8 functional areas – namely Agriculture, Commerce, Artisan, Food, Manufacture, Other, Professional and Retail.

The review of Quaker occupations from the much larger database used in this thesis is wider and therefore more representative than other studies. There are still potential issues which cloud the clarity of the view of the eighteenth-century Quaker population. Firstly, the database covers only married Quakers. Single Quakers were considered in section 2.5, where it was concluded that young unmarried Quakers were unlikely to significantly affect the occupational patterns seen, though an increase in the proportion of unskilled Quakers from older unmarried men is still possible.

Secondly, only around half of bridegrooms recorded an occupation, giving a large portion of unknown data. I have made the implicit assumption that the pattern of occupation of these unknowns is the same as the recorded pattern, but there is no way of confirming this, and all studies of population in this era suffer from similar uncertainties. There is very little data on women's occupations, discussed at section 2.7.

Thirdly, there is some bias towards London, which provides about one-quarter of the database. This is a reflection of the population distribution and recording rates discussed in chapter 2. Lastly, there is some 'fuzziness' of vision arising from the differing description methodologies used between studies. I have commented on differences between my analysis and Fincham and Vann and Eversley, my view being that some focus on manufacturing is necessary when looking at a time when it was becoming an important part of the English economy. This difference will be dealt with when comparing the studies. There are detail differences in categorisation, none of which will significantly impact the overall patterns.

Looking at the entire database, taking a view across a period of 100 years provides broad information. The overall picture is of a population spread across most of the economy.

There is a bias towards making things, with 27% of the sample being classified as artisans and a further 18% being concerned with the newly emerging manufacturing sector – the two being differentiated by the latter's use of technology and distributed manufacturing processes as compared with former's use of hand tools and individual, whole process skills. 24% are concerned with food production as agriculturalists (16%) or food processors (8%). This is a significant sector, but it is a comparative minority with reference to the 50% fraction involved in agriculture reported by Shaw-Taylor and Wrigley for the same period for the English

economy. This is possibly indicative that the Quakers were a group of people looking to work in a developing economy, comprising specialised participators who were looking to add value with their activities, rather than existing in a subsistence economy.

The final significant sector is based around trade and commerce, driven by money handling. 14% of Quakers were involved in retail, which later in the century was developing into a specialised activity of sourcing goods and actively selling them to increasingly willing consumers, while 11% were involved in the commercial activity of sourcing commodities and intermediate goods and selling them on to secondary processors. This latter activity provided the drive for the later move into banking and financing activities. At this time the Test Acts effectively banned Quakers and other non-conformists from the English universities, so there was little opportunity to enter the professions (and the church and armed forces were also closed doors for pacifist Quakers).³²⁴ However, the Scottish and Dutch universities were open, and the remaining 6% of the sample did contain some surgeons, physicians and (latterly) lawyers.

The final insight from the total database concerns the social class of the population. One of Vann and Eversley's conclusions was that Quakers were affluent and middle-class.³²⁵ Class is a difficult concept to apply and is discussed in more detail in section 8.3. However, the idea of a middle-class of aspirational consumers, possibly educated, was emerging by the end of the century.³²⁶ There are some indicators within the occupations identified in the database

³²⁴ *An Act for Preventing Dangers Which May Happen from Popish Recusants*, CHARLES II, 1672, <https://www.british-history.ac.uk/statutes-realm/vol5/pp782-785> [accessed 26 May 2023].

³²⁵ Vann and Eversley, *Friends in Life and Death*, pp. 252-5. They defined middle-class as 'neither peasants nor laborers nor aristocratic landowners' on p.57.

³²⁶ Frank Trentmann, *Empire of Things: How We Became a World of Consumers from the Fifteenth Century to the Twenty-First* (London: Allen Lane, 2016), pp.23-8; Smith, *Material Goods*, pp.74-5.

that allow some comments on class to be made. Expressions such as ‘worker’ rather than ‘maker’ suggest a split between those with skill and capital and those who are providing little more than labour, and a division between ‘middle’ and ‘lower’ classes. Thus, a ‘cloth worker’ has been taken as lower-class, while a ‘cloth maker’ or ‘cloth goods maker’ has been taken as middle-class. Similarly, ‘master mariners’ have been taken as middle-class, being those who direct ships, whilst ‘mariners’, who haul ropes, have been taken as lower-class. As in all such analyses, there will be overlaps. There is one ‘filer’ in the database who has been deemed lower-class as he files rough metal but he could be making final shapes. Similarly, there are five ‘sewers’, who have been deemed to be unskilled joiners of cloth, and therefore lower-class, but could be seen to be more skilled. Taking account of these comments, the data here contains 801 examples of lower-class occupations, or 8% of the total. These include 245 wool workers, 142 other textile workers, 174 mariners and 64 gardeners. This thesis suggests that this is enough of a proportion to identify a visible lower-class presence in the Society. Chapter 2 contains much more detail pertaining to the numbers in this study, but I will suggest later when discussing social class that the 8% figure here is a low-end figure for lower-class society membership.

Quakers working in agriculture were 16% of the sample, which is much lower than has been reported for the general population. The Quaker agriculturalists were initially evenly split between Yeomen and Husbandmen, but with time their descriptions altered so that farmers and specialist graziers appeared. This is a possible example of Quaker openness to new ideas arising from the eighteenth-century agricultural revolution. At the end of the century, farmers made up nearly 30% of the sample and graziers 12%, yeomen had dropped to 34%, and 24% were husbandmen. There was one colonial planter found in the sample, whose

location was given as Maryland. As pointed out in section 3.3.1 above, this is not a definite indication of involvement with slavery, but Quakers in the eighteenth century had not yet become the abolitionists that they were in the nineteenth century.

The two biggest occupational sectors were artisans (27%) and manufacturing (18%). I have pointed out the blurred boundaries between these two classes, and I found that artisanal involvement fell from 31% to 22% over the century and manufacturing rose from 18% to 21% - so overall employment in making artefacts fell from 49% to 43%. Both Vann and Eversley and Fincham found higher levels of artisan activity than I have found. This can be attributed to differences in analysis arising from my separation out of manufacturing, and the more careful defining of the two sectors. For example, clothworkers, clothiers and cotton spinners all appear as craftsmen in Fincham and within manufacturing in my scheme. From the changing patterns through the century, it appears that some artisans took advantage of the emerging opportunities and technologies to transform their craft businesses into industrial concerns. The proportion of Quakers involved in this type of production is higher than for the general population – for artisans particularly, this is possibly an indication of a non-conformist outsider also being outside the conventional employment networks.

Direct commercial activity accounts for one-quarter of the database, with 14% being retail and 11% commerce. This again is a fuzzy arena due to categorisation. Separation of retail and wholesale activity is an area of blurred boundaries. Drapers might have acted as wholesalers, and mercers have been included in commerce as cloth sellers. Grocers, too, might include wholesaling activity. Merchant activity is included under commerce, so again there is the possibility of blurred edges. Such blurring is evident in comparisons with the

other Quaker studies. Vann and Eversley found a higher level of commercial activity than I have reported. This is due to their inclusion of artisan activity as commercial. Conversely, Fincham shows a lower level. This is due to my inclusion of some activity in manufacturing rather than as artisanal, and thereby identifying it as commercial. However, the trend of rising Quaker commercial activity over the century is seen in all the Quaker studies, and all studies agree that there is a higher proportion of the activity than is seen in the general population.

Retailing, as discussed in section 3.3.8, is a sector that began to emerge as a specialist discipline in the later eighteenth century with the beginnings of the consumer society. Early-century retailers were largely textiles (40%) and food (34%). At the end of the century textiles had fallen to 29% and food had risen to 42%, and there had been a notable increase in druggists, from 2% to 11%. Once again, we see Quaker involvement in emerging sectors, with the increase in popular interest in foods such as tea and chocolate and the growth in medical knowledge. The commerciality of the retail sector is obvious as it is an instance of direct money handling. The interest of Quakers in other commerce centres around the selling of commodities to trade for further processing, the sectors of corn and meal, cloth and iron, are all important, with other areas represented, too. About a third of the sector relates to direct finance (mainly merchants). There were shifts in selling as corn and meal selling almost doubled from 17% to 30% and cloth selling halved from 17% to 7%. This appears to be a reflection of growing Quaker interest in selling food and possibly of greater integration in an industrialising textile industry.

Quaker moves to become involved in banking as some families became more known for financing rather than producing or trading are shown by there being no bankers listed in the 1710 cohort but seven in the 1790 cohort – once again evidence of increasing commercial sophistication. A minor part of the commercial sector concerns a declining interest in transport, some of which can be attributed to the building of bridges over the Thames in London.

The results from the commercial and retail sectors and the conclusion that over the century Quakers became more interested in selling food can be integrated with what happened with Quakers in the food-processing sector (that activity between agriculture and distribution). This sector is about 8% of the database, but the proportion in the mid-century is a little higher. Fincham's identification of a food sector agrees with my analysis, but Shaw-Taylor and Wrigley do not provide any comparable detail, so a comment with respect to the general population is not possible. In the early years the sample was primarily ingredient production (44%, mostly maltsters and millers), bakers (28%) and animal products (15%, mostly butchers). At the end of the century, ingredients had dropped to 34% and bakers risen to 43%, with animals down to 2%. There is an interesting fraction of 10%, rising to 15% concerned with alcoholic drink, which consists of brewers and distillers, the former rising in importance at the expense of the latter with time.³²⁷ This is indicative of a Quaker move against strong drink, although brewing beer as an alternative to unsanitary water was acceptable. Within this group there is a pattern of moving away from primary production towards distribution, with a more commercial element to it. Widening the view to the

³²⁷ Ned Ward, *London Spy* (The Folio Society, 1955). This reissue of a 1698 original contains a description of a Quaker temperance pub (pp.58-61) and *Christian Discipline of the Society of Friends* (London: Samuel Harris and Co, 1883) has a three-page division concerning the self-denial of intoxicating beverages, pp.107-110.

industry, and including food-related activities from the commercial sector, the pattern is of a secondary production proportion of 27%, reducing to 15% over the century and a total distribution proportion rising from 56% to 79%.

The two final small employment sections are Professional and Other. At around 2% of the total, the Quaker professional sector is lower than for the country generally, no doubt a reflection of the lack of English university access. It is dominated by teachers, education being a particular Quaker interest, but there are finance professionals appearing in the end-of-century data. The main contributors to the Other section (5% of the total) are gardeners (from about 15%-26% of the section), ordinary mariners (rapidly falling from 29% to 3%) and the medical professions (rising from 5% to 10%). This section is important as it shows the presence of a small, but not negligible, fraction of lower-class activity.

The overall conclusion is that eighteenth-century Quakers were represented in a wide range of employment sectors across society. There were no clergymen or military. They were under-represented in the professional fields, though that was changing with time and the greater integration of Quakers into society, and the changing economic environment. Although less present in agriculture than the general population, the food industries were important to them and became more so later in the century as food production and distribution became increasingly part of a commercially oriented economy. The move to commercialism is also seen in manufacturing Quakers. This set began as artisans, a useful status for a non-conformist as artisan skills are portable, which is potentially important for someone who might suffer persecution and have to move on to a new location. However, their later move to industrialised manufacture was an example of later generations of Quakers adapting to a

changing and developing world by taking on new occupations. This was a natural move for those who began to organise the complex supply chains required by the new industries and to provide finance: hence the appearance of bankers in the Quaker commerce sector. Present in all sectors of the economy but over-represented in manufacturing and commerce, individual Quakers were ready to appear in the vanguard of change. The presence of some lower-class activity in the Manufacturing and Other sections provides a challenge to the accepted view of Quakers as a middle-class society.

Chapter 4: Geography of the Quarterly Quaker Meetings in England and Wales in the Eighteenth Century

This chapter is concerned with the geographical analysis of the occupations held by those within the Quarterly Meetings in the database. The population of English and Welsh Quakers was distributed across the counties but I showed in section 2.2 that there were five large Quarterly Meetings that between them contained more than half of the Quaker population. These were London & Middlesex, Yorkshire, Lancashire, Westmorland, and Bristol & Somerset. When looking at occupational records Westmorland drops out of this list (because of its low occupational recording rate), leaving four Meetings that I define as large. This chapter examines the occupational spread across the country on a regional basis, except these four large Meetings, which are examined at the end of the chapter. Although England and Wales have few well defined regions there is some acknowledgement of a regional geographic history, the *Regional History of England* series of books being one example which is broadly similar to the pattern used here.³²⁸ The presentation order I have used is one of regions containing smaller meetings moving from the extremities of the country in towards London, followed by the four large meetings. For the regions, this follows the pattern of increasing data recording established in chapter 2. This presentation strengthens the recognition of the importance of the finding of patterns of variable rates data recording identified there. The system and a comparison with the Regional History series is contained in Table 4.1.

³²⁸ This series published by Longman in the 1980s and 1990s divided England into 10 regions, The Northern Counties, The Lancashire/Cheshire Region, Yorkshire, The Severn Valley and West Midlands, The East Midlands, The South Midlands and Upper Thames, The Eastern Counties, The South West, Wessex, and The South East. A complete alignment is not possible as Quaker Quarterly Meetings have their own set of alignments differing from English county geography. Two clear differences are the joining of Cheshire with Lancashire in the series where Cheshire and Staffordshire combine in a Quaker meeting, and the joining of Leicestershire with Warwickshire in another meeting, which is an obvious regional distortion.

Table 4.1 – English Regions

Presented in the order of analysis by distance from London in the thesis

Per Thesis*The Northern Meetings*

Cumberland, Durham, Northumberland
Westmorland

The South-Western Meetings

Cornwall, Devon

The West Midlands and Wales Meetings

Cheshire & Staffordshire, Herefordshire
Worcestershire & Wales (incl. Shropshire),
Warwickshire Leicestershire & Rutland
(Wiltshire & Gloucestershire in Southern)

The East Midlands Meetings

Derbyshire & Nottinghamshire,
Lincolnshire, Northamptonshire
(Leicestershire in West Midlands and Wales)

The Southern Region Meetings

Berkshire & Oxfordshire, Dorset
Hampshire, Gloucestershire & Wiltshire
(Somerset with Bristol)

East Anglian Meetings

Cambridgeshire, Essex, Norfolk & Norwich
Suffolk

The Home Counties Meetings

Bedfordshire & Hertfordshire,
Buckinghamshire
(Northamptonshire in East Midlands,
Oxfordshire in Southern Region)

The South-Eastern Meetings

Kent, Sussex & Surrey

Lancashire

(Cheshire in West Midlands)

Bristol & Somerset

(Somerset and Bristol in Wessex)

*Yorkshire**London & Middlesex***Per Regional History Series***Northern Counties*

Cumberland, Durham, Northumberland

South West

Cornwall, Devon

West Midlands

Gloucestershire, Herefordshire, Shropshire,
Staffordshire, Warwickshire, Worcestershire

East Midlands

Derbyshire, Leicestershire, Lincolnshire,
Nottinghamshire

Wessex

Berkshire, Dorset, Hampshire, Somerset
Wiltshire

Eastern Counties

Cambridgeshire, Essex, Norfolk, Suffolk

South Midlands

Bedfordshire, Hertfordshire,
Buckinghamshire, Northamptonshire,
Oxfordshire

South East

Kent, Sussex, Surrey

Lancashire and Cheshire

Cheshire, Lancashire

Yorkshire

excluded

I show that in the smaller, regionalised meetings discussed here the major activities of Quakers as artisans, small-scale manufacturers and agriculturalists reflects the economic preoccupations of the general population in that region. The four large meetings all had their own characters, though followed the major patterns seen elsewhere. Lancashire is the ancestral home of Quakerism; in the eighteenth century it included land on the far side of Morecombe Bay (now situated in Cumbria) and was largely a traditional agricultural county but included Manchester and the industrialising textile industry.³²⁹ Bristol & Somerset became home to a significant Quaker population in the city of Bristol. During the century Bristol overtook Norwich as the country's second city and was home to commercial activity in the Atlantic trade, before itself being eclipsed by the growing Northern powerhouse. Yorkshire has always seen itself as a separate region and was a mixture of agriculture and textile manufacturing. London was the biggest city by far in the eighteenth century and was a centre of manufacturing before commerce became its main industry. But the Quakers in these large meetings took part in economic activity that mirrored the local preoccupations, as did Quakers in the smaller meetings. There were some differences in their activity from the smaller meetings, though in degree rather than in kind, such degrees being an indication of the differing natures of urban and rural communities. Detailed tabulated data for each Quarterly Meeting are given in Appendix 5, but I have included those for Cumberland & Northumberland (Table 4.2) and Bristol & Somerset (Table 4.3) in the chapter as examples.

³²⁹ John K. Walton, *Lancashire – A Social History, 1558-1939*, (Manchester: Manchester University Press, 1987), p.60.

4.1 The Northern Meetings

This section covers the far northern Meetings of Cumberland & Northumberland, Westmorland, and Durham. The two larger Meetings in Lancashire and Yorkshire are covered separately as ‘large’ Meetings. Between them these three smaller northern Meetings provided 13.3% of the marriages (4,874) but only 5.9% of the occupations (600), an occupations-to-marriages ratio of 0.44 for the region – a very clear example of a drop-off in data recording with distance as discussed in section 2.2.

Cumberland & Northumberland showed a total number of marriages close to double that in Durham but recorded the same number of occupations – a more extreme example of a more remote population recording less information. It was also a more extreme example of a weighting of occupations to later years than Durham, with 27 of the 32 records in the dated cohorts being in the later, 1790, one (Tables 4.2, A5.1 and A5.2). Both Meetings showed conformity with the pattern described in section 2.2, where occupational recording reduces with geographical remoteness. Durham is distant from London and provided 2.4% of the marriages but only 1.7% of the occupations. Westmorland was larger in size than the other two Meetings in the region in terms of occupations recorded (264), and was also higher in its recording rate, though was still an example of a remote county providing lower levels of recorded information. It provided 2.6% of the occupations but 6.1% of the marriages. The weighting of data to the later years suggests more careful recording as the Society became more formally organised.

Cumberland & Northumberland and Westmorland were both weighted towards agriculture and artisan work, though there was a manufacturing and commercial presence, especially around Newcastle upon Tyne.³³⁰ The high agricultural presence is unusual but shows the congruence of Quakers with local conditions and reflects the inclusion in Durham of Quakers in Newcastle upon Tyne. Durham showed a concentration towards manufacturing and retail over time.

Table 4.2 - Marriage Records with Occupations in Cumberland & Northumberland, 1691-1809

Cohort Sector	1710	1750	1790	Total
Agriculture	2	1	11	65
Artisans	0	1	6	40
Commercial	0	1	4	12
Food	0	0	0	1
Manufacturing	0	0	2	21
Other	0	0	3	14
Professional	0	0	0	1
Retail	0	0	1	14
	2	3	27	168

Cumberland & Northumberland was a conservative Meeting in occupational terms, with the two 1710 records being in agriculture, and the 1790 cohort being weighted towards agricultural and artisanal work – although there was a commercial, manufacturing and other presence. The agriculturalists were yeomen or husbandmen and were spread across the county. The artisans included a number of shoemakers and weavers. There were clusters of Quaker employment in the north Cumbrian towns of Maryport and Whitehaven, where

³³⁰ Norman McCord and Richard Thompson, *The Northern Counties from AD1000*, (Harlow: Longman, 1998), A Regional History of England series, pp.199-211.

commercial, manufacturing and maritime activity was recorded. Both locations saw their activity take off with the development of man-made port facilities and planned towns driven by the need for local coal entrepreneurs to export their products.³³¹ Although Whitehaven was the earlier development in the later seventeenth century, and the more significant port in the mid-eighteenth century, each location provided a similar sized occupational contribution to the database.³³² Richard Dearman will be mentioned in the discussion of the iron industry in this thesis and both towns contributed to a north Cumbrian iron based industrial centre that developed from the mid eighteenth century.³³³

In Westmorland, the agricultural population consisted of yeomen and husbandmen, apart from four farmers, all of whom appeared after 1770. In the artisan population there were 26 weavers, 23 clothing-related trades and 9 carpenters. In the years after 1770, there was a concentration of weavers and shoemakers. The manufacturing activity was dominated by textiles where 39 of the 54 entries were working, and there was activity throughout the century. Within the retail sector grocers dominated with 14 of the 23 entries. Unusually, there was little cloth-selling activity, though four druggists appeared to be a strong presence. Westmorland was part of the early history of Quakerism, the ‘convincement’ of the Westmorland Seekers providing a large group of early Quakers in 1652.³³⁴ Thus, it was not surprising to find a large number of marriages stemming from this established Quaker community, though it was disappointing to find that this had not translated into stronger

³³¹ Richard Newman, ‘Port Development and Town Planning in North West England’, *Journal of Maritime Archaeology*, 8.2 (2013), 283–309; McCord and Thompson, *Northern Counties*, pp.202-4.

³³² John V. Beckett, *Coal and Tobacco: The Lowthers and the Economic Development of West Cumberland, 1660-1760* (Cambridge: University Press, 1981), p.102. On the same page Beckett notes that from the 1730s the port books do not distinguish between Whitehaven, Maryport and Workington so a reference to West Cumberland ports rather than Whitehaven may be more appropriate.

³³³ JY Lancaster and DR Wattleworth, *The Iron and Steel Industry of West Cumberland* (Cumbria: British Steel Corporation, 1977).

³³⁴ Braithwaite, *Beginnings*, pp.80-96.

occupational recording. The records showed a conservative, agricultural population with a low expansion into a modern commercial economy and no differentiating factors from the general population. This view is strengthened by the late arrival of enclosure and agricultural modernisation into the county.³³⁵

In Durham the records showed an increasing concentration of Quaker activity in manufacturing and retail over time, a trend that reflected national movements. The manufacturing sector covered a variety of businesses. Tanning was represented at both ends of the century, and five of the nine later records related to aspects of the textile industry, including one hatter. The retailers were largely food-related, with four grocers in the 1790 cohort and one cheesemonger in the 1710 group. Of the remaining records, the marine trade was represented in the commercial sector with a master mariner at both ends of the period, and two ordinary mariners in the early part of it, and more master mariners in the body of the commercial records, making the maritime trade the most common entry. The pattern described showed a county with no particular specialisation, but with occupations related to the county's links to transport (the mariners) and its position as an outlet for Northern English wool. Durham's location on the River Wear and between the Rivers Tees and Tyne explains the expected activity. These rivers were the basis of the eighteenth-century North-Eastern maritime trade, epitomised by the coal trade with London, which explains the visibility of mariners in the records.³³⁶ The interest in the local textile industry is illustrated by the example of the Backhouse family of Darlington.³³⁷ They were originally dealers in the wool industry and later became suppliers of credit to the wider textile industry in the area, forming

³³⁵ McCord and Thompson, *Northern Counties*, pp.178-80.

³³⁶ For example Hausman, 'A Model of the London Coal Trade', pp.1-2; Ville, 'Total Factor Productivity', pp.357-8.

³³⁷ Raistrick, *Quakers in Science and Industry*, p.330.

the bank J. and J. Backhouse in 1774. The retailers were spread across the county. Those in the 1710 cohort were specialists in tobacco and cheese based in the early urbanisation on the Tyne, and the later ones on all three rivers, in Newcastle-upon-Tyne, Sunderland and Stockton-on-Tees. The point that most Quaker marriages in the period recorded in Newcastle-upon-Tyne were recorded in the Durham Quarterly Meeting emphasises the links of urban Newcastle with the industrialising North-East rather than rural Northumbria.

This region is split into two. Cumberland & Northumberland and Westmorland were agricultural and artisan counties, but Durham and Newcastle upon Tyne leaned towards manufacturing, retail and commerce. The commerce sector in Durham was related to the East Coast maritime trade, which even in the earlier eighteenth century, served the local coal fields to supply a coal-fuelled London. All Meetings showed an occupations-to-marriages ratio of much less than one (see Table 2.5), indicating a low occupation recording rate. The Quaker occupation patterns in all three Meetings were comparable to the activity of the general population.

4.2 The South-Western Meetings

This was a small group consisting of the Devon and Cornwall Meetings. It was another remote region, far from London, and with a strong self-identity in Cornwall, as noted in section 2.2 above. Both were small Meetings and together provided 2.6% of the marriages (959) but only 1% of the occupational records (103), an occupations-to-marriages ratio of 0.39. Cornwall was the smallest of the Quarterly Meetings by number of occupational records, with a total of 44 entries, which represented 0.4% of the total of 10,179. The total of

616 marriage records was 1.7% of the total of all such records. Thus, Cornwall, with a ratio of 0.26, was a prime example of one of those remote regions where full record keeping was not apparently seen as a priority. Devonshire was a smaller Meeting than Cornwall by numbers of marriage records but had more recorded occupations – although only producing 0.9% of the marriages, it provided 0.6% of the occupations.

In Cornwall the small number of records held does not allow any detailed analysis, but there was a paucity of records in the middle of the century. The size of the 1790 cohort, being bigger than that in 1710, indicated either a growth in the Meeting, which would be against the national trend of the Quaker movement, or an improvement in record-keeping (or at least the survival of records). A similar pattern is seen in Devon, though the 1790 cohort only equals the 1710 in size.

The Artisan class was the most numerous in the records and the most common employment class in both counties. Six out of the eleven Cornish artisans were concerned with shoemaking and tailoring, looking after the local population's basic need of personal warmth. In addition, some weavers appeared in Devon. In Cornwall there was some broadening of Quaker activity in the latter part of the century, notably into manufacturing in textiles and tin-plate and into retailing, where groceries and tobacco were noted. In Devon the manufacturing appeared earlier, being overwhelmingly textile-based and biased towards the first third of the century. Slightly strangely, the only textile-based commercial activity identified was William Fry, a mercer who married in 1798. Some retailing emerged in the later years, and that did include two drapers in Exeter, Samuel Morgan and John Dymond, who married in the 1780s.

The two counties of the deep South-West had artisan, manufacturing and retail-based occupational patterns. The artisan population tended to supply people's basic needs for clothing and footwear. Cornwall is a county of rugged landscapes and hard rocks, and the lack of agriculture is not surprising. Besides the tin-mining industry, china-clay extraction became important following the discovery, by the Quaker William Cookworthy, of how to make porcelain, a process long guarded by the Chinese.³³⁸ Devon had richer soils and was known for agriculture; in the early 1800s the government's Board of Agriculture carried out a review of the county to establish the current position and prospects for improvements as part of its nationwide survey (reference will be made later to the comparable surveys for Cheshire and Lancashire).³³⁹ They were both small Meetings with low occupational recording rates. The note of a tin-plate worker in Cornwall is another nod to Quakers' involvement in regional industries.

4.3 The West Midlands and Wales Meetings

This was a group of three Meetings covering the middle to northern England-Wales border but extended westwards to include Wales (a sparsely populated country as far as Quakers are concerned) and Eastwards to Leicestershire and Rutland. The latter two counties are normally regarded as being in the East Midlands but the Quaker structure joined them to

³³⁸ Penny Smith, 'Whitegold - William Cookworthy Celebrations 1705-2005', *Ceramics, Art and Perception*, 64 (2006), 80–86; A. L. Rowse, 'The Cornish China-Clay Industry', *History Today*, 17.7 (1967), 483–6; Raistrick, *Quakers in Science and Industry*, pp.202-10.

³³⁹ Charles Vancouver, *General View of the Agriculture of the County of Devon with Observations on the Means of Its Improvement* (London: Printed for Sherwood Neely and Jones, 1813). This is a reprint of the original 1808 book printed for Richard Phillips of London at the instigation of the Board of Agriculture and additionally contains comments received about the original text.

Warwickshire, and as they provided fewer records than Warwickshire, the combined Meeting has been taken with the West Midlands. The Meetings were all of a medium size although Cheshire & Staffordshire was almost twice the size of Herefordshire Worcestershire & Wales. Between them they contained just over 9% of the marriages (3,393) and provided 7.5% of the occupations (756), an overall occupations-to-marriages ratio of 0.8. This higher ratio than previously seen was expected as we moved closer towards London, but the Meetings were different. It is interesting, but not necessarily significant, that the trend in increasing number of occupations through the group as presented is reversed for the number of total marriages.

The remoteness of Wales at the time is demonstrated in the lower share of recorded occupations compared to the share of marriages (1.7% to 3.4%) in Herefordshire Worcestershire & Wales. What is more striking was the low absolute number of Welsh occupations recorded, only 11 of the 172 in the Meeting having a Welsh location. None of these eleven were in North Wales, though four were specifically located in the border county of Radnorshire and two in Montgomeryshire, both in mid-Wales. This suggests that the Welsh Quaker population was itself small. Warwickshire Leicestershire & Rutland was the first area, as we move closer to London, where there are more than a handful of records from the mid-century cohort. It showed 2.5% of the occupations (from 3.1% of the marriages).

Cheshire & Staffordshire provided 3.3% of the occupational records from 2.8% of the marriages. The occupations-to-marriages ratio is 1.16. In terms of the hypothesis presented here that recording of information reduces with distance from London, this appears anomalously high. Neighbouring Lancashire shows a ratio of 0.86, Derbyshire & Nottinghamshire 0.79 and Warwickshire Leicestershire & Rutland 0.81. Neither was there a

notably strong Quaker presence, as in Lancashire, that might have been a factor in encouraging compliance with data-recording requests, nor an obvious node of urban sophistication, either existing or emerging, such as Norwich, Bristol, Birmingham or Manchester. The existence of records was weighted towards the earlier years.

Agriculture was the largest presence in the region (219 entries), but this was due to the extremely high contribution from Cheshire & Staffordshire (165 entries). Artisans were slightly fewer (196 entries) but were more evenly distributed. In Herefordshire Worcestershire & Wales there were more records from the later years, and in this latter period the larger sectors, besides artisans, were manufacturing and retail. As well as artisans, manufacturing was the largest section in Warwickshire Leicestershire & Rutland, a pattern seen in both the 1710 and 1790 cohorts, although manufacturing was down in the 1750 cohort.

In Herefordshire Worcestershire & Wales, of the artisans in the 1790 cohort 4 were glovers, and of the 50 artisans over the century 16 were glovers with 11 operating after 1780. These 16 represent 17% of the 94 identified Quaker glovers in the database. This cluster appeared as a surprise, but it is claimed that Worcester and its hinterland produced 50% of the gloves made in England between 1790 and 1820 and that over 30,000 people were employed in the trade in the county.³⁴⁰ Well-known names such as Dents, established in 1777, were originally Worcester entities.³⁴¹ The manufacturing sector contained five ironmasters or founders, two

³⁴⁰ 'BBC - A History of the World - Object : Worcester Glove-Making' <<https://www.bbc.co.uk/ahistoryoftheworld/objects/ftRyzGHSdqjFiBLdgwGA>> [accessed 19 February 2020]; 'Worcester City Art Gallery & Museum - Spirit of Enterprise Exhibition - Glove Making', 2012 <<https://web.archive.org/web/20120217195702/http://www.worcestercitymuseums.org.uk/mag/spirit/spglov.htm>> [accessed 19 February 2020].

³⁴¹ *Our Story* (Dents Ltd) <<https://www.dentsgloves.com/pages/our-story>> [accessed 7 January 2021].

of whom were active around 1790. This appeared to be a solid presence for an apparently rural area but this Meeting included Quaker activity in Shropshire and the iron-making area around Coalbrookdale, and, latterly, the edges of the Black Country. It also covered the metal industries of South Wales, and of the few Welsh entries, one was an iron master in Llanelly and another an ironmonger. However, the emergence of Wales as an industrial region is limited to South Wales and is more a nineteenth-century phenomenon.³⁴²

The Warwickshire Leicestershire & Rutland activity illustrated the growth of Birmingham as an economic centre, with a pattern of a Quaker artisan community taking part in a developing city and in emerging economic sectors. Outside Birmingham traditional activity carried on, represented by weaving and textiles, with Coventry being noted for silk products.³⁴³

Artisans, the largest group, contained 15 weavers, 22 clothing-associated trades and 16 metal industry trades (with another 6 bucklemakers, clockmakers, locksmiths and spademakers).

Of these, only one was noted as being based in Leicestershire or Rutland. The weavers appeared throughout the century, as did the clothing trades. Of the metal and associated trades, 14 were in the latter part of the period. This was an indicator of the growing importance of the metal trades in the Birmingham area as the eighteenth century progressed.

Eric Hopkins quotes CW Chalkin as Birmingham grew from a population of 5,000-7,000 in 1700 to 23,688 in 1750, and then CM Law for further growth to 40,000 in 1775, when only London and Bristol were larger.³⁴⁴ By 1801 Tony Wrigley considers Birmingham the fourth

³⁴² Neil Evans, 'Two Paths to Economic Development: Wales and the North-East of England', in *Regions and Industries – A Perspective on the Industrial Revolution in Britain*, ed. by Pat Hudson, (Cambridge: Cambridge University Press, 1989), pp.201-4.

³⁴³ Marie B. Rowlands, *The West Midlands from AD1000*, (Harlow: Longman 1987), A Regional History of England series, p.220

³⁴⁴ Hopkins, *Birmingham*, pp.20-21; C. W. Chalklin, *The Provincial Towns of Georgian England: A Study of the Building Process, 1740-1820*, (London: Edward Arnold, 1974), *Studies in Urban History*, 3, p.22; C.M. Law, 'Some Notes on the Urban Population of England and Wales in the Eighteenth-Century', *The Local Historian*, 10.1 (1972), 13-26.

largest urban area in England with 74,000 people, having been less than 12,000 in 1700, a figure supported by Maxine Berg.³⁴⁵ Interpreting these points, manufacturing showed a similar pattern to textiles with a presence through the century and metals appearing later. The appearance of button manufacturers in the later years (part of the well-known Birmingham ‘toy’ trade) was another mark of the local industrial development.³⁴⁶ The commercial activity was wider than the textile/metal concentration in the ‘making’ fields, but of the 28 entries, 15 were in metals and textiles. There was a slant towards the later years, as commerce became more developed and important in the United Kingdom economy, but there was an early presence in the dealing of iron and textiles, which presages later developments in both sectors. In the food sector there was a preponderance of bakers, a trade that was spread across the Meeting. The retail sector in the Meeting grew from the mid-century on, over 50% of it being food-related. Textile retailing was smaller and was equalled by the druggists, both trades appearing in the later years.

Cheshire & Staffordshire was one of the Meetings where agriculture was the largest occupational sector, being twice as large as artisans. The agriculture was evenly split between animal husbandry and yeomanry, with both activity streams appearing across the time period. The nomenclature suggests conservative farming practices, but there are five farmers, one in 1735 and the others between 1789 and 1806. There was a range of artisan activity, with weavers (21) and shoes and clothing (21) being the two largest sectors.

³⁴⁵ Wrigley, *People, Cities and Wealth*, p. 160; Maxine Berg, ‘Commerce and Creativity in Eighteenth-Century Birmingham’, in *Markets and Manufacture in Early Industrial Europe*, ed. by Maxine Berg (London: Routledge, 1991), pp.180-83.

³⁴⁶ Possibly the most famous example of the developed toy trade is Matthew Boulton’s Soho Manufactory, see for example Peter M. Jones, *Industrial Enlightenment: Science, Technology and Culture in Birmingham and the West Midlands 1760-1820* (Manchester: Manchester University Press, 2013), pp.48-57. The development of the Birmingham jewellery quarter should be considered too.

Working with wood (10) and metal (9) was also present. Unusually wheelwrights (7) formed the majority of the woodworking activity. As is now expected, textiles were well represented in the manufacturing sector, covering 15 of the 32 entries. Leather and furniture accounted for another ten between them. Of note was the presence of three soap boilers, although the rise of the salt-based alkali soap industry (which led to the presence of such firms as Lever brothers on the Mersey) did not occur until the nineteenth century.³⁴⁷ In the retail sector, food was the largest contributor with 13 entries, with six of these making up three-quarters of the post-1770 retailers in the Meeting, an example of the Quaker move towards the food sector in the latter part of the period. Though Cheshire is linked with Staffordshire through its Quaker meeting only 20 of the 332 entries were specifically located in Staffordshire, and Cheshire had strong commercial links with southern Lancashire through its developing manufacturing industry based on its salt beds and its food supplies to Manchester.³⁴⁸

This was a diverse area. Herefordshire Worcestershire & Wales had artisans as its largest sector, including a cluster of glovers based in Worcester, at that time a national centre for the industry. The manufacturing sector was boosted by the inclusion of the iron-based industry located in Shropshire, which was included in the Meeting. Warwickshire Leicestershire & Rutland was also artisan-based, but in this case the growing and industrialising city of Birmingham was the driver, with smiths, platers and a bellows maker clearly representing the metal industries. There was also a textile industry presence, for which Coventry was a centre. The Coventry industry survived into the nineteenth century by specialising in silk

³⁴⁷ T. C. Barker, R. Dickinson, and D. W. F. Hardie, 'The Origins of the Synthetic Alkali Industry in Britain', *Economica*, 23.90 (1956), 158–71.

³⁴⁸ Jon Stobart, *The First Industrial Region, North-West England c1700-60*, (Manchester: Manchester University Press, 2004), pp.108-11, 211.

ribbons.³⁴⁹ Outside their industrial borders, Cheshire & Staffordshire were agricultural counties, with supporting artisan sectors, though they also had presences in the textile sector. The Quaker activity clearly supports the diverse local specialisations.

4.4 The East Midlands Meetings

The East Midlands was a region of three Meetings that were small in numbers but covered an area which extended to the North Sea coast of Lincolnshire. Nottingham was the only significant urban centre, with a population rising from between 5,000 and 7,000 in 1700 to 29,000 in 1801.³⁵⁰ The region accounted for 4.5% of the marriage records (1,630) and 2.6% of the occupations (265), giving an occupations-to-marriages ratio of 0.58 – an indication of a population relatively untouched by the bureaucracy of the Society of Friends.

Northamptonshire was itself a small contributor to the records and showed a greater proportion of marriage records (1.4% of the total) than occupations (0.5%). Lincolnshire also reflected the region in showing occupational recording that is lower than marriage recording, with the county providing 0.9% of the occupations but 1.6% of the marriages. Derbyshire & Nottinghamshire provided 1.2% of the occupations and 1.5% of the marriages, and although the most complete in the region, it was still low in recording occupations. The region was biased towards the later years in occupational recording, though this trend was not as visible in Lincolnshire.

³⁴⁹ Peter Searby, ““Lists of Prices” in the Coventry Silk Industry, 1800-1860’, *Bulletin of the Society for the Study of Labour History*, Number 27 (1973), 39–53.

³⁵⁰ Wrigley, ‘Urban Growth’, p.686.

Northamptonshire was the second smallest county for recording occupations after Cornwall, and similar comments to those applying there can be made. However, it should be noted that agriculture played a significant role and that retail had not made as much impact. The agricultural contribution only appeared after 1772 and included eight people using the more modern designation of Farmer. A particular factor in the emergence of an agricultural presence in Northamptonshire was a local deindustrialisation in textiles resulting from the mechanisation of the textile industry in Yorkshire, which forced some people back onto the land.³⁵¹ Amongst the artisans there were eight shoemakers, again weighted towards the end of the century. This reflected the growing importance of Northampton and its surrounding villages as a centre of the growing ready-to-wear footwear industry.³⁵² Food sector entries also appeared later in the century and are mostly connected to the basic essentials of bread (bakers) and beer (brewers).

Lincolnshire today is regarded as a substantial agricultural county, and over the eighteenth century Agriculture was the largest group, although not amongst the 1710 Quakers.³⁵³ After 1750 Lincolnshire agriculture began to see modernising practices adopted, which increased efficiency.³⁵⁴ Additionally, greater acceptance of Quakers (see section 3.3.1) had reduced the barriers to Quaker agricultural participation. This explains the emergence of five Quaker agriculturists in a population of eight in the 1790 cohort. As we have seen in other

³⁵¹ Shaw-Taylor and Wrigley, 'The Occupational Structure of England', pp.18-20.

³⁵² R. A. Church, 'Labour Supply and Innovation 1800–1860: The Boot and Shoe Industry', *Business History*, 12.1 (1970), 25–46.

³⁵³ 'Total Income from Farming in the East Midlands of England', *GOV.UK*

<<https://www.gov.uk/government/statistics/total-income-from-farming-for-the-regions-of-england/total-income-from-farming-in-the-east-midlands-of-england>> [accessed 30 March 2023].

³⁵⁴ John V. Beckett, *The East Midlands from AD1000*, (Harlow: Longman 1988), *A Regional History of England* series, pp.122-3.

counties, the artisans were broadly occupied with clothing activities, and the retail activity, which was comparatively rare at that time, concerned the supply of candles.

In Derbyshire & Nottinghamshire, as the Meeting and cohort size increased over time, the patterns of employment began to emerge. The early-years cohorts were still small but in 1790 there was a sign of bias towards manufacturing, with a sizeable contribution from agriculture and artisan work, too. In the manufacturing sector there was a concentration of activity around frame knitting, with 14 of the 22 national entries under this heading being within the Meeting. Another 10 of the 33 employed in manufacturing were connected to the wool industry. Frame knitting was an early instance of mechanisation within the textile industry and was a factor in the development of the East Midlands hosiery and lace industries.³⁵⁵ Retailing was heavily tilted towards the grocery trade and, although not a large component of the Derbyshire & Nottinghamshire 1790 cohort, was a trade that was seen amongst Quakers nationally in the latter half of the period.

Northamptonshire and Lincolnshire were primarily agricultural counties, though the data in Northamptonshire was skewed towards the later years. This skewing reflects data arising after a reported deindustrialisation in the county arising from the development of the textile industry in West Yorkshire. The emergence of a boot and shoe industry has been noted, too. These patterns in Northamptonshire track the very specific economic conditions in the county later in the century. Derbyshire & Nottinghamshire was more industrialised, with a local specialisation in frame knitting. The artisan sector was fragmented, including contributions from weaving, metal work and shoemaking. Again, the Quaker activity is in line with

³⁵⁵ Ivy Pinchbeck, *Women Workers in the Industrial Revolution* (London: Routledge, 2004), p.209; Beckett, East Midlands, pp.157-8

regional activity, agriculture becoming established in Lincolnshire, and frame knitting appearing in Derbyshire & Nottinghamshire.

4.5 The Southern Region Meetings

The Southern region, as defined in this study, covers the area between the South-West, the West Midlands, the Home Counties and the English Channel. It contained three Meetings, Dorset & Hampshire, Gloucestershire & Wiltshire and Berkshire & Oxfordshire, all of which were comparatively large, the latter two being the largest Meetings outside the 'large' Meetings. This region accounted for 10.3 % of the marriages (3,760) and 12.3% of the occupations (1,257). The influence of the large, and relatively proximate, Quaker communities of London and Bristol appeared to be having an effect, as shown by an occupations-to-marriages ratio of 1.20 – showing that the recording of occupations was more complete than in the more remote regions previously discussed. The Dorset & Hampshire Meeting was a Meeting close in size to the national median of the number of occupations recorded. A comparable Meeting for occupation and total marriage numbers was Warwickshire Leicestershire & Rutland, but the former showed fewer records in the decade cohorts. This implies a more regular spread of recordings across the century and thereby a more consistent membership pattern. The occupational recording pattern was similar to the Warwickshire Leicestershire & Rutland too, with 3% of the marriages (1,110) providing 2.6% of the records (261).

Gloucestershire & Wiltshire Meeting had 415 recorded occupations from 1,255 marriages. These were 4.1% and 3.4% respectively, giving an occupations-to-marriages ratio of 1.19.

This ratio was less than that for neighbouring Berkshire & Oxfordshire, which is expected, given the greater distance from London. It is slightly higher than Bristol & Somerset, which the pure distance criterion would predict. However, Bristol was one of the five biggest cities in England throughout the century.³⁵⁶ As such, a higher rate of recording might have been expected – but Somerset was a relatively distant and undeveloped county. It is also likely that some of the Gloucestershire & Wiltshire recording was influenced by the sophistication of urban Bristol, as places such as Bedminster and Brislington, which are now Bristol districts, were included.

Berkshire & Oxfordshire contributed 3.8% of the marriages (1,395). It is a combination of two counties in the outer hinterland of London and was unremarkable in Quaker geography and history. But it provided 5.7% of the occupational records (581). This Meeting was the largest one outside the large Meetings and its 5.7% of occupations was a jump from second-ranking Gloucestershire & Wiltshire with 4.1%. These figures give it an occupations-to-marriages ratio of 1.5, the third largest behind London & Middlesex and Buckinghamshire. This indicates very strong record-keeping, as would be expected from the proximity to London. The relative sizes of the time cohorts here also indicated this, with a large mid-century showing.

Although comparable in size to Warwickshire Leicestershire & Rutland, Dorset & Hampshire did not contain a fast-growing urban centre comparable to Birmingham, the major centres of Quakerism being Alton (42 records), Poole (35) and Southampton and surrounding villages (36). Occupationally, manufacturing was the largest sector, followed by artisans. Of the 68

³⁵⁶ Wrigley, *People, Cities and Wealth*, p.160.

manufacturers, 43 were concerned with textiles, with another 5 in the related field of hat making. The only other significant activity was leather working (13 records). The artisan trades were more wide-ranging, although there were 7 weavers and 6 tailors. The patterns did not appear to change with time. Commercial activity appeared more commonly in later years, in the guise of general merchants and meal or corn sellers. Earlier commercial activity was weighted to cloth-selling. Most retail activity appeared in the latter years of the period, half of it being related to textiles through drapery, haberdashery and stay-making. The level of druggist activity was higher than seen elsewhere at 7 of 39 entries. The picture of this Meeting is one of little change with time, although there was some swing to commercial activity in the later years. The major focus appeared to be the textile sector, although the industry has been seen as one in decline in these counties.³⁵⁷ The acknowledged status of the port of Poole is shown by the community of merchants and mariners located there.³⁵⁸

In Gloucestershire & Wiltshire the occupational profile of the area showed a strong bias towards manufacturing and artisans, although agriculture too was significant. The records were noticeably biased towards the earlier years. Dealing with agriculture first, the sector was largely made up of yeomen. Of the 51 yeomen, only 5 appear in the latter part of the century, where there is also 1 farmer. Animal farming was spread throughout the period, represented by 4 graziers and a husbandman in the latter part, and 12 husbandmen and 1 grazier in the early part, and a lone husbandman in the mid-years. Manufacturing and artisans were dominated by textiles. In his discussion of the decline of the Norwich textile industry, Keith Sugden acknowledges the importance of Gloucestershire as a textile area

³⁵⁷ J. H. Bettey, *Wessex from AD1000*, (Harlow: Longman, 1986), A Regional History of England series, p.189

³⁵⁸ Bettey, *Wessex*, p.188

specialising in broad cloth as does Adrian Randall.³⁵⁹ Of the artisans, 39 were weavers, of which 26 were specifically broad weavers. Of the 103 manufacturing entries, 75 were concerned with textiles, of which 62 were involved in wool preparation and thread and cloth making. 39 of these 62 were from the early part of the century and only 6 from the later. Amongst the artisans there was the usual population of clothing and shoemakers, 26 in all, of which 18 were from the earlier years. Given the preponderance of the early years' occupational records, the appearance of three grocers, four general retailers and two druggists in the later years of the century does suggest that these sectors were areas of relative popularity for work then. The pattern of drapery and textile retail activity held up through the century, too. The Gloucestershire & Wiltshire food activity (49 entries) was dominated by bakers (23) and maltsters (22), both activities occurring throughout the century. The commercial sector in this Meeting was not as large as artisans or manufacturing, but still accounted for 39 entries. There were 15 merchants, spread across the century, an activity undoubtedly influenced by the nearby presence of the major port of Bristol. There were also 13 cloth sellers, which is unsurprising given the local cloth production activity. The disappearance of these sellers by 1754 also reflected the reduction in manufacturing and weaving activity. Among the remaining entries there were sporadic appearance by five meal sellers and three ironmongers.

Artisans were the largest category in Berkshire & Oxfordshire, followed by Agriculture. The artisans were widespread across the counties, with few appearing in larger towns such as Reading. Shoemakers made up 56 of the total of 176 and were spread across the century, but

³⁵⁹ Sugden, 'Clapham Revisited', pp.203-4; Adrian R. Randall, 'Work, Culture and Resistance to Machinery in the West of England Woollen Industry', in *Regions and Industries – A Perspective on the Industrial Revolution in Britain*, ed. by Pat Hudson (Cambridge: Cambridge University Press, 1989), p.175.

the tailors were less common with only 17 appearances, all but one marrying before 1760. Weaving provided a solid contribution of 24, again weighted towards the first half of the century, and carpentry, including wheelwrights, coopers and turners, gave 31 entries across the century. Metal working was represented by ten blacksmiths. There was an unusual cluster of 19 clock and watch makers located in Oxfordshire, including 4 early examples predating 1750.³⁶⁰ This is 1 in 7 (14.5%) of the national population of Quaker timepiece makers. The agricultural population was spread across the century, although the mix changes with time. Husbandmen declined in numbers after 1750, and graziers had disappeared by then. Yeomen persisted through the century and the small number of six farmers appeared from 1720 onwards. The food sector was larger than in other Meetings and showed the common occupations of maltster, miller and baker. The time pattern of these occupations reflected that seen elsewhere too, with bakers being weighted to the second half of the century and maltsters and millers in the first half. The connection between the agricultural and commercial sections was clear, with 44 of the 73 commercial records being for mealmen (and another for a corn dealer). They were spread across the century. There was also a solid cloth-selling presence of 20 entries, and another for thread-selling, these being concentrated in the first half of the century. The manufacturing sector was relatively small at 64 records, of which 52 related to textiles in some way. The well-known Witney blanket industry is represented by 12 of these entries. Alfred Plummer has twice surveyed the industry through the lens of the records of the Witney Blanket Makers Company, a late-appearing trade guild.³⁶¹ He notes that the Master of this Guild in 1711 was Thomas Early, a 'robust, active,

³⁶⁰ Tim Marshall, 'Quaker Clockmakers', in *Quakers, Business, and Industry: Quakers and the Disciplines: Volume 4*, ed. by Stephen W. Angell and Pink Dandelion (Longmeadow, MA: Full Media Services, 2017), pp. 37–100; Tim Marshall, *The Quaker Clockmakers of North Oxfordshire* (Ashbourne: Mayfield Books, 2013).

³⁶¹ Alfred Plummer, *The Witney Blanket Industry: The Records of the Witney Blanket Weavers* (London: George Routledge and Sons, 1934); Alfred Plummer and Richard E. Early, *The Blanket Makers, 1669-1969: A History of Charles Early & Marriott (Witney) Ltd* (London: Routledge & Kegan Paul, 1969).

Quaker kind of man'. Thomas Early is not recorded in the surviving Quaker marriage records though. Retail was also a smaller sector of 42 entries, spread across the century and across food and cloth, though with contributions from general retailers and druggists with some other specialised traders.

This region was strong in textile manufacturing, although Dorset & Hampshire with its distributed textile industry differed from Gloucestershire & Wiltshire, which specialised in broadcloth, and the presence in the Witney blanket industry is notable. Dorset & Hampshire showed weavers among its artisans, and textiles appeared in its retail sector. Additionally, there was a cluster of merchant activity based around the port of Poole in Dorset, which was a significant port at that time. Berkshire & Oxfordshire was based around artisan and agricultural activity, with a population involved in food processing as maltsters, millers and, later, bakers. The emergence of Reading as a major urban centre and the home of the Quaker food business Huntley & Palmers did not happen until the nineteenth century.³⁶²

4.6 East Anglian Meetings

East Anglia was a large geographic region of four Meetings. Norfolk & Norwich and Suffolk are often regarded as comprising East Anglia, but the fen country of Cambridgeshire is an integral part, too. These days Essex is more normally associated with London, but in the eighteenth century before London's expansion, it was a rural county at the base of the East Anglian land jutting out into the North Sea. In the earlier eighteenth century, Norwich was

³⁶² Nicholas Burton, Donncha Kavanagh, and Martin Brigham, 'Religion, Organization and Company Law – a Case Study of a Quaker Business', *Management & Organizational History*, 14.4 (2019), pp.323-8; Corley, *Quaker Enterprise in Biscuits*.

England's second city and remained in the top ten until 1801; Great Yarmouth was the seventeenth largest town even in 1750.³⁶³ The region contributes 8.2% of the marriages (3,013) and 8.8% of the occupations (891). The occupations-to-marriages ratio of 1.06 is in line with the proximity to London model. Cambridgeshire & Huntingdonshire showed a time distribution of occupational entries approximating to the national pattern, with more early entries and few in the mid-century. It showed a greater contribution to the occupational records than the total marriage records (0.9% and 0.8%, respectively), giving a county ratio of 1.12. Suffolk was a well-recorded county, its total of 142 recorded occupations being 1.4% of the total, although it only provided 1.1% of the marriages, a ratio of 1.26. That completeness of recording is reflected in the relative sizes of the 1710 and 1790 cohorts, whose proportions of 100% and 52% were the closest approximation yet to the national population of 100% and 61%. However, there was again a dearth of mid-century data. Essex was unusual in that it was a Meeting close to London with a lowered occupational recording rate. Although providing 2.7% of the occupations (270), these came from 3.1% of the marriages (1,119). This is an occupations-to-marriages rate of 0.87, compared to neighbouring Meetings of 1.66 (London & Middlesex), 1.16 (Bedfordshire & Hertfordshire), 1.12 (Cambridgeshire & Huntingdonshire) and 1.26 (Suffolk). Essex was also unusual in showing a relatively strong contribution to its occupational records from the 1750 cohort, its 1750 cohort of 21 being 7.8% of the county's total occupational records, a proportion exceeded only by Berkshire & Oxfordshire. Norfolk & Norwich had 387 occupations recorded, which is 3.8% of the total. These came from 3.3% of the marriages (1,194). So, the occupations-to-marriages ratio is 1.16, indicating that Norfolk & Norwich was one of the counties with a higher occupational recording rate. This was lower than Suffolk to the south,

³⁶³ Wrigley, 'Urban Growth', p.686.

but higher than in neighbouring Lincolnshire and Cambridgeshire & Huntingdonshire. The difference from Suffolk was predicted by the distance/recording rate model suggested in this thesis, but the higher ratio than in its other neighbours requires explanation. Norwich was the second English city in the early eighteenth century, and was a sophisticated mercantile society accustomed to record-keeping.³⁶⁴ This status showed in the weighting of records towards the earlier part of the period, which was challenged later as the northern cities began to grow.

Cambridgeshire & Huntingdonshire was dominated by artisanal and agricultural activity in the earlier part of the century. Of the artisans four were shoemakers and tailors, and the others were supportive of the local agriculture by providing smithing or carpentry services. The agriculture was not concentrated in any one activity. At the end of the century, the disappearance of agriculture was notable, although the Food sector contained two maltsters. Within the Artisans group two thatchers made a notable appearance, possibly indicating the emergence of specialised construction trades.

Over the century Suffolk showed a high population of artisanal workers, with substantial contributions from retail, agriculture and food and a slightly lesser manufacturing sector. The two largest sub-sectors for artisans were shoemakers and weavers, although the weavers had disappeared after 1768. The sample of retailers appearing in the cohorts was small. However, general shopkeepers, a third of the retail population, appeared throughout the century in the county, with more specialist retailers such as grocers and drapers appearing more frequently later. The agriculturalists were more numerous in the earlier years, as were those employed in the food sector. Half of the food occupations, maltsters and millers, were

³⁶⁴ Wrigley, *People, Cities and Wealth*. p. 160.

connected to agriculture. The manufacturing activity was not concentrated in any specific sector, but participants were more numerous in the latter years – as in retailing, the time cohorts do not reflect this. A notable name listed here is Robert Ransome of Ipswich who married in 1802, now listed as an ironfounder, having been earlier listed in Norfolk & Norwich as an ironmonger. He received a patent in 1785 for cast-iron plough shares and became well-known as an agricultural equipment manufacturer following his move to Ipswich in 1789.³⁶⁵

In common with several other Quarterly Meetings, occupations in Essex were weighted towards agriculture and artisans, although there was a larger retail sector here than in other neighbouring Meetings. The commercial sector was smaller. The agricultural sector contained 34 farmers, 19 husbandmen and 14 yeomen, with a high proportion of entries using the ‘farmer’ designation. The earliest of these appeared in 1699, although the rest are spread from 1743 onwards. Following suggestions made earlier in this thesis (in 3.3.1), I suggest that this indicates a modern approach to farming, and J.R. Wordie suggests that Essex was in the vanguard of agricultural enclosure (and therefore potential modernisation) in the seventeenth century.³⁶⁶ Artisan trades were widespread, and the major sector contributors are spread through time, too. Carpentry was the largest sector with 17 of the 61 entries, followed by clothing (15) and weavers (10). The appearance of nine braziers was a rare concentration of a metal-based trade. The weavers fed into the manufacturing sector, as 23 of the 32 records were in the textile industry, although that industry was reducing its activity after 1770. The cluster of braziers was reflected in the sole metal manufacturer noted – a brass founder.

³⁶⁵ George E. Fussell, ‘Ploughs and Ploughing before 1800’, *Agricultural History*, 40.3 (1966), p.186.

³⁶⁶ J. R. Wordie, ‘The Chronology of English Enclosure, 1500-1914’, *The Economic History Review*, 36.4 (1983), pp.488-94.

The retail contingent in the county was larger than in other comparably sized Meetings and mostly appeared after 1750, with 28 of the 51 entries being after 1770. The items being sold were mainstream, there being 21 general retailers, 12 grocers and 11 drapers among the 51. The final sector of note is that pertaining to food. In the earlier period maltster was a favoured occupation, although it had disappeared by 1770. After 1750 milling appeared and was joined by baking after 1760. There were 13 millers, 10 maltsters and 8 bakers in the county's total of 36 food-related occupations. Overall, Essex showed a picture of traditional occupations dominated by textiles and agriculture. However, the emergence of modernised, enclosed agricultural practices together with the group of food processors (maltsters and millers) and the retailers suggests some modern economic thinking existed in the county. This is likely to have been influenced by increasing interaction with the growing market represented by London.

The status of Norwich also informed the occupational distribution in Norfolk & Norwich. The three largest sectors were artisan, manufacturing and retail. Examination of the artisan and manufacturing communities in Norfolk & Norwich shows the importance of the wool trade – at least earlier in the period. Of the artisans, 107 were weavers, of whom 79 were married before 1730. Of those 107, 94 were specifically identified as worsted weavers. Worsted is a type of woollen thread produced by combing the wool to use longer fibres.³⁶⁷ It was used for hosiery and for weaving the higher-quality cloth often used for tailoring. Keith Sugden has published a recent review of the decline of the Norwich wool industry.³⁶⁸ He concluded that a significant decline began in the second half of the eighteenth century, before the mechanisation of the Yorkshire industry. One factor involved was the loss of exports to

³⁶⁷ S.D. Chapman, 'The Pioneers of Worsted Spinning by Power', *Business History*, 7.2 (1965), p.97.

³⁶⁸ Sugden, 'Clapham Revisited'.

Europe and North America due to the impact of the Seven Years War of 1754-63, and the later American War of Independence (1775-83).³⁶⁹ A second factor was the substitution of printed Lancashire cottons for Norwich worsteds, both domestically and in exports.³⁷⁰ The retail sector was relatively concentrated. Textiles and clothing were spread throughout the period and comprise 23 of the 51 entries. The numbers of druggists (7), grocers (12) and general retailers (9) were of similar sizes, and only the druggist section, a late emergence, shows any change over time. Merchants made up just over half of the commercial sector and were present throughout the period, a reflection of Norwich's importance as a city. Specific textile-selling was a smaller presence than might be expected at 3 of 24 entries, all of whom were in the early and middle parts of the century. A cluster of 5 ironmongers appeared late in the century, two of whom are Robert (1782) and Thomas (1778, 1784) Ransome of Norwich and John (1778) Ransome of Walsingham. Ransome was not a rare name among the Norfolk & Norwich Quakers. Another John Ransome, who has not appeared in the marriage registers, was an ironmonger in North Walsham who went bankrupt in 1800 after a previous near miss with failure in 1789.³⁷¹ Robert also made a later appearance in Suffolk (see above) as an ironfounder.³⁷² Again there was some connection between the food (21 entries) and agriculture (33) sectors. Agriculture, unusually, showed some weighting to the latter end of the period with 16 entries for farmers, of whom 14 were after 1770. Two graziers were also late entries, and the yeomen and husbandmen were spread across the period. In the food sector the ten millers and maltsters were more prevalent early on, but the seven bakers were spread throughout.

³⁶⁹ Sugden, 'Clapham Revisited', pp.206-7; Elizabeth Schumpeter, *English Overseas Trade Statistics, 1697-1808* (Oxford: Clarendon Press, 1960).

³⁷⁰ Sugden, 'Clapham Revisited', pp.217-8.

³⁷¹ Stevens, 'A Believing People', pp.66-7.

³⁷² Raistrick, *Quakers in Science and Industry*, p.210.

Cambridgeshire & Huntingdonshire was an agricultural Meeting, as was Essex. Agriculture appeared in Suffolk earlier in the century. All three counties also had strong artisanal sectors, often supporting the agriculture, but Suffolk and Essex had some weavers, and Essex possessed a cluster of braziers. Essex Quakers did expand their activity into food processing, possibly to feed the London market. The occupational profile of Norfolk & Norwich was overwhelmingly textile based with manufacturing and artisanal weavers, but with some retail input. This was due to the influence of the significant urban centre of Norwich. The Norwich worsted industry was a major source of English exports but declined in the later years of the eighteenth century as the West Yorkshire wool industry became organised, industrialised and, eventually, mechanised. This was a factor in the weighting towards agriculture seen at the end of the century.

4.7 The Home Counties Meetings

For the purposes of this analysis, the Home Counties cover Bedfordshire, Buckinghamshire and Hertfordshire – the region bordering outer London to the North-West. It was made up of two Meetings and provided 2.9% of the marriages (1,058) and 3.9% of the occupational records (394), giving a regional occupations-to-marriages ratio of 1.34. This is comparatively high, implying strong recording of data and recognition of bureaucracy, and is a consequence of the closeness and influence of London. Bedfordshire and Hertfordshire were joined together in one Meeting and provided 1.6% of the marriages (585) in the database but 1.9% of the occupations (189), a local ratio of 1.16. This was a Meeting with a larger

agricultural component and significant presences in the artisan and food sectors, but also in retail and commercial. The pattern of its records was biased towards the earlier years.

Buckinghamshire was a neighbour to Bedfordshire & Hertfordshire and, therefore, would be expected to show some similarities – and these were evident as it also had a relatively high rate of recording occupations. The county provided 2.0% of the occupations (205) from 1.3% of the marriages (473), a local ratio of 1.56, which is second only to London. Of the 205 recorded occupations, 105 were either agricultural (59) or artisanal (46). Its records, too, were weighted towards the early years.

In Bedfordshire & Hertfordshire agriculture was the leading sector, followed by artisans. The designation of ‘farmer’ made three early appearances in the 1710 agricultural cohort in the Meeting and was common throughout the century. I have previously suggested in section 3.3.1 that the use of ‘farmer’ indicates a modern approach to agriculture. The precise definition of the English agricultural revolution has been disputed, like that of the industrial revolution. Traditionally it has been taken to be associated with field enclosure in the later eighteenth century, but in the 1990s this view was challenged by writers including Robert Allen, by a suggestion of an earlier change arising from smaller farmers to increase their productivity.³⁷³ Other writers, notably Mark Overton, sought to re-establish the status quo.³⁷⁴ One aspect of modernity which Allen referred to was the new usage of the turnip crop – although he suggested that the change provided little impact on productivity. Overton

³⁷³ Rowland Edmund Prothero, Baron Ernle, *English Farming: Past and Present*, 6th ed (London: Heinemann Frank Cass, 1961); Robert C. Allen, ‘Tracking the Agricultural Revolution in England’, *The Economic History Review*, 52.2 (1999), 209–35.

³⁷⁴ Mark Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500–1850*, (Cambridge: Cambridge University Press, 1996), Cambridge Studies in Historical Geography.

provided figures for Hertfordshire which included areas of land made over to turnips, and also provided an explanation for their impact in the later eighteenth century.³⁷⁵ It is not part of this thesis to comment on the arguments around the agricultural revolution, but these factors of terminology and crop presence do suggest that Quaker agriculturalists in Hertfordshire were thinking and working in newly modern, productive ways. The artisan population contained the expected contribution to clothing and shoeing the population, but also had a metal-working sector in the later years, which included gold- and silver-smithing as well as the more mundane blacksmithing and brazing. The food sector contained agriculture-related maltsters and millers, but bakers were common, and a brewer appeared in the 1790s. The commerce activity in the counties declined with agriculture, being initially connected with dealings in corn and meal – though an ironmonger was listed. Quaker retailers in the area changed in character from food-weighted sellers in the early years to drapers in the later years. This is slightly unusual in that other Meetings saw grocers appearing later.

Buckinghamshire, too, showed agriculture as the largest activity, again followed by artisans. But here only one person amongst the agriculture records was listed as a farmer, rather than as the older yeoman or husbandman designation. This suggests a more conservative community than in Bedfordshire & Hertfordshire. Of the artisans 18 were concerned with clothing and shoes and 17 with construction. In the construction group there was a cluster of 6 bricklayers, which is notable as there are only 33 within the entire database. The commercial activity in the county was connected with agriculture, with 16 of the 29 entries being meal sellers, including 2 each in the 1710 and 1790 cohorts. The retail sector primarily consisted of general retailers, but grocers made an appearance in the latter years.

³⁷⁵ Overton, *Agricultural Revolution in England*, pp.94, 99-101.

The Home Counties Meetings were both agricultural in nature, with the commercial activity of corn and meal selling being linked to it. These counties were close enough to London to act as suppliers to that community. In Bedfordshire & Hertfordshire the commercial activity declined with the decline in agricultural numbers. In addition to the expected clothing and shoemaking groups the artisan sectors contained a later metal-working group in Bedfordshire & Hertfordshire and a construction activity group in Buckinghamshire, both reflecting changes in activity in a modernising economy. Retail was a constant presence in both Meetings, though food was present early in Bedfordshire & Hertfordshire (where it was supplanted by textiles) and later in Buckinghamshire – the more normal pattern. General retail was the early Buckinghamshire norm.

4.8 The South-Eastern Meetings

The South-East was the area immediately South of the River Thames in the environs of London, and in the South-East of England. There were two Meetings, Kent and Sussex & Surrey. The latter contained districts such as Southwark and Bermondsey which are now deeply integrated into London, and even then were being influenced by the city across the river.³⁷⁶ The region was home to 4.5% of the occupations (454) and 3.4% of the marriages (1,252), giving an occupations-to-marriages ratio of 1.30. This, again, is high, but not unexpected for a region close to the capital. Kent was a small Meeting where the 85 occupational records were weighted to the end of the century. It provided 0.8% of the occupational records, but only 0.6% of the marriages (211). The occupations-to-marriages

³⁷⁶ Peter Brandon and Brian Short, *The South East from AD1000*, (Harlow: Longman (1990), A Regional History of England series, pp.252-6.

ratio of 1.45 shows it as unusual in being a small Meeting with a strong recording ethic, which is consistent with the closeness-to-London pattern found here. Sussex & Surrey contained 369 occupation records, 3.6% of the total. These came from 2.8% of the marriages (1,041), a ratio of 1.27 – a higher value predictable from the proximity to London. The records were weighted towards the earlier part of the period.

In Kent a range of occupations was visible, although regional historians concentrate on the agriculture of the South East, except for Wealden iron.³⁷⁷ Artisanal work formed the largest share. Although tailoring and shoemaking were a sizable portion of this artisan group (8 of the 26), there were also 9 metal workers (blacksmiths, braziers and a goldsmith) and 5 carpenters. Of the carpenters 3 were listed as from Margate, and another from Dover. In 1701 Margate was the second largest maritime centre in Kent (after Ramsgate), although Dover's maritime activity increased during the eighteenth century.³⁷⁸ Therefore, it is possible to surmise that these carpenters were involved with maritime activity. Supporting this postulate, the 'Other' category is comprised of mariners, one of whom is listed as from Margate. The second largest sector of activity was that of retail. Here drapers comprised the largest sub-sector (9 entries) followed by grocery and general retailers (6 entries). The Kentish manufacturing activity is spread across saddlery, textiles and pattern making.

The Sussex & Surrey Meeting still had a high agricultural leaning, but there was a comparatively large commercial sector. As noted above, this was a result of the influence of the City of London lying across the River Thames from locations such as Southwark and Bermondsey, which were still part of Surrey at this time. The food sector was larger than has

³⁷⁷ Brandon and Short, *The South East*, pp.202-66.

³⁷⁸ Sarah Palmer, 'Kent and the Sea', *Archaeologia Cantiana*, 128 (2008), p.267.

been seen elsewhere but was based in the more rural parts of the area and connected to agriculture, which was spread across both counties and across all time periods except that Farmers were weighted to the later years. There were 55 husbandmen, 28 yeomen and 18 farmers, of whom 10 appeared in or after 1770. Artisans were, as previously seen, commonly associated with clothing and shoes. There were 23 such entries here, which included a cluster of 6 glovers. Woodwork was also prevalent with 13 entries, including 3 coopers who were food-related. Of the remainder 7 were working with metals and 5 were weavers. As seen elsewhere, the textile industry accounted for most of the manufacturing activity (19 records), with leather as the second contributor (9). The textile activity was a little surprising given the low number of artisan weavers. There is no listed Quaker involvement with iron, but the eighteenth-century Wealden iron industry was in decline.³⁷⁹

The size of the commercial sector in the Meeting has been noted. Its pattern indicates the growing involvement with commerce as the century moves on. Textiles diminished considerably, with 4 of the participants being married before 1710 (but the other two were in the 1780s). The 26 meal and corn sellers were an indication of the growing Quaker involvement with food. Not only did these sellers connect with the agricultural sector, but 12 of them appear after 1770. The commercial sector was also a late developer. Here finance is represented by 12 merchants and 1 banker, 7 of whom appeared after 1770. The remainder includes 4 hide sellers connected to the leather manufacturers and 5 boatmen, who all, bar one, appeared before 1710. In chapter 3 their demise was connected to the building of new bridges across the Thames.

³⁷⁹ Brian Short, 'The Deindustrialisation Process: A Case Study of the Weald 1600-1850', in *Regions and Industries – A Perspective on the Industrial Revolution in Britain*, ed. by Pat Hudson, (Cambridge: Cambridge University Press, 1989), pp.156-74.

The retail sector was significant but not as large as the others discussed with 34 entries. Again, the move towards commercial activity with time was seen as 16 of these were found after 1770. Although cloth selling was seen early in the period under commercial activity, it disappeared, but drapery appeared in the later years of the retail section. It is likely that there was some overlap of activity here. Otherwise, food and general retailing were seen, the latter including three instances of the use of the unusual term 'salesman'. The food sector contained the agriculture-connected population of maltsters and millers, and the later emergence of groups of bakers and brewers.

This region was essentially agricultural, although the Kentish contribution was small. Kent, being a small Meeting, was a minor regional contributor and was different, being mainly artisanal and retail based with an apparent cluster of work around the maritime industry around Margate. Although Sussex & Surrey were focussed on agriculture and allied trades such as corn and meal selling under commerce, and malting and milling in food, there was a significant urban-based minority activity in the growing areas on the south bank of the Thames. Merchants were seen in the commercial sector, and there is a group of artisanal coopers who are contributing to the distribution of foodstuffs in the crowded city. Again, Quakers are seen to be representative of the regional economy and its local variations.

4.9 Lancashire

There are two competing factors in the expectations of size of the Lancashire Meeting's occupational records. As discussed in section 2.2, its distance from London suggests a lower

recording rate, as seen in Westmorland, Durham and Cumberland & Northumberland. It is also regarded as the cradle of Quakerism, and so might be expected to be strong in numbers and more receptive to efforts to carefully record the Society.³⁸⁰ The area North and North-East of Lancaster is treated amongst Quakers as the heartland of Quaker beginnings. When not travelling in his Ministry, George Fox lived at Swarthmoor Hall, Ulverston, Cumbria, where he met Margaret Fell, eventually marrying her in Bristol.³⁸¹ It was from Swarthmoor Hall that many of the early Quaker preachings and ideas spread. Thus, if London became the centre of Quaker bureaucracy, then it is likely that there remained a residual pride in being a Lancastrian Quaker that would be worthy of record. However, it appears that such pride was still focussed on Quaker revolutionary fervour, with records being required to document strife and disputes arising from issues such as tithing.³⁸² Its 657 recorded occupation entries represented 6.5% of the occupational records, but that came from 7.5% of the marriages (2,731), leading to an occupations-to-marriages ratio of 0.88. This is higher than neighbouring counties, excepting Cheshire & Staffordshire, suggesting support for the proposal above. This relatively high ratio speaks of a higher quality of record-keeping in the county, and this is supported by the presence of a substantial mid-century cohort.

Workwise, Lancashire was strong in the agricultural and artisanal fields. Artisan work held up throughout the years, agriculture declined, and commercial, manufacturing and retail occupations became more popular. The 179 artisans included 62 weavers and 42 shoemakers, neither figure appearing remarkable in the contexts of Lancashire as a textile county and shoemaking as a common theme in this Quaker occupation database. But the

³⁸⁰ Pink Dandelion, *An Introduction to Quakerism* (Cambridge: Cambridge University Press, 2007), pp.13-19.

³⁸¹ Braithwaite, *Second Period*, pp.262-3.

³⁸² Morgan, *Lancashire Quakers*, pp.280-81.

weavers disappeared after 1750, which is early in the story of the industrialisation of the textile industry. This can be explained by the eventual emergence of a mechanised cotton industry in the county towards the end of the century.³⁸³ This built on the existing fustian industry but put great pressure on the linen and woollen industries also found in the area. The linen industry changed and declined as it failed to innovate and fustian prospered.³⁸⁴ Earlier in the century, the first part of the industrial revolution was a change from artisanal weaving (by self-employed and self-trading weavers who sold cloth to local merchants at their own risk) to the ‘putting-out’ system whereby the merchants supplied the risk capital and the weavers became employees – often on a part-time basis.³⁸⁵ Of note too, and peripherally connected, was the appearance from 1762 onwards of a group of 12 cloggers amongst the Lancastrian shoemakers – clogs were the archetypal footwear of the northern industrial revolution, now chiefly remembered in folk dance circles.³⁸⁶ With the removal of weavers, a range of different artisan trades emerged to boost Quaker numbers. Besides the cloggers a small group of 5 watchmakers was operating after 1780, and, although present through the century, a group of 8 female milliners was noteworthy. The agriculturalists were all husbandmen or yeomen, and over half of the total of 168 married before 1730. The terminology points towards this being a relatively conservative sector, a conservatism also noted by regional historians.³⁸⁷

³⁸³ C. B. Phillips and J. H. Smith, *Lancashire and Cheshire from AD1540*, (Harlow: Longman, 1994), A Regional History of England series, pp.169-70.

³⁸⁴ Walton, *Lancashire*, p.61; Stobart, *First Industrial Region*, pp.94-5, John D. Marshall, ‘Stages of Industrialisation in Cumbria’ in *Regions and Industries – A Perspective on the Industrial Revolution in Britain* ed. by Pat Hudson, (Cambridge: Cambridge University Press, 1989), pp.152-3.

³⁸⁵ Carole Shammis, ‘The Decline of Textile Prices in England and British America Prior to Industrialization’, *The Economic History Review*, 47.3 (1994), pp.495-6; Smail, ‘Sources of Innovation’, p.3.

³⁸⁶ Julian Pilling, ‘The Lancashire Clog Dance’, *Folk Music Journal*, 1.3 (1967), 158–79. Traditional clogs are available as a niche product, for example from Walkley Clogs, www.clogs.co.uk.

³⁸⁷ C. B. Phillips and J. H. Smith, *Lancashire and Cheshire*, p.78; Walton, *Lancashire*, p.76.

The relatively large manufacturing sector of 137 was an indication of the county's position as an early contributor to the industrial revolution, and 57 of those appear after 1770 compared to 48 before 1730 and 32 in the middle years. The textile industry was dominant, occupying 86 of the 137 records, with 40 of those being in the later year group. There were another 8 entries for textile-related activities such as hosiery manufacture. Unspecified cloth making was visible throughout the century, but cotton-specific trades only showed after 1788 with 11 entries. This timing was consistent with the appearance of a mechanised industry dependent on imported fibre.³⁸⁸ Behind textiles there were 15 nailers and 14 leather-related occupations.

Retail and commercial activities were important, too. Of the retailers, half were grocers, and there were another two cheese specialists. Half of this food activity was after 1770. Cloth and allied products with 13 entries and general retailers with 9 entries were the other significant sectors. Of the Quakers active in commerce, 33 were listed as merchants. They operated across the century and are explicable by the presence of the ports of Lancaster and Liverpool within the county. Liverpool was the growing English port in the last quarter of the century when, along with Glasgow, it was providing modern and relevant facilities to the Atlantic trade that outpaced the staid and more complacent offering from Bristol.³⁸⁹ The development of these facilities went alongside the development of a coal-based economy in its hinterland.³⁹⁰

³⁸⁸ Riello, *Cotton*, pp.148-9, 183-4, 237.

³⁸⁹ Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century*, p.220.

³⁹⁰ Stobart, *First Industrial Region*, pp.103-32; Walton, *Lancashire*, pp.73-4.

4.10 Bristol & Somerset

In 1700 Bristol was England's third city.³⁹¹ Its size was due to its position as a hub for the West Country and its mercantile activity that was predicated on the Atlantic trade.³⁹² Thus, it was an attractive location for many trades and people. One such immigrant was Abraham Darby, the ironmaster, who arrived in the city in 1699 to set up as a malt mill maker and soon, in 1702, formed the Bristol Brass Wire Company, with the assistance of the strong local Quaker community.³⁹³ But not all the contemporary local Quaker economic activity was so benign. In 1707 a privateering (government-licensed piracy) expedition was put together in Bristol.³⁹⁴ Amongst the investors in this successful expedition were the Quakers Thomas Goldeney (a grocer), Edward Hackett (a grocer) and Francis Rogers (a ship owner). There was also Lawrence Hollister, not known as a Quaker himself, but of Quaker descent (a merchant). Both Rogers and Hollister were known to have shares in slave ships. It is easy to see why Bristol & Somerset was a large Meeting, and why it was dominated by Bristol entries (411 of the 692, Table 4.3). As a sophisticated urban Meeting with strong commercial links to London, it might have been expected to demonstrate good record-keeping. This is confirmed by the occupations-to-marriages ratio of 1.13 (6.8% of the occupational records from 6.0% of the marriages, 692 occupations and 2,194 marriages). However, the impact of relative distance from London and the rural element from Somerset is also shown by the ratio not being as high as the Meetings in the South-East of England.

³⁹¹ Wrigley, *People, Cities and Wealth*, p.160.

³⁹² Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century*, p.219; Bettey, *Wessex*, pp.206-7.

³⁹³ Raistrick, *Quakers in Science and Industry*, p.122.

³⁹⁴ Ian Abbey, 'Goldsmiths and Grocers: Further Examination of Investors in the Privateering Voyage of Woodes Rogers, 1708-1711', *Mariner's Mirror*, 105.1 (2019), 25-39.

Table 4.3 - Marriage Records with Occupations in Bristol & Somerset, 1691-1809

Cohort Sector	1710	1750	1790	Total
Agriculture	0	0	9	40
Artisans	24	8	16	186
Commercial	10	3	5	102
Food	4	7	3	68
Manufacturing	21	11	12	138
Other	2	2	1	20
Professional	2	3	0	17
Retail	11	9	8	121
	74	43	54	692

Artisans and manufacturing were the two largest sectors here, with retail and commercial not far behind. This activity is a reflection of Bristol's stature in England, and also of the relative lack of Quakers in wider Somerset. The bulk of the artisan sector was active in clothing supply as tailors (28), shoemakers (33) and sundry items (9). Clothing always being required it is not surprising that this activity continued throughout the century. The urban nature of the Meeting is shown by the relatively strong group of 32 in construction-related fields – carpentry, masons, glaziers, plasterers and plumbers, with some weight towards the earlier years. Weaving was an ubiquitous activity across the country, and there were 30 weavers in the Meeting, the last marrying in 1725. The last two sizeable activity areas were metal (19 entries, smithing in the early and middle years and cutling - making knives and cutlery - later) and coopering (16). The latter, and cork cutting, supported the city's wine-importing trade.³⁹⁵

Moving to manufacturing, textiles were the largest sector. Of the 56 entries, 25 were for cloth making, an activity supplanted later in the century by more product-oriented trades such

³⁹⁵ *The Trade of Bristol in the Eighteenth Century*, ed. by Walter E. Minchinton (Bristol: Bristol Records Society, 1957). pp.23-9, *BRS Pubs Vol XX*.

as hosiers, hatters and lacemakers. The country-wide Quaker standby of leather working was strong, too, with 30 entries. There was a cluster of 21 soap boilers spread across the century, an early version of a nascent chemicals industry. Metals were not heavily represented, with 13 entries, of which wire drawing was the most popular activity. The retail sector was similarly textile heavy with 43 entries, followed by food at 37. There was a noticeable cluster of 18 tobacconists, a local trade based on Atlantic imports, and general retailers and druggists appeared later in the century.

The commercial sector was dominated by general merchants. Of those noted above as being involved in privateering and slavery, none were listed in the marriage records, but from these records it is not possible to absolve others listed in the merchant community of such activities. Included in the list of marrying merchants was Nehemiah Champion, married 1739. This was the Nehemiah Champion identified by Raistrick as an iron dealer, Nehemiah IV born in 1709.³⁹⁶ A Nehemiah Champion has also been identified as owning about 30% of a cargo of Spanish wine, but this is more likely to have been his father, Nehemiah III, born in 1678.³⁹⁷ Besides Nehemiah Champion there were 12 other ironmongers spread across the century. Also operating commercially were 13 textile sellers and 12 food product sellers.

The final significant sector to note is food. Besides the commonly seen maltsters (15), millers (2) and bakers (2), there was a large sector based on alcohol. The 19 distillers disappeared after 1756, though 3 of the 4 brewers operated much later in the century. Also

³⁹⁶ Raistrick, *Quakers in Science and Industry*, pp.191-2.

³⁹⁷ Minchinton, *The Trade of Bristol*, p.29, citing the Bristol Port Books for 1730-1, PRO E 190/1206/3 (Now in the National Archives, Kew).

of note is Joseph (Storrs) Fry, who was the son of the Joseph Fry who first applied his name to the Fry's chocolate firm and who was a noted type-founder and printer.³⁹⁸

4.11 Yorkshire

Yorkshire is England's largest county, historically made up of three Ridings, North, East and West. It has always had a very strong self-identity: a thoughtful exploration of this trait is given by Steve Ely when discussing the poet Ted Hughes.³⁹⁹ Also, York is the seat of the Archbishop of York, second only to the Archbishop of Canterbury in the Church of England hierarchy. Being such a geographically large region, it was (and still is) very diverse, containing industrial and rural areas. It is also relatively distant and remote from London. The database contained 1,290 occupational entries (12.7% of the total) and 5,618 marriages (15.4%). The occupations-to-marriages ratio of 0.83 is indicative of a relatively remote county, though it is higher than all of its neighbours except Lancashire. Unusually for the national pattern, but normal for the large Meetings, there is a solid contribution from each of the cohorts with no great weighting to any part of the period.

The diversity of the region is shown in the relative sizes of the occupational sections. Unusually, manufacturing was the largest sector in Yorkshire, just ahead of artisans. It was dominated by textiles, unsurprisingly in a county where the West Riding was a traditional centre for wool trades, and a centre for modernisation and success even before

³⁹⁸ Raistrick, *Quakers in Science and Industry*, p.215; Fitzgerald, 'Fry'.

³⁹⁹ Steve Ely, 'Hughes's Yorkshire', in *Ted Hughes in Context*, ed. by Terry Gifford (Cambridge: Cambridge University Press, 2018), pp.145–54.

mechanisation.⁴⁰⁰ Specific wool industry entries were relatively small at 43, but other textiles at 236 included 197 cloth makers, most of whom would have been wool-related. Cotton appeared, but only as five entries from 1785 and later. This mirrored the experience in Lancashire, although the 11 entries there point to a higher penetration of the sector by cotton. Leather was the next industry with 44 entries, but metal was very low at 8, and of these all bar 2 millwrights are 1768 or after. The artisan class was another demonstration of the importance of textiles in Yorkshire with 130 of 333 artisans being weavers. The weavers also demonstrated the development of manufacturing in the county as all bar 22 of those were married prior to 1770. After the weavers, the clothing sector came next, though 68 of the 87 clothing entries were shoemakers. There were 57 metal-working artisans, a sector boosted by 33 cutlers, of whom 31 were Sheffield based, as were two platers. Sheffield was known, even then, as a steel city, and particularly for its cutlery and silver plate.⁴⁰¹

In such a large county, which was still largely rural outside the urban area in West Yorkshire, it was no surprise to see a considerable agricultural sector. Agricultural specialisation, such as horses and dairy in the North Riding, and improvement occurred from the first half of the 18th century.⁴⁰² There was a roughly equal split between yeomen and husbandmen, but there were also 35 farmers, 31 of whom appeared after 1770, an indication of some forward thinking in the county.

⁴⁰⁰ David Hey, *Yorkshire from AD 1000*, (Harlow, Longman, 1986), A Regional History of England series, pp.230-7.

⁴⁰¹ Geoffrey Tweedale, 'Backstreet Capitalism: An Analysis of the Family Firm in the Nineteenth-Century Sheffield Cutlery Industry', *Business History*, 55.6 (2013), 875-92; S. W. Turner, 'The Establishment and Development of the Silver and Plate Industry in Sheffield', *Apollo*, 46.274 (1947), 143-9; David Hey, *Yorkshire* pp.235-9; David Hey, *The fiery blades of Hallamshire : Sheffield and its neighbourhood, 1660-1740*, (Leicester: University Press, 1991), p.194.

⁴⁰² Hey, *Yorkshire*, p.189-91.

The last two sizeable sectors were retail (121) and commercial (102). Retailers showed the usual preponderance of food (45) and cloth-based (36) businesses with 29 of the grocers appearing later than 1770. The weighting towards the later years was seen in the drapers and staymakers as well, where 27 married after 1770, a demonstration of the growing popularity with time of retail as an occupation for Quakers. The commercial sector was slightly unusual. The time cohort analysis suggests a strong early contribution, and this is partially confirmed by looking at the total numbers. However, the cohort pattern was different to that of the totals. In total, there were 34 commercially occupied people prior to 1730, 19 between 1730 and 1770, and 48 from 1771 to 1809. The early strength comes from 17 master mariners, who operated on the East coast. These are less numerous later, with 11 in the middle years and two, plus a ship owner, in the later years. The second strand of commercial activity was merchant activity. The spread of this was reflective of the commercial sector, with 12 in the early years, two in the middle period and 17 after 1770. Five factors (commercial agents) also operated in these later years. There was a clear split in Quaker master mariners. Up to 1721 Scarborough was the dominant base, but from 1717 Whitby grew more popular. In her discussion of Whitby as a port, Rosalin Barker noted how Whitby and Scarborough were useful points of call for ships in the coastal trade, notably in coal, and how the Whitby fleet showed its flair for developing trade and arranging port improvements to the detriment of Scarborough.⁴⁰³ She also identified the wealthy ship-owning family, the Galilees, as being Quaker influenced.⁴⁰⁴ The Galilees did not appear in the marriage records as master mariners, but later Thomas Galillee (1799) and Isaac Galilee (1807) did appear as tanners in York.

⁴⁰³ Rosalin Barker, *The Rise of an Early Modern Shipping Industry: Whitby's Golden Fleet, 1600-1750* (Woodbridge: Boydell & Brewer, 2011), pp.103-5.

⁴⁰⁴ Barker, *The Rise of an Early Modern Shipping Industry*, pp.120, 126.

4.12 London & Middlesex

The most noticeable aspect of the London & Middlesex Meeting was its size. It contained 2,812 occupational records, 27.6% of the total, and 6,096 marriages, 16.7% of the total. The high level of recording (almost 94% of males marrying gave an occupation) led to this high number of occupations – more than double that of Yorkshire, the next biggest Meeting. The recording level also shows in the occupations-to-marriages ratio of 1.66 (compared to Yorkshire's 0.83). Given the high level of occupational recording, there is a smaller 1790 cohort than might be expected (the general pattern is one of recovery of 1790 cohort size to a level approaching that of 1710 after a fall at 1750). These two factors suggest the London & Middlesex Quaker population fell towards the end of the eighteenth century.

The London & Middlesex Quaker population had a large artisan section. The breakdown of the artisan group showed that the clothing grouping is large (291 entries) and consistent through time, as seen in other Meetings, and the weavers were representative of London's size overall. Metal workers, although numerous, were a relatively small proportion of the group, but the construction workers' group was a little bigger, illustrating London's place as the largest and wealthiest urban gathering in England. Of note were the coopers, who provided 72 of the 123 seen nationally, again a reflection of the size of the urban area and its need for food and liquid storage and distribution. Clockmakers were common, 61 of 131 nationally – this group reflecting the wealth and sophistication of the city. Unlike in some Meetings, this group appears throughout the century.

The largest sector of retail activity concerned textiles, followed by food. The latter group is unusual in that it was equally split between grocery sales and cheese specialists. The 55 cheese sellers comprised almost three-quarters of the 76 found nationally. Another large retail group was chandlers, mostly tallow chandlers or candle sellers, a further example highlighting the urban nature of the London & Middlesex Meeting. Two final brief notes highlight the disposable wealth to be found in London. Of the 46 vintners found nationally, 38 were London based, as were 26 of the 64 tobacconists. However, there is only one tobacconist found after 1750. This is an indication of the growth of the tobacco trade as the west coast ports developed their Atlantic trade, particularly Glasgow from 1750 until the American War of Independence.⁴⁰⁵

Prior to the rise of the northern textile industry, London remained England's biggest manufacturing centre.⁴⁰⁶ As ever, textiles were the largest sector within manufacturing with 230 of the 449 manufacturers. There was a wide range of activity in the sector with cloth-making and dyeing forming about half of it. There were frame knitters in the earlier years, a poorly paid discipline as we previously saw in Derbyshire & Nottinghamshire, so it is not surprising that it disappeared. There was a calico-printing presence from 1750 onwards, this being an early entry into what became the world-wide British cotton industry.⁴⁰⁷ A long way behind textiles were leather (68), shipbuilding (60) and metal (62). The metal industries were varied, too, with tin plate being most popular, though founders were present, and in the final years two specifically iron founders and an iron master appeared.

⁴⁰⁵ Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century*, pp.154-5; T. M. Devine, 'Sources of Capital for the Glasgow Tobacco Trade, C. 1740-1780', *Business History*, 16.2 (1974), 113-29.

⁴⁰⁶ Shaw-Taylor and Wrigley, 'The Occupational Structure of England', p.21.

⁴⁰⁷ Riello, *Cotton*, pp.172-5.

The commercial sector was the final occupational sector in London & Middlesex with more than 10% of the entries. In the 1700s this type of commercial sector was only beginning to develop. Therefore, the commercial activity that eighteenth-century Quakers were involved in was comparatively simple. The most widespread description was that of general merchant (161), a trade linked to the city's trading activity and, therefore, a direct forerunner of today's modern 'city' activity. Possibly linked to these by distributing goods domestically were 15 wholesalers. In the middle and later years of the century, banking began to emerge, and 14 Quakers were content to describe themselves as such. The bulk of the rest of the London & Middlesex commercial Quaker world was commodity selling, be that foodstuffs (corn, malt and meal, 71 records), textiles (55), iron (23) or leather (18). Of interest were 23 coal merchants (of 33 nationwide). These people, who were operating throughout the century, were distributing the new fuel that was keeping the capital warm and, later, powering London's industries.⁴⁰⁸

4.13 Geographical Summary and Conclusions

The geographical spread of Quaker occupations (Table 4.4) shows a general pattern of activity that is informed by, and reflects, local economic strengths. The Quaker liking for artisanal activity is demonstrated, with a move towards manufacturing and commercial activity as time progresses and retail activity is seen across the country. There were clusters of Quaker activity, such as the glovers in Worcester who demonstrate a connection to local conditions and the clock makers in North Oxfordshire who appear to be an isolated occurrence.

⁴⁰⁸ Hausman, 'A Model of the London Coal Trade', p.1; Ville, 'Total Factor Productivity', pp.357-8.

Table 4.4 - Geographical Distribution of Eighteenth-Century Quaker Employment Sectors in the Quarterly Meetings								
Quarterly Meeting	Agric.	Artisan	Comm.	Food	Manuf.	Other	Prof.	Retail
Bedfordshire & Hertfordshire	25.4%	16.4%	12.7%	11.6%	10.1%	4.2%	3.2%	16.4%
Berkshire & Oxfordshire	19.4%	30.3%	12.6%	13.9%	11.0%	4.3%	1.2%	7.2%
Bristol & Somerset	5.8%	26.9%	14.7%	9.8%	19.9%	2.9%	2.5%	17.5%
Buckinghamshire	28.8%	22.4%	14.1%	10.7%	7.8%	2.9%	0.5%	12.7%
Cambridgeshire & Huntingdonshire	26.1%	30.4%	0.0%	10.9%	10.9%	4.3%	0.0%	17.4%
Cheshire & Staffordshire	49.7%	22.3%	3.3%	2.1%	9.6%	1.5%	1.2%	10.2%
Cornwall	4.5%	25.0%	13.6%	4.5%	20.5%	11.4%	2.3%	18.2%
Cumberland & Northumberland	38.7%	23.8%	7.1%	0.6%	12.5%	8.3%	0.6%	8.3%
Derbyshire & Nottinghamshire	20.2%	21.8%	3.4%	2.5%	27.7%	4.2%	1.7%	18.5%
Devonshire	15.3%	20.3%	5.1%	1.7%	39.0%	1.7%	1.7%	15.3%
Dorset & Hampshire	6.9%	17.6%	13.4%	10.7%	26.1%	9.2%	1.1%	14.9%
Durham	5.4%	13.1%	17.9%	6.0%	28.0%	7.7%	1.8%	20.2%
Essex	24.8%	22.6%	4.1%	13.3%	11.9%	3.3%	1.1%	18.9%
Gloucestershire & Wiltshire	17.1%	20.7%	9.4%	11.8%	24.8%	1.9%	1.0%	13.3%
Herefordshire								
Worcestershire & Wales	12.2%	29.1%	14.0%	11.6%	15.7%	2.9%	3.5%	11.0%
Kent	9.4%	30.6%	9.4%	10.6%	8.2%	5.9%	4.7%	21.2%
Lancashire	25.3%	26.9%	9.0%	0.9%	20.6%	4.5%	2.0%	10.8%
Lincolnshire	48.4%	10.5%	3.2%	13.7%	6.3%	4.2%	0.0%	13.7%
London & Middlesex	3.8%	30.7%	14.9%	8.2%	16.0%	6.6%	1.9%	18.0%
Norfolk & Norwich	8.5%	40.3%	6.2%	5.4%	24.3%	1.6%	0.5%	13.2%
Northamptonshire	37.3%	25.5%	7.8%	11.8%	3.9%	3.9%	2.0%	7.8%
Suffolk	16.2%	28.9%	6.3%	15.5%	12.0%	1.4%	0.7%	19.0%
Sussex & Surrey	27.4%	15.4%	17.3%	13.8%	10.0%	4.9%	1.9%	9.2%
Warwickshire								
Leicestershire & Rutland	13.1%	28.6%	11.1%	9.9%	23.8%	2.8%	0.8%	9.9%
Westmorland	34.5%	24.6%	6.8%	2.3%	20.5%	0.8%	1.9%	8.7%
Yorkshire	18.8%	25.8%	7.8%	4.3%	26.7%	5.0%	2.0%	9.5%
Space restrictions have necessitated the abbreviation of Agriculture to Agric, Commerce to Comm, Manufacturing to Manuf, and Professional to Prof. in the column titles.								

In chapter 3, the artisan class was identified as the most common type of activity, and they are the most common class in many of the Meetings, including Norfolk & Norwich, Suffolk, Herefordshire Worcestershire & Wales and Warwickshire Leicestershire & Rutland and the four large Meetings. This is shown in Table 4.4, but though the table demonstrates comparative levels of activity across the meetings, it should not be forgotten that some of the sample sizes are small. This has been brought out by the use of absolute population figures rather than percentages in the preceding discussions for each meeting. The potential impact of these small populations must be kept in mind when considering the comparative observations made here.

The table shows the differing sector sizes across the different Meetings. A means of delving into this data is to take the mean and the standard deviation of the contribution to each sector in each meeting, and then to look at the ratio of the two. This gives a measure of the spread of the contribution distribution standardised against the population size. A small ratio points to a narrow curve, and a population evenly spread across the Meetings. Higher ratios point to more concentrated or localised populations. A second way to look at this point is to present a quintile analysis of the same data. This divides the data into five levels – here each sector contains 26 data points, one from each quarterly meeting. These have been ranked from the highest contribution to the lowest, Tables 4.5 and 4.6 contain data for the Agriculture and Artisan sectors and the split into five groups is visible. Table 4.7 contains the summary data from this analysis, with the mean and standard deviation for each sector across the meetings, and their ratios, and the means for the top and bottom sectors of the quintile analysis, and their ratios. This data then feeds into the sector discussion below.

Table 4.5 - Agricultural Activity

Quarterly Meeting	Sector Fraction
Cheshire & Staffordshire	49.7%
Lincolnshire	48.4%
Cumberland & Northumberland	38.7%
Northamptonshire	37.3%
Westmorland	34.5%
Buckinghamshire	28.8%
Sussex & Surrey	27.4%
Cambridgeshire & Huntingdonshire	26.1%
Bedfordshire & Hertfordshire	25.4%
Lancashire	25.3%
Essex	24.8%
Derbyshire & Nottinghamshire	20.2%
Berkshire & Oxfordshire	19.4%
Yorkshire	18.8%
Gloucestershire & Wiltshire	17.1%
Suffolk	16.2%
Devonshire	15.3%
Warwickshire Leicestershire & Rutland	13.1%
Herefordshire	12.2%
Worcestershire & Wales	12.2%
Kent	9.4%
Norfolk & Norwich	8.5%
Dorset & Hampshire	6.9%
Bristol & Somerset	5.8%
Durham	5.4%
Cornwall	4.5%
London & Middlesex	3.8%

Table 4.6 - Artisanal Activity

Quarterly Meeting	Sector Fraction
Norfolk & Norwich	40.3%
London & Middlesex	30.7%
Kent	30.6%
Cambridgeshire & Huntingdonshire	30.4%
Berkshire & Oxfordshire	30.3%
Herefordshire	29.1%
Worcestershire & Wales	29.1%
Suffolk	28.9%
Warwickshire Leicestershire & Rutland	28.6%
Bristol & Somerset	26.9%
Lancashire	26.9%
Yorkshire	25.8%
Northamptonshire	25.5%
Cornwall	25.0%
Westmorland	24.6%
Cumberland & Northumberland	23.8%
Essex	22.6%
Buckinghamshire	22.4%
Cheshire & Staffordshire	22.3%
Derbyshire & Nottinghamshire	21.8%
Gloucestershire & Wiltshire	20.7%
Devonshire	20.3%
Dorset & Hampshire	17.6%
Bedfordshire & Hertfordshire	16.4%
Sussex & Surrey	15.4%
Durham	13.1%
Lincolnshire	10.5%

Table 4.7 - Summary Analysis						
Sector	Mean	Standard Deviation	Ratio	Top 5 Mean	Bottom 5 Mean	Ratio
Agriculture	20.9%	12.8%	0.61	41.7%	5.8%	7.19
Artisan	24.3%	6.3%	0.26	32.5%	15.6%	2.08
Commerce	9.4%	4.7%	0.50	15.8%	3.2%	4.94
Food	8.4%	4.6%	0.55	14.0%	1.7%	8.24
Manufacturing	17.2%	8.4%	0.49	29.5%	7.6%	3.88
Other	4.3%	2.5%	0.59	8.6%	1.5%	5.73
Professional	1.6%	1.1%	0.66	3.2%	0.4%	8.00
Retail	13.9%	4.2%	0.30	19.6%	8.5%	2.31

The artisan sector, besides being the largest sector, was also one of the most evenly spread. It had an average sector contribution to the Meeting of 24% (taking rounded values), and a standard deviation of 6% (again rounded), and a ratio of standard deviation to average of 0.26. This is one of the lower ratios seen, indicating that artisans are more evenly spread across the meetings. Looking at the quintile analysis in Table 4.6, there is a range of 10% to 40% in the fractions of artisans in Quarterly Meetings. Reducing the effect of any outliers by using the averages of the top and bottom quintiles (Table 4.7), there are levels of 33% and 16%, a ratio of 2.08. Returning to Table 4.6, it is clear that, apart from the highest and lowest entries, there are no discernible groupings of activity levels, they are all close to their neighbours in the ranking.

This is explained by the dominant and widespread artisan employments concerned being clothing (tailoring and the like), shoemaking and carpentry – occupations that are not geographically limited. Weaving was common also, a trade that was widespread in the time of a craft-based textile industry. Groups of specialised construction trades were seen in Buckinghamshire, Berkshire & Oxfordshire, Lancashire, Yorkshire and, unexpectedly, of

masons in Northamptonshire – though such trades were more common in urban areas such as London and Bristol.

Manufacturing was the second largest sector and was more localised than the artisans, with a standard deviation to average ratio of 0.49, showing a less even geographical spread. This is illustrated too by the ratio of the top and bottom quintile activity levels being 3.88, almost double that of the artisan sector. In here again there are two outliers at the top and bottom, Devonshire at 39% is based on a small county population, and Northamptonshire at 4% was impacted by deindustrialisation arising from the rise of the West Yorkshire woollen industry. Otherwise, there were three distinct groups of meetings, the highest manufacturing meetings being the established and changing textile areas of Yorkshire, Gloucestershire & Wiltshire, Norfolk and Norwich and Derbyshire and Nottinghamshire (with its frame knitting and hosiery industry⁴⁰⁹), along with Durham, Warwickshire, Leicestershire & Rutland and Dorset & Hampshire. In the eighteenth century the data showed that manufacturing for Quakers was almost synonymous with the textile industry. Of the Meetings with a large proportion of their population engaged in manufacturing, only Warwickshire (with the Birmingham metal industries appearing in the last quarter of the century) and Durham (with a sizeable leather sector) deviated from textiles. Norwich was England's second city, with its wealth being based on wool, but the rise of West Yorkshire became one of several factors in its decline.⁴¹⁰ Gloucestershire was another county that was a major wool cloth area coming into the period, but saw its manufacturing activity, including that amongst Quakers, decrease with time as other regions grew. Julia Mann summarises her book with '....they, in their turn, lost

⁴⁰⁹ Pinchbeck, *Women Workers*, p.202.

⁴¹⁰ Sugden, 'Clapham Revisited', p.217.

trade.....to the worsted manufacture of Yorkshire by delaying change until it was too late'.⁴¹¹

Dorset & Hampshire's Quaker textile manufacturing activity appears to have survived, but the records seen here suggest a decentralised industry with no urban focal point. It probably survived by supplying local needs. Westmorland showed a pattern of manufacturing that was not the largest sector in the county but grew with time, which was similar to neighbouring Lancashire. Bristol textile manufacturers showed a notable early shift from cloth making to products such as hosiery, hats and lace.

Agriculture was an important sector, though more important to the country than to Quakers: possible reasons for this have been discussed in chapter 3. Its Quaker activity is one of the most concentrated of the Quaker sectors with a standard deviation to mean ratio 0.61, and a top to bottom quintile ratio of 7.19. Table 4.5 shows the impact of these ratios, with two meetings highly focussed on agriculture, another group of three in the 35% to 39% range and the bottom group of seven meetings with below 10% contribution to their Meeting. Of the counties and Meetings where agriculture was still the dominant activity, hill agriculture was the largest activity in the remote hilly counties of Cumberland, Northumberland and Westmorland. However, it was noted in section 4.1 that in Northumberland, the bulk of the occupational records for Newcastle-on-Tyne are held within the Durham Meeting, which is possibly a distorting factor. Cheshire & Staffordshire and Lincolnshire are both notable for having almost half of their occupied men involved in agriculture. Both Lancashire and Cheshire had large flat areas of land suitable for cultivation but scope for improvement was

⁴¹¹ Julia de Lacy Mann, *The Cloth Industry in the West of England from 1640 to 1880* (Oxford: Clarendon Press, 1971), p.219.

identified in government reports prepared as part of a nationwide survey, mentioned when Devonshire was discussed.⁴¹²

Northamptonshire was one area where it was known that agricultural engagement increased because industrialisation elsewhere in the textile industry adversely affected the local textile output.⁴¹³ Not quite as agriculture dependent, but still with contributions of at least 25%, the rich soils of the South-East of England explain why agriculture was strong in Bedfordshire & Hertfordshire, Buckinghamshire, Essex and Sussex & Surrey. This group also includes Lancashire and Cambridgeshire & Huntingdonshire. The time pattern of agricultural involvement in these areas varied. In the data here, agricultural activity fell in Bedfordshire & Hertfordshire and Buckinghamshire, possibly as Quakers moved further up the food industry chain and became involved in commerce. It fell, too, in Lancashire and Westmorland, where the cause was more likely to be the increasing attractiveness of the textile industry, and in Sussex & Surrey, where commercial activity rose.

Allied to agriculture is the food sector, and they will be considered together in chapter 5. The food sector, which is relatively small at 8% of the data, shows a standard deviation/average ratio of 0.55, and a top to bottom ratio of 8.24, in its proportions by Meeting, therefore giving a geographically focussed distribution. Here, however, the focus is not where the activity was centralised but where it was absent. It was missing (<5% of the Meeting's activity) in Cheshire & Staffordshire, Cornwall, Cumberland & Northumberland, Derbyshire &

⁴¹² R.W. Dickson and W. Stevenson, *General View of the Agriculture of Lancashire with Observations on the Means of Its Improvement* (London: Sherwood Neely & Jones, 1815), pp. 47-8; Henry Holland, *General View of the Agriculture of Cheshire; with Observations Drawn up for the Consideration of the Board of Agriculture and Internal Improvement* (London: Printed for R. Phillips, T. Gillet, 1808), pp.345-7.

⁴¹³ Shaw-Taylor and Wrigley, 'The Occupational Structure of England', p. 19.

Nottinghamshire, Devonshire, Lancashire, Westmorland and Yorkshire. It is possible that the small proportion seen in the large Meetings of Lancashire and Yorkshire is explained simply as being due to dilution of the food activity by the higher activity in other sectors. The broad picture to be drawn from this is that food processing (baking, malting, milling and, to a lesser extent, butchery and alcohol) was concentrated in the agrarian regions south of a line from Lincoln to Bristol and east of Devon. This crude delineation would include Derbyshire & Nottinghamshire, which had very little sector activity, but does show that the sector was able to deliver food into the early urban centres of London, Norwich and Bristol. The lack of a processing industry in Cheshire, a very agricultural county (almost 50% Quaker activity, Table A5.8) could possibly be explained by the emergence of Cheshire cheese as a distinctive and well-marketed product around this time.⁴¹⁴ This development was driven by local producers beginning to work together, possibly at the expense of the separate Quaker community, who, therefore, did not show up as cheese processors. However, at the end of the century Cheshire cheese was being supplanted by cheese from stilton and cheddar.⁴¹⁵

Retail activity at 14% of the total rivals agriculture for importance, and was followed by the 11% engaged in commercial activity. The two sectors have parallels as they were both concerned with dealing and monetary transactions. Geographically, they are different though. Quaker retailers appeared across the country. The deviation/average ratio for the retail sector is 0.30 and the top to bottom ratio 2.31, indicators of a spread population. Those for commercial activity are 0.50 and 4.94. Retail was 18% or more of the working populations of Cornwall, Derbyshire & Nottinghamshire, Durham, Essex, Kent, London &

⁴¹⁴ Richard Blundel and Angela Tregear, 'From Artisans to "Factories": The Interpenetration of Craft and Industry in English Cheese-Making, 1650–1950', *Enterprise & Society*, 7.4 (2006), 705–39.

⁴¹⁵ Phillips and Smith, *Lancashire and Cheshire*, p.80.

Middlesex, and Suffolk (although Cornwall and Kent were small counties overall), but Berkshire & Oxfordshire was the lowest at 7%. Generally, retailing became more popular later in the period, and particularly so for the emergence of specialist retailers such as booksellers or china and glass retailers, which was a mark of a developing economy. The commercial sector grew during the century, as the economy developed. Commercial activity in the country Meetings, Lancashire and Yorkshire, was basically trading in cloth, meal or corn. In Bedfordshire & Hertfordshire that activity was clearly deducible as being connected to the local agriculture, as it declined in parallel with agriculture's decline. Durham differentiated itself by being involved with maritime activity connected with the East Coast coal trade, in which Yorkshire was also represented, although Quaker involvement decreased with time. Ville reports that insurance records show that most of the North-East and Yorkshire regional ports were involved.⁴¹⁶ The activity in Sussex & Surrey expanded over time from food-related trade to include general merchants and bankers, a reflection of the effective expansion of London across the Thames. This expansion, and particularly the building of bridges,⁴¹⁷ saw the loss of a group of Thames boatmen from the Meeting. However, the urban area of Birmingham contained a more diverse commercial sector. There was a commercial presence in Warwickshire Leicestershire & Rutland throughout the century. Beginning with textile and some iron dealing, the sector became larger as the century progressed, and Birmingham's needs became more complicated as it became a more important centre. The commercial sector rose from *circa* 10% of the cohort in 1710 to *circa* 20% in 1790. Bristol and London both had merchant communities who took advantage of the developing Atlantic trade.

⁴¹⁶ Ville, 'Total Factor Productivity', p.367.

⁴¹⁷ Stockton, 'Redesigning the River', pp.7-13.

For completeness the Professional and Other categories must be mentioned. Both were small, with Professionals (mostly teachers) below 2% (with a few exceptions) and Other mostly below 5%. Because of the small size, and the diversity of the Other category, the quintile and standard deviation analyses have not been taken beyond reporting the figures in Table 4.7. In most Meetings the population of professionals was in single figures, though only Cambridgeshire & Huntingdonshire and Lincolnshire Meetings actually had a zero representation. The four Meetings with a high Other content mostly showed mariners as the main constituent. These mariner Meetings were Cornwall (11%), Cumberland & Northumberland (8%), Dorset & Hampshire (9%) and Durham (8%), though London & Middlesex and Yorkshire had mariner populations, too.

There were differing factors explaining the size of the larger Meetings. The London & Middlesex and Bristol & Somerset Meetings show parallels in explanations of size and employment. Both cities were attractive urban centres showing economic growth, London as the nation's capital and economic hub and Bristol as the first centre of the Atlantic trade. They had high populations of artisans and retail but were strong in manufacturing and commerce, too. The strength of their commerce sectors arose from their status as major port cities which supported a merchant community. Such international trade required support from the artisans to supply clothing, victuals and hardware. Their manufacturing sectors were textile-based though Bristol showed a notable early shift from cloth-making to products such as hosiery, hats and lace. The presence of a food-processing sector was indicative of agricultural products coming into urban areas to feed people and trade. Agriculture itself was not important. Most Quaker commercial activity revolved around trading in cloth, meal or corn and developed during the century. But Bristol and London contained more diverse

commercial sectors. Bristol's sector was present throughout, but its status as a major port was reflected in the proportion of general merchants present. London was the commercial hub of the country, with Quaker involvement in the nascent banking industry, but most activity was that of general merchants or commodity sales – including coal.

Lancashire's large Quaker population originated from its being home to the original and active Quaker group centred on Swarthmoor Hall. Economically, it was still mostly agricultural at the start of the century. But although Lancashire's agricultural community was only the second largest in the county, it was similar to the artisans. Both Lancashire and Cheshire had large flat areas of land suitable for cultivation with scope for improvement.⁴¹⁸ However, the agricultural proportion fell in Lancashire, the cause likely being the increasing attractiveness of the textile industry, Lancashire becoming a great textile county.⁴¹⁹ However Quaker manufacturing involvement at this time was smaller than in the artisan or agricultural sectors. Manufacturing became more important in Lancashire in the records as time went on, the reasons appearing to include the migration of artisan weavers to become employed workers and the first introduction of cotton industries.

The final large Meeting, Yorkshire, was a large and diverse area. Much of it was rural and agricultural, either in the richer soils of the East Riding and the Vale of York or in the hilly areas of the Dales and Moors. This explains the significant agricultural proportion, although food processing remained low as a percentage. The large, sparsely populated rural areas and initial lack of urban areas explains the low retail fraction, too. But West Yorkshire was the centre of transformation of the textile industry, firstly by the introduction of the 'putting out'

⁴¹⁸ Dickson and Stevenson, *Agriculture of Lancashire*, pp.47-8; Holland, *Agriculture of Cheshire*, pp.345-7.

⁴¹⁹ Stobart, *First Industrial Region*, pp.64-102.

system which industrialised the organisation of the industry, and later by leading the mechanisation of the industry.⁴²⁰ These organisational changes began early in the century and were reflected in the Quaker population by Yorkshire having a continuous involvement with the industry throughout the period. The later mechanisation phase, with its increased capacity and cost reductions, had knock-on effects in other textile areas such as East Anglia.

I have commented on the parallels between the Quaker occupational range and the regional character in most of the areas examined. The agriculturally biased Meetings in the North and South-East of England, including Yorkshire and Cheshire, are in regions where agriculture is strong – either a subsistence hill farming or more sophisticated arable and dairy farming elsewhere. A notable agricultural cluster is in late-century Northamptonshire, where agriculture became a default activity after deindustrialisation of the local textile sector. The textile industry participants and artisan weavers in Norwich, Gloucestershire and Yorkshire are a second example. But there are more local examples of local reflection.

Nottinghamshire's frame knitters are a local illustration in the textile industry. The cluster of glovers seen in Worcester are working in that town's specialism. Although Quakers generally were not strongly represented in the metals industries, they were visible in the Herefordshire Worcestershire & Wales Meeting, which covered the Shropshire and South Wales industries, and in the Warwickshire Leicestershire & Rutland Meeting covering Birmingham, particularly as ironmongers (Chapter 6). Quaker commercial activity included merchant clusters in London and Bristol, both established trading centres, and in Liverpool, Lancaster and Poole where shipping activity was either established or developing.

⁴²⁰ Smail, 'Sources of Innovation', pp.3-6, 9-10; Pat Hudson, 'Capital and Credit in the West Riding Wool Textile Industry c1750-1850' in *Regions and Industries – A Perspective on the Industrial Revolution in Britain*, ed. by Pat Hudson, (Cambridge: Cambridge University Press, 1989), pp.69-102.

Final geographical conclusions

Eighteenth-century Quaker marriage geography is scattered in numerical terms. More than half (54%) of the 36,578 marriage records listed were contained within the country Meetings and the other 46% in the four large Meetings. But when considering the occupational records, the smaller Meetings only contained 46% of the records. Westmorland is the Quarterly Meeting that tilts the proportions. This Meeting was one which had many marriages but showed a low occupational recording rate, providing 6% of the marriages but only 2½% of the occupations. This is explicable in terms of a remote rural pattern of record-keeping, but in a county which was heavily influenced by early Quakerism although not involved with the early organisation centred around Ulverston and Lancaster.

The Quaker population during the century was always less involved with agriculture than the general population, though there was significant Quaker representation in strong agricultural counties such as those in the South-East of England. The main occupational focus was on artisan work, with a shift to manufacturing and commerce as these sectors became more important in later years. One possible explanation for this is that being an independent, skilled artisan provided a means to a living that was not dependent on others – which is likely to have been important for a group of people still subject to hostility, even though the religious climate gradually eased. Such people were found in Meetings across the whole country. There was a trend to move to manufacturing as time progressed. During the century the textile industry was dominant, with the iron and engineering sectors only opening up in the last 25 years. Derbyshire & Nottinghamshire, Durham, Gloucestershire & Wiltshire and Norfolk & Norwich and Yorkshire were strong textile regions with large

Quaker manufacturing presences, and Warwickshire Leicestershire & Rutland contained the Quaker activity in Birmingham. The losses of artisans such as weavers suggests some overlap between the two sectors, possibly with a loss of independence as industrial organisation appeared.

There were connections between agriculture and commerce, too. In Bedfordshire & Hertfordshire there were food and commercial occupations such as milling and meal selling, but these declined as agriculture declined. However, in Sussex & Surrey corn and meal sellers appeared later, explained by the growing need for foodstuffs to be imported into London from the surrounding hinterland. The commercial traits required for an artisan to sell the products of his skill and make a living were transferable to the retail sector. Such Quaker retailers were rarely in the three largest sectors in a Quarterly Meeting but were consistently present across the country as a substantial presence. The notable trend for the appearance of Quaker food retailers and bakers across the country is explained by the rising population in towns who provided a market for those prepared to source products. Those who were able to persuade the emerging consumer class that they could take the strain out of purchasing more luxurious goods became the more specialist retailers typically seen in larger urban settings.

In short, the bulk of the regional Quaker population was involved in similar activities to the general population, but often using their skills to support that activity, and so not depending on the goodwill of the community for practical support at intensive periods such as harvest time. The regional Meetings all contained Quaker artisans, agriculturalists and small-scale manufacturers. Weaving and textile activity were ubiquitous, not only in known regions such

as Gloucestershire & Wiltshire and Norfolk & Norwich, but in counties such as Dorset & Hampshire where the activity was distributed widely and can only be explained as being local support for the local population. In these Meetings there often appeared to be a co-dependence of activity, farmers being serviced by blacksmiths and wheelwrights, for example. The presence of clusters such as the Worcester glovers reinforces the connection to the local general population. This local connection was seen in the larger urban Meetings, too. London and Bristol attracted people to them and were early centres of manufacturing and commerce, with their urban natures precluding much agricultural activity. However, there was a significant commercial food-based activity to keep the cities supplied with essential commodities. Lancashire's Quaker community arose from its connection with Quaker history, and agriculture survived even as mercantile activity developed in Liverpool. The final cluster in Yorkshire was predicated on the dual effects of an early Quaker population and an expanding wool industry in an economy that still remained wool-driven after cotton took off in Lancashire. But these Meetings held the solid artisan population that was the backbone of the Quaker movement.

Thus, the overall picture is of a group of people who mostly worked as small, independent entities and who were integrated into the local economies. They did take advantage of the dynamics of the changing economic environment, for example moving from artisan work to manufacturing, or by engaging in the Atlantic trade. In their working lives they were not an exceptional, excluded community. Even the activity of the privateers and slave ship owners noted in Bristol can be seen as a badge of the ordinariness of their activities.

Chapter 5: Quakers in Major Industrial Sectors

There are three industries spread across the categories used for the previous analyses which are worthy of consideration at the industry level: textiles, iron and food. These industries operate nationwide and cover several of the functional sectors I have used for analysis.

Textiles is an industry that was transformed during the century by the adoption of practices and structures that assisted in boosting production, and, late in the century, by the translation of those practices into the emergent factory setting utilising steam power and centralised labour. Textile exports were the basis of the English economy before the industrial revolution. The iron industry was transformed by the adoption of coal firing and molten metal processes. These successes were transformational for society, allowing much increased iron use and the development of commercial steam power. The food industry is seen as important for Quakers as an industry that was not inimical to the wider population, although the great Quaker names associated with food, such as Cadbury, Rowntree and Huntley & Palmer are all nineteenth-century undertakings. In each case a review of the industry occupations will then be followed by a geographical analysis.

5.1 Textile Industries

Occupations

Looking at an entire industry requires a different grouping of occupations when compared with a functional grouping. For textiles I have taken four aspects of the industry. Firstly, Fibre and Other Inputs, which deals with the starting point of the textile supply chain. I have followed with Cloth Manufacturing covering the production of the basic unit of the industry.

This cloth is then sold on (Cloth Selling) and made into products which are distributed into the market (Products and Accessories). The occupations included in each part of the chain are listed in Table 5.1. In these analyses of industries, the occupations are taken from the standardised occupations in Appendix 1.

Table 5.1 - Defined Occupational Grouping within the Textile Industry for this Section

Fibre and other inputs	Cloth manufacturing	Cloth selling	Products and accessories
Dye maker	Baizemaker	Cloth seller	Blanket maker
Dye seller	Baymaker	Cotton seller	Breeches maker
Flax seller	Bleacher	Linen seller	Cloth goods maker
Flax worker	Blue maker	Wool cloth seller	Collar maker
			Cotton goods maker
Thread maker	Calenderer		
	Calico		
Thread seller	manufacturer		Draper
Thread worker	Card maker		Embroiderer
Wool machine tender	Cloth maker		Frame knitter
Wool seller	Cloth worker		Glover
Wool tool maker	Comb maker		Haberdasher
Wool worker	Cotton maker		Hatter
	Cotton worker		Hosier
	Dyer		Lace maker
	Fuller		Milliner
	Linen maker		Sack maker
	Loom maker		Sewer
	Mill worker		Staymaker
	Weaver		Tailor
	Wool cloth maker		

The first point to make is that those concerned with textiles make up more than a quarter of the data sample, which reinforces the importance of the textile industry to Quakers. The proportion declined from almost a third in the earlier years to a fifth in later years (Table 5.2). Cohort data are produced as described previously and here the percentage is the fraction of the cohort.

Table 5.2 - Analysis of Textile Industry Numbers in Total and by Cohort through the Eighteenth Century

Sector	Database		Cohort					
	Number	%age	1710	%age	1750	%age	1790	%age
All occupations	10,179		1,231		521		759	
Textiles	2,825	27.8	388	31.5	152	29.2	157	20.7

Some data given for a national picture by Leigh Shaw-Taylor and Tony Wrigley can be used for comparison.⁴²¹ Their analysis is within the envelope of their PST system discussed in section 3.2. From their Table 2.2 there are figures for circa 1710 of 7.5% in textiles and 4.5% in clothing, and an additional 2.5% for dealers and sellers, some of whom must be concerned with textiles. If we arbitrarily take half of the dealers as being textile-related, this gives a total proportion of the workforce involved in the textile industry of 13.3%. This is something less than half of the Quaker population in my study. Shaw-Taylor and Wrigley also give corresponding figures for circa 1817 of 7.8%, 3.4% and 1.7%, for a total of 12.9%. This is less than the 21% in Table 5.2 for 1790, although not down to the half level of 1710, and the gap will also be lessened by the decreasing trend in participation in the industry seen in both studies.

Further comparison can be made with Richard Vann and David Eversley. Their reporting is split between rural and urban populations and contains some detail of individual occupations.⁴²² Besides the urban/rural split, the data are given for fifty-year cohorts, the relevant two being 1700-49 and 1750-99. For 1700-49 they identified 70 rural people concerned with textiles (17.2% of the sample) and 79 urban people (31.7% of the sample).

⁴²¹ Shaw-Taylor and Wrigley, 'Occupational Structure and Population', p.59, Table 2.2.

⁴²² Vann and Eversley, *Friends in Life and Death*, pp.70-71.

For 1750-99 the rural count was 66 (13.2% of the sample) and the urban figures 32 (16.8%). These gave weighted averages of 24.9% for the earlier period and 14.4 % for the later, figures which are, again, lower than I have found. For weavers Vann and Eversley reported rural levels of between 1.8% and 3.2% and urban levels of zero to 9.6% across the century. Overall, these are in line with my study range of 1.2% to 9%. Similarly, Vann and Eversley gave a range of 0.8% to 2.6% for tailors against my range of 1.2% to 3.4%, which is a little lower.

Returning to my own study, Table 5.3 provides an analysis of the spread of Quakers across the industry, again with my standard methodology for data collation. The key point emerging from this table is the change from cloth-making to products and accessories. This is consistent with the trends over the century towards a tertiary economy identified by Shaw-Taylor and Wrigley and therefore for Quakers to become more involved in commerce. Clothmaking is a secondary-sector, materials-processing activity, but products and accessories, while not removing all processing activity, are much more customer facing and commercially driven, as the activity contains a much higher level of delivering products to final consumers. Overall, the level of Quaker activity in the textile industry declined as time progressed (Table 5.2), and, as Quaker commercial activity became more sophisticated, it is not surprising that involvement in the earlier parts of the supply chain (fibres) was reduced. It is less easy to rationalise the reduction in cloth selling, but I suggest that this was a function of the increasing size, complexity and integration of the manufacturers with the industrialisation of the industry and the moves of sellers to add value to their business by offering finished products.

Table 5.3 - Analysis of Textile Industry Sectors through the Eighteenth Century

Occupation title	Cohort		1710		1750		1790		Title total
	Database count	%age	No.	%age	No.	%age	No.	%age	
Fibre and other inputs	358	12.6	47	12.1	19	12.5	14	8.9	80
Cloth making	1339	47.1	196	50.5	88	57.9	62	39.5	346
Cloth selling	153	5.4	18	4.6	9	5.9	6	3.8	33
Products and accessories	993	34.9	127	32.7	36	23.7	75	47.8	238
Totals	2,843	100.0	388	100.0	152	100.0	157	100.0	

Geography

Table 5.4 summarises the geographical distribution of married Quakers in the textile industry, sorted by size of population. The textile industry was a major component of the English economy during the eighteenth century. It was wool-based, cotton only appearing later in the century as the European powers learned of its versatility and possibilities for trade.⁴²³ The wool industry was widespread throughout England, and Keith Sugden identified some of the major areas of production as the West Country (Gloucestershire, Somerset, Wiltshire, Devon and Dorset), Norfolk & Norwich and the West Riding of Yorkshire, while other areas such as Northamptonshire, Kent, and Warwickshire Leicestershire & Rutland were of lesser importance.⁴²⁴ The eight largest Quarterly Meetings (for textile purposes) contained 77% of the Quaker textile industry workforce – and these Meetings covered the major textile areas cited, with the exception of Devonshire. Adding Devonshire in would have taken the share to 78%. These Meetings mainly cover the areas identified by Sugden. Included in that 78% was 26% of the Quaker workforce that is London-based. However, London's textile activity

⁴²³ Riello, *Cotton*, pp.87-134; Stephen Broadberry et al, *British Economic Growth, 1270-1870* (Cambridge: Cambridge University Press, 2015), pp.147-8.

⁴²⁴ Sugden, 'Clapham Revisited', pp.203-4.

was unusual in that it was more than 50% product-based, with 368 of 750 records – and of the 993 product-classed workers nationally, 458 are retailers and another 388 artisans such as tailors. That the sophisticated urban markets are a desirable home for end-of-chain suppliers was further demonstrated by the figure of 97 product-class records in Bristol & Somerset. Between them, these two Meetings, with two of the largest English cities in them throughout the century,⁴²⁵ contributed almost 50% of the textile product records. Detailed review of the records showed that in the South-West, textile activity amongst Quakers declined over the century. In both Bristol & Somerset and Gloucestershire & Wiltshire, Quaker weavers had disappeared by 1750. Textile manufacturing declined in Gloucestershire & Wiltshire, too, but held up in Bristol & Somerset. Norfolk & Norwich, as discussed above (section 4.6), was another traditional textile area that suffered a decline. One of the reasons identified by Sugden for the decline was the growth and industrialisation of the Lancashire and West Yorkshire industries.⁴²⁶ The northern output explosion, including the introduction of cotton in the last quarter of the century, led to the national textile output almost trebling between 1700 and 1800.⁴²⁷ This rise in Yorkshire was reflected in the numbers in Table 5.3, where the occupational numbers held up over the century, and the manufacturing cohort of 1790 was actually larger than that for 1710. Lancashire is popularly regarded as a textile county and was the fourth largest of the Quaker Meetings engaged with textiles. Lancashire's reputation for textile activity arose from the cotton industry; Theo Balderston does not regard it as a major centre of national wool cloth activity (although it is clearly significant in Quaker terms).⁴²⁸

⁴²⁵ Wrigley, 'Urban Growth', p.686.

⁴²⁶ Sugden, 'Clapham Revisited', pp.217-8.

⁴²⁷ Broadberry et al, *British Economic Growth*, pp.139, 146-9.

⁴²⁸ Theo Balderston, 'The Economics of Abundance: Coal and Cotton in Lancashire and the World', *The Economic History Review*, 63.3 (2010), p.573.

Table 5.4 - Geographical Distribution of Quakers in the Eighteenth-Century Textile Industry

Quarterly Meeting	Fibre	Cloth manufacturing	Cloth selling	Products	Total
London & Middlesex	50	300	32	368	750
Yorkshire	48	355	15	62	480
Norfolk & Norwich	72	115	1	29	217
Lancashire	20	114	7	48	189
Bristol & Somerset	14	56	12	97	179
Gloucestershire & Wiltshire	16	92	13	38	159
Berkshire & Oxfordshire	12	48	20	56	136
Dorset & Hampshire	18	26	11	38	93
Westmorland	11	49	4	12	76
Warwickshire Leicestershire & Rutland	19	25	7	15	66
Cheshire & Staffordshire	3	30	2	18	53
Sussex & Surrey	4	16	6	27	53
Essex	14	19	0	17	50
Durham	16	16	5	9	46
Herefordshire Worcestershire & Wales	3	7	8	25	43
Derbyshire & Nottinghamshire	10	8	1	20	39
Bedfordshire and Hertfordshire	4	3	1	25	33
Buckinghamshire	1	4	3	24	32
Suffolk	3	11	0	18	32
Cumberland & Northumberland	1	13	1	9	24
Devonshire	8	13	1	2	24
Cambridgeshire & Huntingdonshire	7	5	0	10	22
Kent	0	4	1	12	17
Lincolnshire	2	6	1	7	16
Cornwall	2	3	0	3	8
Northamptonshire	0	1	1	4	6
	358	1,339	153	993	2,843

Georgio Riello states that cotton production in Britain increased by an order of magnitude between 1770 and 1790, and by another order in the next twelve years, leading to Lancashire's domination of British cotton production in the early part of the nineteenth

century.⁴²⁹ But that follows the period of this study, and this later rapid rise of the industry explains why cotton provides only 13 of Lancashire's 189 textile related occupational records.

5.2 Metal Industries

Metal-based industries, and particularly the iron industry, changed much during the eighteenth century. The iron industry was transformed by the Darby family's commercialisation of coke-fuelled iron production technology. That wider availability of iron then proceeded to transform other aspects of life, as iron became used in architectural construction and machine building.⁴³⁰ The Ditherington Flax Mill in Shrewsbury in 1797 is seen as the first example of an iron-framed skyscraper.⁴³¹

As with the textile industry, there are many differing occupations within the broad metal industry. The grouping used here is given in Table 5.5, using standardised occupation descriptions.

Table 5.5 shows that Quakers were involved in all aspects of metal producing, processing and conversion into products. The division between smithing and artefact production is slightly artificial in some areas but has been based upon the amount of physical working of the metal involved. Artefact production is seen to involve less metal bashing and more detailed finishing. Table 5.6 gives the proportion involved in the industry for the total sample and over the century in an analogous manner to Table 5.3.

⁴²⁹ Riello, *Cotton*, pp.212, 228.

⁴³⁰ A. Richard Collins, *Structural Engineering – Two Centuries of British Achievement* (Chislehurst: Tarot Print Limited, 1983). p.40.

⁴³¹ Nigel Jones, *Architecture of England, Scotland, and Wales* (Santa Barbara, CA: ABC-CLIO, 2005), pp.92-4.

Table 5.5 - Defined Occupational Grouping within the Metals Industry for this Section

Metal production	Distribution	Founding	Smithing	Plate and wire	Artefact production
Bellows maker	Iron monger	Brass founder	Anchor smith	Brazier	Cutler
Iron master		Founder	Armourer	Tin plate worker	Hinge maker
Lead miner		Iron founder	Blacksmith	Wire drawer	Razor maker
Refiner – silver			Blade smith		Scissor smith
			Filer		Screw filer
			Chain maker		Shear smith
			Mill wright		File smith
			Plough wright		Clock and watch maker
			Smith		Buckle maker
					Gun smith
					Metal goods maker
					Nailer
					Needle maker
					Pin maker
					Plane maker

The surprise from Table 5.6 is the relatively small proportion of Quakers concerned with metals. Raistrick and others have argued that Quakers were important in the emergent eighteenth-century iron industry,⁴³² and this is certainly true for the technological

⁴³² Raistrick, *Quakers in Science and Industry*, pp.89-160.

developments made by the Darby family.⁴³³ But from the marriage records, those concerned with iron production were a small number.

Table 5.6 - Analysis of Metal Industry Numbers in Total and by Cohort through the Eighteenth Century

Sector	Database		Cohort					
	Number	%age	1710	%age	1750	%age	1790	%age
All occupations	10179		1231		521		759	
Metals	674	6.6	77	6.3	39	3.2	71	5.8

Table 5.7 gives a view of Quaker participation in the industry across the century using the normal cohort derivation.

Table 5.7 - Analysis of Metal Industry Sectors through the Eighteenth Century

Occupation title	Cohort		1710		1750		1790		Title total
	Database count	%	No.	%	No.	%	No.	%	
Metal production	19	2.8	1	1.3	1	2.6	1	1.4	3
Distribution	93	13.8	8	10.4	4	10.3	8	11.3	20
Founding	26	3.9	1	1.3	3	7.7	4	5.6	9
Smithing	186	27.6	38	49.4	16	41.0	8	11.3	62
Plate and wire	97	14.4	9	11.7	5	12.8	8	11.3	22
Artefacts	253	37.5	20	26.0	10	25.6	42	59.2	72
Totals	674	100	77	100	39	100	71	100	

Metal production accounts for less than 3% of those Quakers working with metal (19 of 674), and that proportion appears to have fallen at the end of the century when iron production was rising. The larger areas of involvement were manufacturing of products and components, especially in later years, distribution of iron (ironmongers) and smithing (the working of

⁴³³ Ronald F. Tylecote, *A History of Metallurgy* (London: Metals Society, 1976), pp.105-7.

metal by hammering and forging). The table suggests that there was a switch from smithing to manufacturing as time progressed. This would be a fair suggestion as the economy developed and industrialisation introduced some sophistication into its organisation. Founding (the handling and use of molten metal) increased its share of the workforce, too – one of the consequences of the introduction of the Darby technology was increased use of cast iron, and Abraham Darby I had his first success with cast iron cooking pots.⁴³⁴

Geography

With 674 records the metals industries participation was slightly smaller than a quarter of the size of the textile industry participation. This supports Stephen Broadberry and his co-workers' reporting of the relative importance of the two sectors in England in the eighteenth century.⁴³⁵ The geography of the involvement is summarised in Table 5.8. This table shows a spread of activity across the country. The London & Middlesex involvement was higher than the general contribution of London & Middlesex to the database – but as stated in the textiles section, London was the country's manufacturing centre prior to the revolutions of the last quarter of the century.

⁴³⁴ Abraham Darby, *Castling Iron Pots*, patent no. 380, (Bristol, 1707).

⁴³⁵ Broadberry et al, *British Economic Growth*, pp.132-5.

Table 5.8 - Geographical Distribution of Quakers in the Eighteenth-Century Metal Industry

	Metal prod.	Founding	Dist.	Plate and wire	Smithing	Artefact prod.	Total
Bedfordshire & Hertfordshire	0	1	5	6	4	2	18
Berkshire & Oxfordshire	0	0	4	1	11	22	38
Bristol & Somerset	3	2	12	7	12	12	48
Buckinghamshire	1	0	2	0	5	0	8
Cambridgeshire & Huntingdonshire	0	0	0	0	3	0	3
Cheshire & Staffordshire	0	0	1	0	9	9	19
Cornwall	0	0	0	3	1	2	6
Cumberland & Northumberland	1	0	2	0	1	4	8
Derbyshire & Nottinghamshire	0	0	1	0	1	7	9
Devonshire	0	1	1	0	2	0	4
Dorset & Hampshire	1	2	1	3	3	5	15
Durham	1	0	1	1	2	1	6
Essex	0	1	2	9	0	4	16
Gloucestershire & Wiltshire	0	0	3	1	1	5	10
Herefordshire							
Worcestershire & Wales	4	2	3	1	6	7	23
Kent	0	0	2	4	5	1	12
Lancashire	0	0	12	0	10	21	43
Lincolnshire	0	0	0	0	0	1	1
London & Middlesex	2	12	23	51	75	76	239
Norfolk & Norwich	0	0	5	1	4	1	11
Northamptonshire	0	0	0	0	1	1	2
Suffolk	0	1	0	2	2	4	9
Sussex & Surrey	0	0	2	3	5	4	14
Warwickshire							
Leicestershire & Rutland	4	2	7	2	5	11	31
Westmorland	0	1	0	0	1	1	3
Yorkshire	2	1	4	2	17	52	78
Totals	19	26	93	97	186	253	674

Space restrictions have necessitated the abbreviation of production to prod. and Distribution to Dist. in the column titles.

Given the prominence of iron making put forward by authors such as Raistrick, the paucity of entries in the table for iron production was surprising.⁴³⁶ The pattern of these few entries was supportive of the location of the industry, being around Shropshire (covered by the Herefordshire Worcestershire & Wales Meeting) and Birmingham. The distribution function in the industry was covered by the trade of ironmongers who then were sellers of iron. These Quaker ironmongers were spread across the country with only Lancashire arguably being overrepresented in the population (London and Bristol being early urban centres of industry, and Birmingham being described as *The First Manufacturing Town in the World* by Eric Hopkins).⁴³⁷ The plate and wire section was weighted towards London by the presence of a cadre of wireworkers who were members of the Worshipful Company of Tin Plate Workers alias Wire Workers guild, as noted in chapter 3. The section also included brasiers, or workers with brass, who are more spread about the country, but with clusters in urban Bristol and, less obviously, Essex. Smithing was another country-wide craft with local blacksmiths providing numerous iron-based products made from bar supplied by the ironmongers. Once again London was weighted heavily, but the population there included 45 non-ferrous smiths working with gold, silver, pewter and other white metals. The largest metal-based sector concerned the making of artefacts such clocks and watches, cutlery and blades, nails, pins, needles and like objects. Half of the section is clocks and watches and another 30% was cutlers. Of the cutlers, 33 of the 69 are Yorkshire based. Even then Sheffield cutlery was renowned, a reputation bolstered by the availability of Huntsman's innovative crucible steel. Benjamin Huntsman was a Quaker watchmaker looking for improved spring steels, whose idea of producing a cast steel revolutionised the Sheffield industry, and who continued to

⁴³⁶ Raistrick, *Quakers in Science and Industry*, pp.89-160.

⁴³⁷ Hopkins, *Birmingham*.

inspire steelmakers such as Ken Barraclough.⁴³⁸ Clock and watch makers are surprisingly well distributed, though there are 61 based in London & Middlesex. Tim Marshall has documented another cluster of 19 in Berkshire & Oxfordshire, essentially from two families, and also the Yorkshire Quaker family of Hargreaves of Settle were clockmakers who used their mechanical skills to make an early entry into the mechanisation of the textile industry.⁴³⁹

5.3 Food Industries

I commented on Quaker involvement with food at section 3.3.4, but this section brings together food production, commodity activity and distribution. For the purposes of this glance at the whole industry from the farmyard gate (therefore excluding agriculture) to the final consumer, I have divided the activity into primary production (producing food products from raw agricultural products or fishery activity), trade distribution (the distribution of corn or meal to further processors), secondary production (processing primary production products into consumable food products), distribution to consumers and service providers (innkeepers and cooks). For completeness, Table 5.9 shows the standardised occupations included in each sector. As with many of the definitions and splits used here, and by other researchers, argument is possible over the categorisation used. The one decision I will highlight is the placing of butchers as primary producers. There is clearly an argument to treat this occupation as a retail sector activity, but the killing, carcase processing and ancillary production (for example sausage making) provides a strong primary production function. It

⁴³⁸ Kenneth C. Barraclough, 'The Development of the Early Steelmaking Processes' (unpublished PhD, University of Sheffield, 1981). Ken Barraclough was a senior member of the Sheffield steelmaking fraternity who continued to introduce and champion new processes within the steel industry in the second half of the twentieth century.

⁴³⁹ Marshall, *The Quaker Clockmakers of North Oxfordshire* ; Tim Marshall, 'Quaker Clockmakers', p.59.

should be noted too that there is some inclusion of wholesaling in Distribution. Changes in the sectors with time are analysed in Table 5.10 below.

Table 5.9 - Defined Occupational Grouping within the Food Industry for this Section

Primary production	Trade distribution	Secondary production	Distribution	Service provider
Butchers	Corn seller	Brewers	Tea seller	Innkeeper
Poulterer	Malt seller	Distiller	Baker	Cooks
Butter mould maker	Meal seller	Wine maker	Milkman	
Fishermen	Hop seller	Chocolate maker	Fishmongers	
Miller		Confectioner	Cider seller	
		Sugar maker	Grocer	
		Maltster	Grocer	
		Mustard maker	Cheese seller	
		Vinegar maker	Greengrocer	
		Salter	Vintner	

Table 5.10 - Analysis of Food Industry Sectors through the Eighteenth Century

Occupation title	Cohort		1710		1750		1790		Title total
	Database count	%	No.	%	No.	%	No.	%	
Primary production	192	12.7	26	15.3	13	14.3	8	5.9	47
Trade distribution	239	15.8	19	11.2	17	18.7	25	18.4	61
Secondary production	333	22.0	46	27.1	25	27.5	20	14.7	91
Distribution	731	48.3	77	45.3	36	39.6	82	60.3	195
Service provider	18	1.2	2	1.2	0	0.0	1	0.7	3
Totals	1,513	100.0	170	100.0	91	100.0	136	100.0	

The earlier discussion of the food production sector showed a trend with time away from animal processing and ingredients towards baking. This is reflected in Table 5.10, which

uses comparable data cohorts to other sections. The wider involvement with food illustrated shows that distribution was always important. It is also noticeable that food production activity declined in the latter years of the century. The primary production sector consisted mainly of butchers and millers, and both these occupational proportions dropped steadily over the century, no butchers being found in the 1790 cohort. The major occupations represented in secondary production are maltsters, brewers and distillers. Maltsters and distillers declined as a proportion of the cohort with time, the maltster pattern replicating that of millers, and the general reduction in interest in basic foodstuffs. The reduction in distillers is less easy to fathom as the brewers showed a pattern of increasing proportion, and both occupations require some scientific knowledge (even if it was not recognised as such at the time – in the 1700s it would be more likely to be passed on as tacit craft learning rather than formal education). As suggested in section 3.3.4, the supply of beer was seen as providing a healthier alternative to unclean water supplies, but by 1800 the heavy consumption of strong spirits was being seen as antithetical to the Quaker position. The rise in distribution (including retailing) is in line with Fincham's view of increasing Quaker commercial activity with time.⁴⁴⁰

As a final comment on Quakers in the Food sector, Table 5.11 shows the fractions of Food against total as per Textiles and Metals above but includes a line for agriculture to give an idea of the amount of Quaker involvement in the complete food chain – trends in agriculture have already been discussed in section 3.3.1. This shows that the increased involvement with food, notably in distribution, in the later years of the century has contributed to an overall small increase in food chain activity in that period.

⁴⁴⁰ Fincham, 'Origins of Commercial Success', pp.64-5.

Table 5.11 - Analysis of Food Industry and Cohorts through the Eighteenth Century

Sector	Database		Cohort					
	Number	%	1710	%	1750	%	1790	%
All occupations	10,179		1,231		521		759	
Food	1,513	14.9	170	13.8	91	17.5	136	17.9
Agriculture	1,607	15.8	207	16.8	67	12.9	117	15.4
Total food chain	3,120	30.7	377	30.6	158	30.3	253	33.3

Geography

This section will look at the food industry in two ways. Firstly, it will be compared across the country by using the aggregated sectors developed in chapter 3 – primary production, trade distribution, secondary production, retail distribution and service provision. Secondly, there will be a brief consideration of the food chain, including agriculture. The food industries themselves comprised 1,513 records, of which almost half are in retail distribution. The spread across the country, and the split amongst the sectors, are shown in Figure 5.1.

This figure is helpful in illustrating an overview of the industry. The spread of the retail sector is visible, and the discussion earlier in this chapter, and also in chapter 3, has indicated that this activity developed over time as the century progressed. Presentation of the same data in Table 5.12 allows a more detailed examination. The table gives a starker view of the preponderance of retail in this sector. This is an example of the involvement of Quakers in a sector of the economy that was emerging as the economy modernised from an agrarian base to a more industrial/commercial focus.

Figure 5.1 - Geographical Distribution of Food Industry Sectors

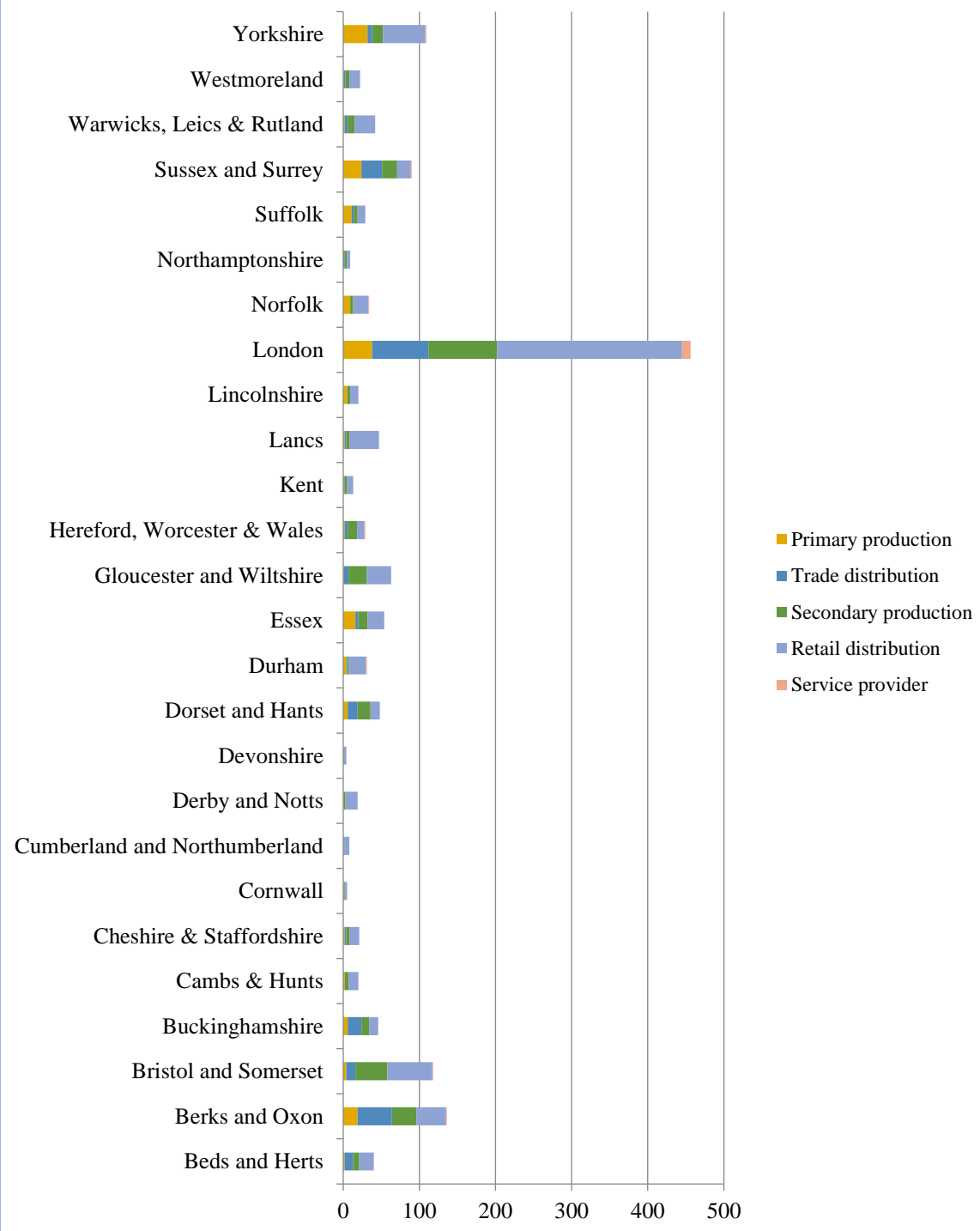


Table 5.12 - Geographical Distribution of Food Industry Sectors

Quarterly Meeting	Primary prod.	Trade dist.	Secondary prod.	Retail dist.	Service provider	Total
Bedfordshire & Hertfordshire	2	11	8	19	0	40
Berkshire & Oxfordshire	19	45	32	39	1	136
Bristol & Somerset	4	12	42	59	1	118
Buckinghamshire	6	18	10	12	0	46
Cambridgeshire & Huntingdonshire	2	0	5	13	0	20
Cheshire & Staffordshire	2	2	4	13	0	21
Cornwall	1	1	1	2	0	5
Cumberland & Northumberland	1	1	0	6	0	8
Derbyshire & Nottinghamshire	1	0	2	16	0	19
Devonshire	0	0	1	3	0	4
Dorset & Hampshire	6	13	17	12	0	48
Durham	4	1	2	23	1	31
Essex	16	4	12	22	0	54
Gloucestershire & Wiltshire	1	6	24	32	0	63
Herefordshire						
Worcestershire & Wales	2	4	12	10	1	29
Kent	1	1	3	8	0	13
Lancashire	2	2	4	39	0	47
Lincolnshire	5	0	4	11	0	20
London & Middlesex	38	74	90	243	11	456
Norfolk & Norwich	9	0	4	20	1	34
Northamptonshire	0	2	3	4	0	9
Suffolk	11	3	5	10	0	29
Sussex & Surrey	24	27	20	18	1	90
Warwickshire						
Leicestershire & Rutland	2	4	9	27	0	42
Westmorland	1	2	5	14	0	22
Yorkshire	32	6	14	56	1	109
Totals	192	239	333	731	18	1,513

Space restrictions have necessitated the abbreviation of production to prod. and Distribution to Dist. in the column titles.

The size of the cohorts in London & Middlesex and Bristol & Somerset, even possibly in Yorkshire, was influenced by the sizes of those Meetings, but was also a reflection of the increasing specialisation in urban economies. Trade distribution was even more of a commercial activity than retail, requiring the sourcing of stocks and transporting them to market – a vital activity to support the growing urban populations. Concerning the retail against trade distribution pattern, the overall population had 15.8% of the entries listed as trade distribution (239 from 1,513) and 48.3% as retail (731 from 1,513). On a meeting-by-meeting check, only one Meeting was below half the overall percentage level in the retail category (Sussex & Surrey), but ten were below half the overall rate in the trade category – pointing to numerical support for a geographical concentration of activity in the trade distribution sector as visually suggested from the chart. Turning to the food chain (combining the food sector and agriculture) and working on a percentage basis, Table 5.13 shows the position.

Overall, food chain figures were dominated by those Meetings where agriculture was a big contributor to the activity, notably in Cheshire & Staffordshire. Lincolnshire did have a sizeable food sector contributor, with millers and maltsters being connected to agriculture. Many of the significantly agricultural Meetings in the South-East of the country with 25-30% agriculture, such as Buckinghamshire or Sussex & Surrey, also had a significant food sector in the 10-15% range.

Table 5.13 - Geographical Distribution of the Food Chain

Quarterly Meeting	Food	Agriculture	Food chain
Lincolnshire	13.7%	48.4%	62.1%
Cheshire & Staffordshire	2.1%	49.7%	51.8%
Northamptonshire	11.8%	37.3%	49.0%
Sussex & Surrey	13.8%	27.4%	41.2%
Buckinghamshire	10.7%	28.8%	39.5%
Cumberland & Northumberland	0.6%	38.7%	39.3%
Essex	13.3%	24.8%	38.1%
Bedfordshire & Hertfordshire	11.6%	25.4%	37.0%
Cambridgeshire & Huntingdonshire	10.9%	26.1%	37.0%
Westmorland	2.3%	34.5%	36.7%
Berkshire & Oxfordshire	13.9%	19.4%	33.4%
Suffolk	15.5%	16.2%	31.7%
Gloucestershire & Wiltshire	11.8%	17.1%	28.9%
Lancashire	0.9%	25.3%	26.2%
Herefordshire Worcestershire & Wales	11.6%	12.2%	23.8%
Yorkshire	4.3%	18.8%	23.1%
Warwickshire Leicestershire & Rutland	9.9%	13.1%	23.0%
Derbyshire & Nottinghamshire	2.5%	20.2%	22.7%
Kent	10.6%	9.4%	20.0%
Dorset & Hampshire	10.7%	6.9%	17.6%
Devonshire	1.7%	15.3%	16.9%
Bristol & Somerset	9.8%	5.8%	15.6%
Norfolk & Norwich	5.4%	8.5%	14.0%
London & Middlesex	8.2%	3.8%	12.0%
Durham	6.0%	5.4%	11.3%
Cornwall	4.5%	4.5%	9.1%
Median	10.3%	19.1%	27.5%

Remoter counties might have had a significant agricultural sector but were rarely involved with the wider food sector. Even a Meeting as large as Yorkshire, which although having a significant manufacturing activity still had almost 19% of its recorded people engaged in agriculture, only had a 4.3% involvement in other food. East Anglia had a fair balance between agriculture and food, possibly because there were the urban areas of London to the South and Norwich in the north to be supplied.

5.4 Summary

Looking at Quaker employment across industries rather than sectors, the textile industry is important in the eighteenth century as it is seen as the first example of an industrialised sector. Quakers from artisanry, commerce, manufacturing and retail are involved in it. The share of the labour force engaged in the industry in the general population is given by Shaw-Taylor and Wrigley as 12% in 1710 and 10.2% in 1815. Figures here suggest that almost 20% of Quakers were involved in fibre treatment and cloth production in 1710, which only declined to 10% in 1790. Additionally, there were 12% of Quakers involved with selling cloth and related products in 1710 and 11% in 1790. This involvement in the selling side of the industry is part of the much greater Quaker involvement in the commercial, tertiary economic activity than is expressed by Shaw-Taylor and Wrigley, and again is an example of Quakers in the economic vanguard. It is notable that in 1775, John and Henry Gurney of the Norwich-based wool-trading family formed what became Gurney's Bank. This bank was an early participant in bond markets through Overend Gurney – the first bill-broking firm.⁴⁴¹

A similar consideration of the metals industry suggests that Quakers are more likely to be involved than the general population, especially at the end of the century. Nationally, Shaw-Taylor and Wrigley suggest a figure of just over 4% being involved with metal and metal product manufacture in 1710 and 1815 (though given the changes in the industry around the turn of the century, this lack of increase appears unlikely), while the Quaker population involved in secondary sector metal working rises from 5.7% in 1710 to 8.3% in 1790.

⁴⁴¹ Rhiannon Sowerbutts, Marco Schneebalg, and Florence Hubert, 'The Demise of Overend Gurney', *Bank of England Quarterly Bulletin*, 56.2 (2016), p.88.

Although this study showed a higher involvement with metal than seen in the general population, it was disappointing to see so few examples of the expected names and occupations in the database. Raistrick refers to the Quakers as a ‘very prominent element’ in the eighteenth-century iron industry, and Windsor asserts that ‘they effectively controlled the production and processing of iron’.⁴⁴² Because of these claims and the importance of iron in the eighteenth century as an industry transformed by the liquid metal technology stemming from the Darby family⁴⁴³ and the transformative nature of the hugely increased iron supply later in the century, the industry will be examined more closely in chapter 6.⁴⁴⁴

The Quaker involvement in the food chain at 27.5% is considerably less than the 50% quoted by Leigh Shaw-Taylor and Tony Wrigley for agricultural involvement *circa* 1710, and even the 36% for 1817. The most agricultural of Quaker Meetings (Lincolnshire and Cheshire & Staffordshire) are just below 50% for agriculture and the next largest, Cumberland & Northumberland and Northamptonshire, had just below 40%. Adding in food processing takes Lincolnshire to 62%, Cheshire & Staffordshire to 52% and Northamptonshire to 49%. Clearly, Quaker involvement in the whole food production system is less than for the average population. This is the only clear distinction between Quakers and the general population.

⁴⁴² Raistrick, *Quakers in Science and Industry*, p.89; Windsor, *Quaker Enterprise*, p.2.

⁴⁴³ Tylecote, *A History of Metallurgy*, pp.105-7.

⁴⁴⁴ King, ‘Production and Consumption’, p.7.

Chapter 6: Quakers in the Early Eighteenth-Century Iron Industry

Arthur Raistrick and Andrew Reekes have both said that seventeenth- and eighteenth-century Quakers were drawn to industry because of their exclusion from the universities, professions and larger trade guilds.⁴⁴⁵ The most extreme claim within that wide view is that made by Charles Hyde who suggested that Quakers controlled between 50% and 75% of the iron industry in the early eighteenth century.⁴⁴⁶ This claim has been recently repeated without challenge by Priya Satia, and the subject of Quakers and their influence in the iron industry has not been readdressed.⁴⁴⁷ The objective of this chapter is to examine whether that claim is justified by addressing its plausibility and reviewing the claimed participants. This is achieved by providing an analysis of the industry and a review of the Quaker involvement in it in the first quarter of the eighteenth century using data from the database developed for this thesis augmented by further data from Quaker birth and death records. This allows a critical examination of the claim and the suggested industry participants to be carried out and conclusions on its validity to be drawn.

The transformation of the iron industry is one of the most important industrial changes in the eighteenth century. The developing industrial sector was a focus for Quakers as they honed the skills arising from their traditional artisanal background and combined them with their emerging commercial bent.⁴⁴⁸ The textile industry was economically more important than iron both nationally⁴⁴⁹ and to Quakers, as shown by the comparative numbers employed in it

⁴⁴⁵ Raistrick, *Quakers in Science and Industry*, pp. 42-4; Andrew Reekes, *Two Titans, One City: Joseph Chamberlain and George Cadbury* (Alcester: West Midlands History Limited, 2017), pp.10-11.

⁴⁴⁶ Hyde, *Technological Change*, p.16.

⁴⁴⁷ Satia, *Empire of Guns*, p.70.

⁴⁴⁸ Fincham, 'Origins of Commercial Success', has recently examined this topic.

⁴⁴⁹ Sugden, 'Clapham Revisited', p.203; Riello, *Cotton*, p.212.

throughout the century (chapters 4 and 5), but the changes in the iron industry were transformative. The move to coal-based fuelling in coke-fired blast furnaces and coal-fired refining processes allowed a huge growth in production.⁴⁵⁰ This massively changed the dynamics of iron usage and allowed the transformation of industry through the use of iron-structured factory buildings and iron-cylindrical steam engines, major components of the nineteenth-century boom.⁴⁵¹ The technological changes introduced by the Quaker Darbys of Coalbrookdale are well known, and Arthur Raistrick's classic work, *Quakers in Science and Industry*, suggests a huge involvement of Quakers with iron in the early part of the eighteenth century.⁴⁵² Charles Hyde then went further with his claim. Though the industry has been the subject of continuing study, such as Peter King's major analysis and Paul Belford's recent work on the Shropshire cementation steel industry, the Quaker influence has not been further examined.⁴⁵³

To properly examine Hyde's claim, it is necessary to be able to compare the spread and size of the iron industry with the spread and concentration of the Quaker population. The industry analysis for this thesis has been developed from both production and consumption viewpoints and is summarised by the presentation of a novel analysis in Table 6.1 which synthesises data from several sources and shows the production of pig iron, its conversion to bar and the use of that bar. This provides a geographic analysis of the production and use of iron which has subsequently been used in the final critical examination. The Quaker

⁴⁵⁰ Philip Riden, 'The Output of the British Iron Industry before 1870', *The Economic History Review*, 30.3 (1977), p.448, Table 2.

⁴⁵¹ Jones, *Architecture* pp.92-4; Barrie Stuart Trinder, *The Industrial Revolution in Shropshire*, 3rd ed. (Chichester: Phillimore, 2000), pp.48-50.

⁴⁵² Raistrick, *Quakers in Science and Industry*.

⁴⁵³ Peter King, 'The Iron Trade in England and Wales 1500-1815: The Charcoal Iron Industry and Its Transition to Coke' (unpublished PhD, University of Wolverhampton, 2003); Peter King, *A Gazetteer of the British Iron Industry, 1490-1815*, 2 vols (Oxford: BAR Publishing, 2020); Paul Belford, *Blood, Faith and Iron: A Dynasty of Catholic Industrialists in Sixteenth- and Seventeenth-Century England* (Oxford: Archaeopress, 2018).

presence in the industry is discussed in section 6.2 and listed in detail in Appendix 7, which contains the industry participants identified from this study's database together with the additional participants found from the Quaker birth and death records. The critical analysis of Quaker influence on the industry has been carried out by considering the networks identified by Raistrick, which so influenced Hyde, and discussing them in the light of the novel industry analysis presented and the identified Quaker participants. The Hyde claim is then examined, not only by looking at the plant, which the claim specifically refers to, but considering the market operation, too – which is necessary given the overlap between the sectors by some of the participants. The conclusion is that Hyde's claim is unsupportable.

6.1 Industry Size circa 1710

Comparing the iron industry in general and the Quaker contribution to it, requires analysis of both the production and consumption of iron. This is because Hyde emphasised Quaker control of production, but the Quaker data show more activity in iron distribution. Table 6.1 gives that analysis; the derivation of the figures is shown in Appendix 6.

Table 6.1 - Analysis of the English Iron Industry in 1710						
Region	Pig iron produced		Bar made at 1/1.35 ratio of bar/pig	Bar made King	Bar used	
	Est. tons	% age			Est. tons	% age
Black Country	2,182	9%	1,616	2,681	12,115	40%
Derby and the Trent Valley	1,818	8%	1,347	891	1,154	4%
Forest of Dean and the Wye Valley	2,909	12%	2,155	1,111	2,885	10%
North-East England	364	2%	269	0	577	2%
North-West England	364	2%	269	21	1,154	4%
North-West Midlands	2,909	12%	2,155	1,418	1,731	6%
Redmine	0	0%	0	490	0	0%
Shropshire and the Clee Hills	2,545	11%	1,886	2,344	2,308	8%
South Wales	1,818	8%	1,347	773	2,885	10%
Southern England ^{Note}	7,273	30%	943	1,828	1,731	6%
West of England	364	2%	269	852	0	0%
Yorkshire	1,455	6%	1,077	877	3,462	12%
	24,000		13,333	13,286	30,000	
Note - Southern England's estimate of bar production has been adjusted to allow for iron used in manufacturing cast products on the Weald						

6.2 Quakers in the Iron Industry circa 1710

6.2.1 The Quaker Presence in the Industry

In chapter 3 I showed that Quakers working in metal industries and crafts were a small proportion of the whole – only 6.6% of the database or 674 people. Of these, 439 were involved in smithing and artefact production such as cutling or clock making. These activities are not relevant to the iron production and distribution sectors under consideration here. Additionally, 97 were occupied in working with plate or wire. This leaves 19 in metal production, 26 in founding and 93 in distribution. This total of 138 workers is distributed

across the whole century. Further analysis showed that in metal production, there was one person active in each of the decades centred on 1710, 1750 and 1790. The corresponding figures for distribution were 8, 4 and 8 and for founding (casting of molten metal) 1, 3 and 4, respectively. These cohorts cover thirty years of the 12 decades spanned in the database; we can expect that the three cohort totals of 3, 20 and 8 would be approximately a quarter of the Database Count – but this assumes an even distribution of the occupational sector across the years. This assumption appears to be unwise, particularly for metal production. This number of people does not appear to be of a size to dominate an industry, but these figures are derived purely from the marriage records. By extending the data sources for this chapter to include names identified from a sample of Quaker birth and death records and some further non-digested marriage records, an extended list of established Quaker names with involvement in the iron industry has been developed. This list of 174 people across the century is given in Appendix 7 to this thesis.

Charles Hyde's claim of a 50-75% domination of the industry appears to be derived from two sources.⁴⁵⁴ He references Arthur Raistrick's work and Brian Awty's paper concerning iron making in Lancashire and Cheshire.⁴⁵⁵ Raistrick's chapter presents a construction of a series of regional networks that were each dominated by Quaker influence and covered most of England. I will show that many of Raistrick's proposed participants have little or no presence in the data reviewed. The four mentions of Quakers in Awty's paper are less suggestive of a dominating influence. Firstly, he cites Raistrick's report of the 1651 sale of the Mathrafal forge to the London merchant William Fownes (though Fownes is merely noted

⁴⁵⁴ Hyde, *Technological Change*, p.16.

⁴⁵⁵ Raistrick, *Quakers in Science and Industry*, pp.89-160; Brian G Awty, 'Charcoal Ironmasters of Cheshire and Lancashire, 1600-1785', *Transactions of the Historical Society of Lancashire and Cheshire*, 109 (1957), 71-124.

as ‘connected by marriage’ to Quaker families and is ‘presumed’ by Raistrick to be of Quaker stock⁴⁵⁶). Secondly, he notes correspondence between Abraham Darby and his ‘fellow Quaker’ William Rawlinson. The final two mentions are of Warrington Quakers involved with iron selling, although the Tomlinsons, Titleys and Fothergills are referred to as ‘merchants’ and only Alexander Chorley is specifically called an ironmonger. There is further ambiguity in the claim’s timing of in ‘the early eighteenth century’. The discussion here of Hyde’s claim considers the period from 1690 to 1730, and Table 6.2 contains the Quakers identified as active in the period from the sources quoted above.

The first and obvious point from Table 6.2 is that all 46 (bar two founders and one ironmaster) are listed as ironmongers. The ironmongery trade was split into two distinct strands. Local retail ironmongers supplied bar to neighbouring smiths for working into product required by local industry and agriculture. But from the early seventeenth century some ironmongers became more mercantile and began to organise artefact production as well as wholesaling bar. Such developments in the Midlands caused great concern amongst the London traders of the Worshipful Company of Ironmongers.⁴⁵⁷ The acme of this system was to gain a naval supply contract which had the advantages of size, duration and customer solidity (though the government was not always a good payer).⁴⁵⁸

⁴⁵⁶ Raistrick, *Quakers in Science and Industry*, pp.108-9.

⁴⁵⁷ Marie B. Rowlands, *Masters and Men: in the West Midland Metalware Trades before the Industrial Revolution* (Manchester: Manchester University Press, 1975), pp.9-12.

⁴⁵⁸ Flinn, *Men of Iron*, pp.154-7.

Table 6.2 - Individual Quakers Active in the Iron Industry, 1691-1730

Surname	Forename	Quarterly Meeting	Occupation	Active
Haynes	John	Berkshire & Oxfordshire	Ironmonger	1699
Haynes	Richard	Berkshire & Oxfordshire	Ironmonger	1707
Darby	Abraham	Bristol & Somerset	Ironmonger	1699
Pearsall	John	Bristol & Somerset	Ironmonger	1714
Edwards	Thomas	Bristol & Somerset	Ironmonger	1718
Donne	William	Bristol & Somerset	Ironmonger	1730
Welch	Joseph jun.	Buckinghamshire	Ironmonger	1703
Welch	Joseph sen.	Buckinghamshire	Ironmonger	1715
Merrick	Abraham	Cheshire & Staffordshire	Ironmonger	1692
Hancock	William	Cheshire & Staffordshire	Ironmonger	1720
Tomlinson	William	Cheshire & Staffordshire	Ironmonger	1726
Lowbridge	Richard	Herefordshire Worcestershire & Wales	Ironmonger	1696
Harvey	Thomas	Herefordshire Worcestershire & Wales	Ironmonger	1699
Hanniatt	Joseph	Herefordshire Worcestershire & Wales	Ironmonger	1707
Thomas	John	Herefordshire Worcestershire & Wales	Founder	1714
Ford	Richard	Herefordshire Worcestershire & Wales	Ironmaster	1718
Harvey	Benjamin	Herefordshire Worcestershire & Wales	Ironmonger	1726
Winstanley	John	Lancashire	Ironmonger	1704
Salthouse	Elijah	Lancashire	Ironmonger	1718
Hutson	Thomas	London & Middlesex	Ironmonger	1693
Hewitt	John	London & Middlesex	Ironmonger	1694
Levins	Roger	London & Middlesex	Ironmonger	1695
Plumsted	Mathew	London & Middlesex	Ironmonger	1695
Wood	Edward	London & Middlesex	Ironmonger	1697
Plumsted	Robert	London & Middlesex	Ironmonger	1698
Edgoose	Richard	London & Middlesex	Ironmonger	1702
Tabaram	Elizabeth	London & Middlesex	Ironmonger	1702

Table 6.2 - Individual Quakers Active in the Iron Industry, 1691-1730, continued

Surname	Forename	Quarterly Meeting	Occupation	Active
Carter	William	London & Middlesex	Ironmonger	1703
Gilbert	James	London & Middlesex	Ironmonger	1703
House	John	London & Middlesex	Ironmonger	1703
Mosely	Thomas	London & Middlesex	Ironmonger	1704
Skiping	Joseph	London & Middlesex	Ironmonger	1707
Gerrard	Abraham	London & Middlesex	Ironmonger	1708
Baker	John	London & Middlesex	Ironmonger	1710
Gilbert	John	London & Middlesex	Ironmonger	1711
Robinson	George	London & Middlesex	Ironmonger	1715
Howell	Samuel	London & Middlesex	Ironmonger	1715
Goad	Joseph	London & Middlesex	Ironmonger	1718
Wood	Joshua	London & Middlesex	Ironmonger	1719
Plumsted	Francis	London & Middlesex	Ironmonger	1720
Sims	John	London & Middlesex	Founder	1721
Plumsted	Thomas	London & Middlesex	Ironmonger	1721
Pemberton	John	Warwickshire Leicestershire & Rutland	Ironmonger	1713
Freeth	Samuel	Warwickshire Leicestershire & Rutland	Ironmonger	1716
Prichard	Thomas	Warwickshire Leicestershire & Rutland	Ironmonger	1718
Pemberton	Thomas	Warwickshire Leicestershire & Rutland	Ironmonger	1727

6.2.2 The Founders and Ironmasters

Amongst the three founders and ironmaster, Richard Ford appears in the main occupational database as being an ironmaster on his marriage in 1718. This marriage is to Mary Darby, confirmed by the certificate and widely reported in the literature.⁴⁵⁹ Similarly reported is

⁴⁵⁹ For example Trinder, *Industrial Revolution*, p.26; Raistrick, *Dynasty*, p.3.

Ford's position as a shareholder of the Coalbrookdale Company and manager of the works in the interregnum from the death of Abraham Darby I in 1717 to Ford's death in 1745.⁴⁶⁰ In 1745 Abraham Darby II became the manager after joining the firm as Ford's assistant in 1734.⁴⁶¹ The Darby family and the Coalbrookdale Company are probably the best documented Quaker iron industry concern, being of great interest as the agent of commercialisation of iron smelting using coal as the fuel. John Thomas, the founder, is also associated with Coalbrookdale. He appears in the marriage records as a founder on his marriage in 1714, based in the Salopian parish of Madeley (which includes Coalbrookdale).⁴⁶² John Thomas is described as a long-term employee of Darby's, having joined him in Bristol in 1707 before moving with him to Coalbrookdale, even being quoted as having made the breakthrough which led to the 1707 Pot patent.⁴⁶³ The final founder, John Sims of London, is described in the marriage register as a 'Founder and Citizen'. In this case citizen refers to membership of one of the trade guilds which traditionally governed trade in the City of London (discussed in chapter 3). It is not possible to know from this information whether Sims was an iron or brass founder. His trade Guild is not specified, but the Founders Guild specialised in brass founding.⁴⁶⁴

⁴⁶⁰ Trinder, *Industrial Revolution*, p.26; Raistrick, *Dynasty*, p.6.

⁴⁶¹ Trinder, *Industrial Revolution*, p.26; Raistrick, *Dynasty*, p.10.

⁴⁶² Trinder, *Industrial Revolution*, p.2.

⁴⁶³ Raistrick, *Dynasty*, p.20; Hannah Rose, 'Some Account of the Family of the Darbys, Norris MSS, Vol. x, pp.121-31', 1779.

⁴⁶⁴ 'History', *The Worshipful Company of Founders and Founders' Hall* <<https://www.foundersco.org.uk/history>> [accessed 13 April 2022].

6.2.3 The Ironmongers

The role of ironmongers was twofold, firstly acting as the middleman between the iron producers (the ironmasters) and the forges and slitting mills – they organised the supply of raw iron to be turned into bar, and secondly to distribute the bar to its users.⁴⁶⁵ For the first task, more significant ironmongers (or merchants) would buy direct from the furnace or import iron either directly or through agents. Ambrose Crowley's decision to establish his site in North-East England was influenced by the easier access to Swedish iron.⁴⁶⁶ For lesser ironmongers there were regular meetings of ironmasters where sales were arranged.⁴⁶⁷ The second task of ironmongers was outwardly straightforward, distributing bar to the artefact manufacturers and smiths who would use it. This was how the local ironmongers in smaller towns operated, selling bar to smiths who were supporting the local economy, which was often agricultural. The Haynes brothers of Banbury fit into this category. But in other product sectors, notably nail manufacture, the structure was more complex. The use of one-third to one-half of English iron for nail-making made it extremely important.⁴⁶⁸ Although nailers were found across the country, the burgeoning concentration of the metal industries had led to the West Midlands becoming a centre for nailing. Additionally, the relatively recent introduction of the slitting mill had improved nail productivity and reduced prices. Many nailers found themselves without the working capital to purchase iron to turn into nails, and so ironmongers became nail merchants, supplying iron and paying for the finished product on a piece-work basis – in a system analogous to the putting-out system emerging in

⁴⁶⁵ Rowlands, *Masters and Men*, pp.54-109.

⁴⁶⁶ Flinn, *Men of Iron*, p.67.

⁴⁶⁷ Rowlands, *Masters and Men*, p.71.

⁴⁶⁸ Flinn, *Men of Iron*, p.253.

the textile industry. This was the start of nailing becoming a trade which lost status and earning capacity.⁴⁶⁹

The ironmongers operated as provincial or local dealers, or more entrepreneurial and mercantile operators working at a higher level. John and Richard Haynes of Banbury in Oxfordshire (married in 1699 and 1707, respectively) appear to be local dealers by their location. There is no definite family relationship to be gleaned from the registers, but births listed in Banbury under 'Haines' in 1668 and 1676 to the same parents (whose marriage is recorded as 'Haynes') suggests that they were brothers.⁴⁷⁰ Joseph Welch, senior and junior, were a father and son business in the Buckinghamshire town of Chesham. Both were active as ironmongers at Joseph junior's marriage in 1703, and at their deaths in 1707 (Joseph junior) and 1715 (Joseph senior). There is no indication of any subsequent generational activity in the field. Abraham Merrick was active in Farwin in rural Cheshire some years before William Hancock was dealing in iron in Middlewich, Cheshire. Although salt was extracted in the area in the early eighteenth century, and local soap boiling was emerging, it was not yet home to the salt-based chemical industry that emerged at the end of the century, and iron consumption would have been for agricultural and domestic use.⁴⁷¹

There are several members of the early Quaker ironmonger community whose activity is less easy to categorise. William Donne, Thomas Edwards and John Pearsall are all identified as ironmongers from Bristol from their marriage records. Bristol was the third largest city in

⁴⁶⁹ Rowlands, *Masters and Men*, pp.26,36.

⁴⁷⁰ The specific information in this section is all taken from the Quaker records used to produce appendix 7.

⁴⁷¹ For example Kinan Ibrahim, 'An Investigation of Historical Chemical Industry Ash and Lime Waste, and Local Catchment Chemistry, from near Northwich in Cheshire, United Kingdom' (unpublished PhD, University of Manchester, 2016), p.59. In 1748 the Middlewich Quaker John Beckett was trading as a Chandler and Soap Boiler.

the early eighteenth century, with a particularly strong mercantile and entrepreneurial presence in the Atlantic trade.⁴⁷² Bristol's geographic position as a seaport serving the river trade on the River Severn gave it a unique commercial location. In the early eighteenth century, rivers were the main outlet for goods exported from the West Midlands, as the canal network was only developed from 1760 onwards.⁴⁷³ Although some Black Country goods were distributed through the Trent Valley towards the East Coast, the Severn towards Bristol was a major distribution artery.⁴⁷⁴ On the Severn, Gloucester was an intersection with the London to South Wales road, which also provided a relatively short land portage to the Thames, which was a controlled navigation up to Cricklade.⁴⁷⁵ Thus, Donne, Edwards and Pearsall were in a position to trade iron over a wider region.

Further up the Severn catchment area, Thomas Harvey and Richard Hanniatt were active in Bromsgrove, Worcestershire. Though outside the main West Midland industrial area, Bromsgrove was in its own right a centre of nail, wire and card making (the latter being wire cards for the wool industry), and it was also adjacent to the South Warwickshire needle-making industry.⁴⁷⁶ This is an environment where ironmongers would easily be able to act as middlemen by supplying raw material and then distributing product. The Hunyatt (sic) family is referred to by Marie Rowlands as a Quaker ironmonger family in the West Midlands

⁴⁷² Wrigley, *People, Cities and Wealth*, p.160; Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century*.

⁴⁷³ A. J. (Tony) Arnold and Sean McCartney, "'Veritable Gold Mines before the Arrival of Railway Competition': But Did Dividends Signal Rates of Return in the English Canal Industry?", *The Economic History Review*, 64.1 (2011), pp.217-8.

⁴⁷⁴ Trinder, *Industrial Revolution*, pp.7-8; Malcolm Wanklyn, 'The Impact of Water Transport Facilities on the Economies of English River Ports, c.1660-c.1760', *The Economic History Review*, 49.1 (1996), pp.2-3.

⁴⁷⁵ Stuart Oliver, 'Navigability and the Improvement of the River Thames, 1605-1815', *The Geographical Journal*, 176.2 (2010), p.168.

⁴⁷⁶ Jones, 'Needle Manufacturing', pp.358-60.

– but not as notable as the Lloyds, Parkes, Fidoes, and Pembertons.⁴⁷⁷ On the North-Western side of Birmingham, Thomas Pemberton is listed at Wiggins Hill near Sutton Coldfield. The Pembertons were a Quaker ironmonging family, and Thomas is considered in this section because of his location outside the city. However, it seems unlikely that he was anything less than a wholesaler given his assumed family background.

William Tomlinson and John Winstanley were ironmongers in Warrington, Lancashire. Besides John (married 1704), Edward and John Winstanley (married 1694 and 1736) are listed as nailers active around the period under consideration in the database, as are James (1704) and Joseph (1730) Fradson. It seems possible that John was acting as the source of iron for this nailing industry situated in Winstanley, and it might be that John ceased this sourcing activity as other ironmongers became active in Warrington as time progressed – if the two marriages listed for John Winstanley are for the same person. Also listed as a Warrington ironmonger is William Tomlinson. The Tomlinsons are one of the ‘Quaker merchants’ referred to by Brian Awty in his survey of the Cheshire iron industry.⁴⁷⁸ Awty notes Enoch Tomlinson as a buyer of iron, but Enoch appears in the database as a hardware seller, married in 1691. William is not mentioned by Awty, but a family connection can be inferred. However, the lack of recognition by Awty does not indicate that William Tomlinson was not a major figure in Lancashire ironmonging. Awty was writing of the period around 1700, while the marriage records show that William was active a generation later in 1726. In northern Lancashire, Elijah Salthouse of Ulverston was the son of a grocer but apparently died in Graithwaite Hall, which is associated by address in the marriage

⁴⁷⁷ Rowlands, *Masters and Men*, p.111. The Hunyatts (Hunniat and Hanniatt), Pembertons and Lloyds are found in the data used here, Fidoe appears in the birth and death records, but with no occupation, the Parkes have not been found in the records.

⁴⁷⁸ Awty, ‘Charcoal Ironmasters of Cheshire and Lancashire’, pp.94, 106.

records with the Cumbrian ironmaking Rawlinson family. Hence, Salthouse could have been a retail ironmonger or been associated with producing and selling on a larger scale.

The remaining ironmongers not operating in London (with the exception of Abraham Darby, whose activity is included when the Coalbrookdale Company is discussed below) are based in Birmingham or the Black Country and are assumed to have been active in a manufacturing process and not merely selling to local retail consumers of bar iron. The Abraham Darby listed here is often referred to as Abraham I. He is listed as an ironmonger, having married in 1699 on the occasion of completing his apprenticeship with Jonathan Freeth, a Birmingham malt-mill maker, and immediately prior to setting up in the same business on his own account in Bristol.⁴⁷⁹ His training included some knowledge of casting, and in Bristol he found other co-religionists who were involved in the wider iron industry, including Nehemiah Champion.⁴⁸⁰ The description of him in the marriage register as an ironmonger reflects the wider range of his training and the range of activity that the Freeth business was engaged in. The entry of Samuel Freeth of Birmingham in Table 6.2 as an ironmonger on his marriage in 1716 supports this interpretation.

The other West Midlands-based ironmongers are Richard Lowbridge and Benjamin Harvey, both associated with Stourbridge, and John Pemberton, Samuel Freeth and Thomas Prichard of Birmingham. Lowbridge was not born in Stourbridge and had connections in Devon by marriage. There are no other indications of his activity. Benjamin Harvey is the son of Thomas Harvey discussed above. At Benjamin's marriage, Thomas was listed as resident in Evesham. Again, there is no further indication of activity, but one can speculate that

⁴⁷⁹ Raistrick, *Dynasty*, p.17.

⁴⁸⁰ Raistrick, *Dynasty*, p.19.

Benjamin found Stourbridge an easier place to carry on a putting-out nailing (or similar) trade. Although Marie Rowlands recognises the Pemberton family as a substantial Quaker family, the only appearance in the marriage records is for John in 1713,⁴⁸¹ though Thomas appears in the Ancestry website records.⁴⁸² By 1719 John Pemberton was wealthy enough to have developed Old Square in Birmingham, which became something of an ironmongers' enclave.⁴⁸³ From the birth records, Samuel Freeth was the son of Jonathan Freeth and was also described as an ironmonger on marriage, though as noted above, the family business was malt mill making. Thomas Prichard is another person whose ironmongering activity is only present in the marriage registers; he is listed as a tool forger in his death record.

Categorising the work of the London ironmongers is more complicated. As discussed in chapter 3, the description of a Londoner's occupation is complicated by the presence of the Guilds. While their influence was waning by this time, there were still many people whose activity was defined by their citizen and Guild status. In Table 6.2 there are 22 Quakers described as ironmongers and active in the 1690 to 1730 period. Of these, 16 are listed plainly as ironmongers. But there are six whose status is more complex, their full descriptions including the 'citizen' designation. In standardising the data in these cases, the occupation was taken as that given, with the designation 'citizen' taken as being a badge of Guild membership. Where two occupations and 'citizen' were given, the first descriptor has been taken as the occupation and the second as the seat of Guild membership. Of the six citizens, John House was described as an ironmonger and citizen and taken as a member of

⁴⁸¹ Rowlands, *Masters and Men*, p.111.

⁴⁸² Reference to Ancestry records here refers to the checks carried out as described in Appendix 7 to extend the data for Quakers active in the iron industry. The Ancestry data used is the 'England & Wales, Quaker Birth, Marriage and Death Registers, 1578-1837', collection 7097 as previously referenced at note 69.

⁴⁸³ Rowlands, *Masters and Men*, pp.114-6.

the Ironmongers Guild (the Worshipful Company of Ironmongers); Samuel Howell and Joseph Goad were ironmongers first then drapers and citizens, so have been taken as active ironmongers but members of the Drapers Guild; Abraham Gerrard (Garrard on his burial record) was similarly described, except that his membership was in the Clothworkers Guild. Later in the century there are entries for John Goad as a woolman in 1758 and as a draper in 1766 and another Joseph in 1753 as a tin-plate worker and citizen. Robert and Thomas Plumsted (or Plumstead, both spellings appearing in the registers) have been described as both drapers and ironmongers. Robert appeared as an ironmonger on the birth records of his children during the 1690s and 1700s and at his death in 1726 but is described in the digested marriage records as draper and citizen in 1704 and as ironmonger, draper and citizen in 1719. Also in the 1719 digested marriage records, Thomas Plumsted is described as draper and citizen, but as an ironmonger on the birth of his daughter in 1721. Additionally, within the Plumsted family, Matthew appears as an ironmonger on his children's birth records in the 1690s and 1700s and Francis on his death in 1710. The London Plumsteds include later listings for Robert in 1748 as an ironmonger on his marriage (with no Guild affiliation) and at the birth of a daughter in 1758 and his death in 1760. This would seem to indicate a substantial family business over at least two generations which was probably more mercantile in nature than domestic ironmongery. Their substance and longevity are indicated by their being the provider of Sir Ambrose Crowley's apprenticeship in ironmongery.⁴⁸⁴

Of the non-citizen London ironmongers, Thomas Hutson, William Carter, Joseph Skiping and George Robinson are either the only database entries with that surname or seemingly unconnected with any other activity associated with that surname (in the cases of Carter and

⁴⁸⁴ Flinn, *Men of Iron*, p.31.

Robinson). James and John Gilbert were brothers and immigrants to London, both being sons of Thomas Gilbert of Warwick. In a later (1722) marriage, John is described as a merchant. John Hewitt, Roger Levins, Edward Wood, Richard Edgoose, Elizabeth Tabaram, Thomas Mosely, John Baker and Joshua Wood only appear in the birth or death records. Such limited data allow no comment on the scale of their activities.

There are two additional factors to take into account in considering the activity of London ironmongers. The first is the mercantile activity undertaken by many Guild members, discussed in chapter 3. In summary, the members of London Guilds were originally skilled artisans licensed to practise their trade. In time, as these people prospered in a protectionist economic environment, they used their accumulated wealth to act as merchants in many fields, including ironmongery. This is connected to the second factor, which is the pattern of iron imports. Chris Evans and his colleagues confirm the importance of iron imports into England in the early eighteenth century.⁴⁸⁵ For the early years of the eighteenth century, most of these imports arrived through London. From Port Books and Customs Records analysed by Peter King, London imported 6,873 tons in 1695, 10,290 in 1701 and 7,754 in 1710, representing 48%, 58% and 45%, respectively, of the estimated English imports.⁴⁸⁶ Most of this iron came from Sweden. It seems plausible therefore that at least some London ironmongers, and particularly those with Guild membership, would be acting as wholesalers or merchants.

⁴⁸⁵ Chris Evans, Owen Jackson, and Göran Rydén, 'Baltic Iron and the British Iron Industry in the Eighteenth Century', *The Economic History Review*, 55.4 (2002), pp.644-5.

⁴⁸⁶ King, 'The Iron Trade in England and Wales', pp.425-50, Appendices 18,19.

6.3 The Influence of Quakers on the Early Eighteenth-Century Iron Industry

Charles Hyde's claim is specifically that 'Quakers owned or managed between half and three-quarters of the ironworks in operation in the early eighteenth century'.⁴⁸⁷ Hyde cites Arthur Raistrick and Brian Awty as his source for the claim.⁴⁸⁸ Running ironworks and producing iron form only one part of the early modern industry. As has been shown, only about half of the iron used in England in this period was produced there, the rest was imported. Clearly, control of the industry includes influencing the distribution of iron, and here the role of merchants and ironmongers is important.

From the database used in this study, there is virtually no evidence of a Quaker presence in iron production between 1690 and 1730, the only entry being that of Richard Ford in 1718 at Coalbrookdale. Care is required in making claims about the number and influence of Quakers in the industry, and as this chapter demonstrates, they were not as numerous as has been claimed; secondly, as discussed in chapter 2, the data recorded in the records are not complete. It is well known that Abraham Darby was a Quaker and a major influence on the eighteenth-century English iron industry, but in this database Abraham I was described as an ironmonger at his marriage in 1699.⁴⁸⁹ This appears strange given his subsequent activity of pot founding, his development of smelting processes, and his involvement with the

⁴⁸⁷ Hyde, *Technological Change*, p.16.

⁴⁸⁸ Raistrick, *Quakers in Science and Industry*, pp.89-160; Awty, 'Charcoal Ironmasters of Cheshire and Lancashire'.

⁴⁸⁹ See for example Raistrick, *Dynasty*; Trinder, *Industrial Revolution*, pp.21-6; Cox, 'Imagination and Innovation'.

Coalbrookdale company.⁴⁹⁰ The most cited source for Quaker control of iron production in this period is Arthur Raistrick.⁴⁹¹ From his studies of Quaker journals (diaries) and correspondence, he proposes a series of Quaker family-based iron industry networks.⁴⁹² These were the Fell Rawlinson group which operated in North Lancashire on the Furness ore field, the Lloyds who operated forges in Wales but were more successful after their move to Birmingham, the Darby family who were the prime movers in the Coalbrookdale Company, a more complex Quaker-run network in South Wales and his Cotton – Fell group in Yorkshire. However, his referencing of these sources makes information tracing difficult, and this is a factor driving the need to examine the Hyde claim. The following discussion of Raistrick's networks identifies those participants identified as Quaker in the marriage, birth and death records examined for this chapter, and appendix 8 contains a list of participants not so identified.

Surveying these groups in geographical order, the Fell-Rawlinson group had been working with iron as the Rawlinson family from 1549 by Raistrick's discussion.⁴⁹³ This area was the last bastion of bloomery working in England (Appendix 6), but he reports that in 1711 they were part of the consortium that built the Backbarrow furnace in south Lakeland and a second furnace in Arnside, Lancashire. This company survived well into the eighteenth century, persisting with charcoal technology, even extending its reach into Argyll in Scotland to find new sources of charcoal and extend its economic life. In this case the 'Fell' reference appears to be to the Lancastrian Fell family found at the heart of early Quakerism. Raistrick

⁴⁹⁰ Darby, *Darby Pot Patent*; R.A. Mott, 'Abraham Darby (I and II) and the Coal-Iron Industry', *Transactions of the Newcomen Society*, 31 (1957), 49–93, cited in Tylecote, *A History of Metallurgy*, p.105.

⁴⁹¹ Raistrick, *Quakers in Science and Industry*.

⁴⁹² Raistrick, *Quakers in Science and Industry*, pp.9-11.

⁴⁹³ Raistrick, *Quakers in Science and Industry*, pp.95-107.

tells us that Sarah Fell, a daughter of Margaret Fell (who later married George Fox), had a financial interest in the industry and was an active trader.⁴⁹⁴ Raistrick includes other works in his grouping, notably Cunsey, Lowood and Nibthwaite. He includes the following people involved in the group who were active in the period: William Braithwaite, Daniel Cotton, Stephen Crossfield, George Drinkall, Richard Ford, Edward Hall, Edward Kendall, Ralph Kent, John Machel, John Olivant, William Rawlinson, Job Rawlinson, William Rea, Thomas Rigg, Thomas Sunderland, Isaac Wilkinson and John Wilson. Of all these names, only Stephen Crossfield and William and Job Rawlinson have been identified as appearing in the Quaker records reviewed here. The name of Thomas Rigg appears but has not been positively identified, like Richard Ford (who needs to be differentiated from the Richard Ford active in the Coalbrookdale area). From my database I found that the Rawlinson family was associated with Graithwaite Hall during the century, which was also listed as a location for the Quaker ironmonger Elijah Salthouse, who was active in 1718. These identifiable Quakers (excepting Ford) were active within the Backbarrow Company, which can be said to be Quaker-owned and controlled. The other companies noted in the grouping cannot be so identified. This analysis is confirmed by Peter King, who independently found limited identifiable Quaker ownership in the industry.⁴⁹⁵

Across the Pennines, Raistrick's Yorkshire group was defined by the Spencer partnerships. This was a loose group of many differing partnerships and was geographically involved in the West Yorkshire Pennines, Sheffield and Derbyshire.⁴⁹⁶ These partnerships were active in markets known to them and were not technological experimenters. The Spencers themselves

⁴⁹⁴ Raistrick, *Quakers in Science and Industry*, p.59.

⁴⁹⁵ Private email, Peter King, 'Quaker Owned Iron Works', <peterkingiron@blueyonder.co.uk>, 18 November 2020.

⁴⁹⁶ Raistrick, *Quakers in Science and Industry*, pp.152-3.

were in the nail industry, and Matthew Wilson and Matthew Woodhead supplied wire for wool card makers. These products required a workable iron, which meant charcoal iron in the early eighteenth century. Around Sheffield, John Fell, Ralph Elmsall, Dennis Heyford and Gamaliel Milner were supplying more varied markets such as sickles and domestic castings.⁴⁹⁷ Operating in these more complex markets entailed the use of more sophisticated materials, and the Fell partnership is recorded as using ‘iron’, ‘steele iron’ and ‘Danks iron’ from Danzig from 1690, and purchasing a share of a steel furnace in 1737.⁴⁹⁸ The main Yorkshire names arising from Raistrick’s grouping in the period whom he describes as Quakers are Thomas Dickin, Ralph Emsall, John Fell, John Fell junior, William Milner, Gamaliel Milner, John Spencer, William Westby and Matthew Woodhead. The Milners in particular are said to have had contacts with the Lloyd and Darby families, but of the remainder the Spencers with their connection to the Cotton family are the only ones with links to the established ironmaking families. None of them appear in the Quaker records examined, with the possible exception of Gamaliel Milner, who appears to be the subject of a death recorded in 1762. The Milners are noted as Quaker ironmasters spread across the Midlands, London and North Wales, but the last Gamaliel is also recorded, along with John Fell junior, as being a church burgess.⁴⁹⁹ This connection with the established church was not a fleeting fancy amongst these partners. William Spencer had been a burgess in the seventeenth century and John was in 1740, along with John Fell junior as a ‘new burgess’, and John Fell senior was buried in Sheffield parish church.⁵⁰⁰ The connection of these Yorkshire Fells to those in the North-West is tenuous. David Hey describes them as a junior branch of the Cumberland ironmasters, and Peter King recognises John Fell and some of his

⁴⁹⁷ Raistrick, *Quakers in Science and Industry*, p.159.

⁴⁹⁸ David Hey, *The Fiery Blades of Hallamshire*, pp.184, 188.

⁴⁹⁹ Hey, *Fiery Blades*, p.172.

⁵⁰⁰ Hey, *Fiery Blades*, pp.215, 172.

partners as Quakers.⁵⁰¹ The only connection with the Cumbrian Rawlinson group appears to be the interest of Sarah Fell in a forge noted above. These Yorkshire partnerships do not appear to be a coherent group, nor do they appear to be particularly Quaker. Raistrick does credit John Spencer with introducing a common accounting system in his partnerships – he was managing them and had found a workable system, and this commonality gives an impression of togetherness.⁵⁰² However, King’s description of the Spencer group as a construct of archival survival and over-interpretation does seem apt.⁵⁰³

By the early to mid-eighteenth century there were two major business arms in Derbyshire. There was one based around entryism by West Midland businesses, notably the Vaughan/Mander line, and there was a second one in North Derbyshire centred on the large Staveley works, which was by then shared between the Sheffield ironmasters and Spencer’s Yorkshire grouping.⁵⁰⁴ Neither arm had significant Quaker connections as evidenced within the data used here.

Moving South, Raistrick’s next grouping is the Darby Reynolds group in Shropshire, which ran the Coalbrookdale Company and associated works. Abraham Darby I successfully used coal (in the form of coke) to smelt iron. Initially, he produced castings, and it was much later in the century after considerable development work that coal iron became a forgeable metal suitable for mass use. Because of the importance of this technological advance, the Darby family has been well reported, and their Quakerism is well known.⁵⁰⁵ The Darbys were not

⁵⁰¹ Hey, *Fiery Blades*, p.172; King, *Gazeteer*, p.137.

⁵⁰² Raistrick, *Quakers in Science and Industry*, p.158.

⁵⁰³ King, *Gazeteer*, p.137.

⁵⁰⁴ King, *Gazeteer*, pp.190-91.

⁵⁰⁵ Sources of information include Raistrick, *Dynasty*; Raistrick, *Quakers in Science and Industry*; Trinder, *Industrial Revolution*; Cox, *Imagination and Innovation*; and Mott, ‘Abraham Darby (I and II)’.

the only Quakers involved with Coalbrookdale. Richard Ford was deeply involved in the company from Abraham I's death in 1717 to his death in 1745, marrying Abraham's daughter Mary in 1718.⁵⁰⁶ The Reynolds family were intimately involved in the company, but after the period of this examination. John Thomas was an early and longstanding assistant of Abraham Darby, joining him in Bristol and thence in Coalbrookdale. He is described as a founder on his Quaker marriage in 1714 but as a moulder by Barrie Trinder when living in a company village in Coalbrookdale.⁵⁰⁷ His son John junior married as a Quaker in 1742, being described as a pot-founder. Raistrick notes Thomas Bayliss as Abraham's brother-in-law and a party to the lease agreement whereby Abraham took on the Coalbrookdale furnace in 1708.⁵⁰⁸ This relation is described as 'Baylies' when he was pursuing Abraham's estate in 1717 for repayment of an alleged loan, having been a clerk at Coalbrookdale.⁵⁰⁹ This Baylies appears in Quaker records only as the father of Thomas, born in 1714 in Coalbrookdale. John Hawkins managed the Bersham furnace in North Wales for the Quaker Lloyds prior to his marriage to Ann, daughter of Abraham.⁵¹⁰ Hawkins was not a successful manager and does not appear in the Quaker records. The Darby Reynolds grouping around Coalbrookdale is the most solid of Raistrick's Quaker groups in terms of Quaker control, size and integration.

The Lloyds of Birmingham, and their forebears in mid-Wales, are a second well-documented Quaker iron family.⁵¹¹ In the mid-seventeenth century the Lloyd family operated the Parc

⁵⁰⁶ Raistrick, *Quakers in Science and Industry*, p.128 with the deaths and marriages being confirmed by the Quaker registers.

⁵⁰⁷ Trinder, *Industrial Revolution*, p.144.

⁵⁰⁸ Raistrick, *Quakers in Science and Industry*, p.125.

⁵⁰⁹ Raistrick, *Dynasty*, pp 42-3.

⁵¹⁰ Rachel Labouchere, *Abiah Darby* (York: William Sessions Ltd, 1988), p.35.

⁵¹¹ For example Michael W. Flinn, 'The Lloyds in the Early English Iron Industry', *Business History*, 2.1 (1959), 21-31; Samuel Lloyd, *The Lloyds of Birmingham with Some Account of the Founding of Lloyds Bank*, 3rd ed.

Mathrafal forge in Caereinion Manor near Welshpool where Charles Lloyd (1637-95) was imprisoned as part of the persecution of Quakers, being released in 1672.⁵¹² The marriage records show the beginnings of the family's more extensive involvement in the industry with the marriage of Charles' son Samson to Mary, the daughter of Ambrose Crowley I, in 1695. With this *entrée* into the Midlands iron industry, compounded by the marriages of his sister into the Pemberton ironmongering family and his brother (also Charles) to Sarah Crowley, the Lloyds Birmingham iron business began as an ironmongery and soon extended to include forges and slitting mills. This Charles Lloyd who married Sarah in 1693 (the records show a marriage but do not name Sarah) operated forges including a new one, Fridd Mathrafal New Forge, close to the old family home at Dolobran and the long-sold Parc Mathrafal forge. He also began the building of a furnace at Bersham, near Wrexham in 1717, but was forced to sell it on his bankruptcy in 1727, the sale being to Abraham Darby's son-in-law John Hawkins, mentioned above as not appearing in Quaker records. This precipitated his disownment by the Quakers, but he was reinstated in 1742, having paid off his debts. The Birmingham business was successful, Sampson's son Sampson II being described as an ironmonger in his marriage record in 1731, and the Lloyd family was instrumental in the foundation of the first Birmingham bank in 1763. More evidence of the Lloyds' Quakerism is contained within the marriage and other registers, with occupational descriptions of merchant and banker appearing later in the century, and there is no doubt of their impact within the Society of Friends nor within the Birmingham business world, but they were predominantly iron processors rather than manufacturers.

(Birmingham: Cornish Brothers Limited and London: Simpkin, Marshall & Co, Ltd, 1909); Price, 'Great Quaker Business Families', pp.363-99.

⁵¹² Raistrick, *Quakers in Science and Industry*, pp.107-21.

In South Wales there were two distinct eras. Of interest in this discussion is the Hanbury family, as Capel established the Pontypool ironworks in the sixteenth century. The founder's grandson, Richard, established the Quaker connection when he became a Friend in 1667 after hosting George Fox a decade earlier.⁵¹³ The family was involved in several Welsh forges, and Capel had managed the Tintern Wire Works. Pontypool Iron Works was known as a source of material for making carding wire. In the early eighteenth century, John, Richard's grandson, was running the ironworks and also acting as a London merchant. The Pontypool works are known for introducing tin plate manufacture on the German model after prior patents expired, and also for using John Payne's patent for rolling out plate iron.⁵¹⁴ Thus, the scene was set for the South Wales steel industry specialisation in plate products. In 1768 an influx of Quaker resources, including the Coalbrookdale-connected Richard Reynolds, the Harford family of London and Bristol, and the Breconshire Partridges, transformed the Melingriffith works into a sophisticated plate producer.⁵¹⁵ However, by 1780 Reynolds had withdrawn and the firm became Harford Partridge and Company. The Hanburys appear in the marriage records, although they are incomplete, and Richard Allen notes Charles Hanbury (the father of John) as being censured for marrying in a church in 1712.⁵¹⁶ The Harfords, too, appear in the records, and Harford Partridge is one of the few Quaker firms identified by Peter King, but their influence is too late for this discussion of Hyde's claim.⁵¹⁷ There is a clearly significant Quaker influence in the iron industry in this region, and as the rolled plate industry developed, South Wales became a very large part of it.

⁵¹³ Raistrick, *Quakers in Science and Industry*, p.146.

⁵¹⁴ Richard C. Allen, 'Industrial Development and Community Responsibility The Harford Family and South Wales, ca. 1768–1842', in *Quakerism in the Atlantic World, 1690–1830*, ed. by Robynne Rogers Healey (University Park, PA.: Pennsylvania State University Press, 2021), p.225.

⁵¹⁵ Allen, 'The Harford Family', p.226.

⁵¹⁶ Allen, *Quaker Communities in Early Modern Wales*, p.144.

⁵¹⁷ Private email, Peter King, 'Quaker Owned Iron Works', <peterkingiron@blueyonder.co.uk>, 18 November 2020.

In summary, the information extracted from the database, augmented by names from birth and death register digests and a limited search of other registers, does not show the extensive participation in the iron industry that Hyde suggests. Indeed, the data suggest more participation in iron trading than its production. Of the networks described by Raistrick, Coalbrookdale is clearly a Quaker enterprise, as is the Backbarrow part of his Rawlinson network. Yorkshire and the East Midlands had some passive Quaker involvement but were not Quaker-controlled. The Lloyds were a Quaker family but, apart from being part of the Bersham partnership, were more involved in the distribution of iron than its production. In South Wales the Hanbury family were active and significant in the early part of the century, as were the Harfords towards the end, but neither dominated the region.

6.4 Assessment of the Hyde Claim

6.4.1 The Iron Production Sector

Hyde's claim is that 'Quakers owned or managed between half and three-quarters of the ironworks in operation in the early eighteenth century'.⁵¹⁸ This is not supported by the evidence. In the early eighteenth century, blast furnaces produced pig iron, most of which was then transformed in a forging process into bar, which itself was the raw material for producing goods. For this discussion I will initially assume that 'ironworks' equates to furnaces and forges, which clearly means ignoring the production of goods. Table 6.3 takes the data of Table A6.1 for all ironworks and restates it by Quarterly Quaker Meeting.

⁵¹⁸ Hyde, *Technological Change*, p.16.

Table 6.3 - The Spread of the English Iron Industry in 1710 by Quarterly Quaker Meeting				
Quarterly Meeting	Furnaces	Forges	Other	Bloomeries
Buckinghamshire	0	0	1	0
Cheshire & Staffordshire	9	18	13	0
Cumberland & Northumberland	2	1	0	0
Derbyshire & Nottinghamshire	5	8	2	0
Dorset & Hampshire	1	2	0	0
Durham	0	0	2	0
Gloucestershire & Wiltshire	5	8	1	0
Herefordshire Worcestershire & Wales	19	45	21	0
Kent	2	1	2	0
Lancashire	1	0	1	13
Sussex & Surrey	17	16	2	0
Warwickshire Leicestershire & Rutland	2	4	1	0
Yorkshire	3	8	6	0
Totals	66	111	52	13

There are differences from Table A6.1 with this presentation, which is derived by returning to the original location data from Peter King.⁵¹⁹ Firstly, the dominance of Herefordshire Worcestershire & Wales arises because of the inclusion of the Shropshire, South Wales, Denbighshire and some Wye Valley works, and secondly, the Sussex & Surrey figures represent the presence of the Wealden works. Cheshire & Staffordshire contain those works on the edge of the Black Country on the South Staffordshire coal field, and those around the Potteries. Table 6.4 combines the data of Table 6.3 with the Quakers identified in this chapter as active in the industry between 1691 and 1730.

⁵¹⁹ King, 'The Iron Trade in England and Wales', pp.342-424, Appendices 9-17.

From the table it is immediately apparent that active Quakers are spread more thinly than plants, and that Quakers are more concerned with distributing iron rather than producing it. But before making the leap to dismissing Hyde's claim of above 50% Quaker control of the industry, consideration of the patterns described earlier in this chapter is necessary.

Table 6.4 - Iron Plant and Quakers Working in the Industry circa 1710 by Quarterly Meeting				
Quarterly Meeting	Plant	Ironmasters	Ironmongers	Founders
Berkshire & Oxfordshire	0	0	2	0
Bristol & Somerset	0	0	4	0
Buckinghamshire	1	0	2	0
Cheshire & Staffordshire	40	0	3	0
Cumberland & Northumberland	3	0	0	0
Derbyshire & Nottinghamshire	15	0	0	0
Dorset & Hampshire	3	0	0	0
Durham	2	0	0	0
Gloucestershire & Wiltshire	14	0	0	0
Herefordshire Worcestershire & Wales	85	1	4	1
Kent	5	0	0	0
Lancashire	15	0	2	0
London & Middlesex	0	0	22	1
Sussex & Surrey	35	0	0	0
Warwickshire Leicestershire & Rutland	7	0	4	0
Yorkshire	17	0	0	0
Totals	242	1	43	2

In Southern England the plant distribution is across the Weald, covered by the Quaker Meetings of Sussex & Surrey, Kent, and Dorset & Hampshire. The Weald was an outlier region in the industry due to its concentration on gunfounding. This meant that there was

low bar production, and, therefore, low treatment of bar in slitting mills and the like. From Table 6.1 we have seen that the Weald was responsible for approximately 30% of the country's pig iron production at this time, even though the plant figures in Table 6.4 appear lower than this. There is no industry Quaker representation in this region from my data, nor does Raistrick suggest any Wealden Quaker presence. Peter King notes a Quaker presence at the Titchfield works in Hampshire through the Gringo family. This name does not appear in the marriage records where occupations are recorded but mentions of birth and death were found in the Ancestry system.⁵²⁰ As the Weald accounts for 30% of English pig iron production with no Quaker input, Hyde's upper cut-off of 75% Quaker control of the English industry is inconceivable.

Herefordshire Worcestershire & Wales was a geographically large Meeting which covered the iron areas of South Wales, Shropshire and parts of the Forest of Dean (together with Gloucestershire & Wiltshire) and the West Midlands. In South Wales in this era, the Pontypool works of the Hanbury family is the only clearly Quaker presence. Before this period there had been both Hanbury and Challenor networks, but by 1700 Challenor in particular was declining, and the Hanburys were no longer involved in the Tintern works.⁵²¹ Across the Wye in the Forest of Dean, the traditional independent producers had come under network pressure as the massive Foley network became strong.⁵²² This led to Forest of Dean iron being supplied to the West Midlands as the Foley brothers worked together late in the seventeenth century.⁵²³ This grouping included the Tintern works. In the early eighteenth century, the Foley interest became diluted as the 'Forest' partnership emerged. Under this

⁵²⁰ King, *Gazeteer*, p.101.

⁵²¹ King, 'The Iron Trade in England and Wales', p.89; Raistrick, *Quakers in Science and Industry*, p.146.

⁵²² King, 'The Iron Trade in England and Wales', pp.90-91.

⁵²³ Rowlands, *Masters and Men*, p.54.

partnership, links with South Wales developed, but their influence declined without the skill base provided by the Foleys.⁵²⁴ Thus, Quaker family influence in this region was not as high as it had been in the mid-seventeenth century. Later in the eighteenth century such influence increased again when the Harford family was operating in Ebbw Vale.⁵²⁵

Late in the eighteenth century, Shropshire was the dominant iron-producing region as Darby's coal-fuelled furnace technology was developed into a process capable of supplying the mass market (though in terms of plants in use, South Wales was close behind with 21 furnaces to Shropshire's 24).⁵²⁶ However, in the early part of the century the position was different. Shropshire produced around 11% of the country's pig iron and 15% of its bar (Table 6.1 and appendix 6). But this was in the early days of the coke revolution and Coalbrookdale was a new company producing iron pots. Coalbrookdale was one of seven active furnaces in the county in 1710, the other six all well established and with no Quaker connections in the period (though the Kemberton furnace is noted as receiving coal for coking as early as 1710, and Willey was under Coalbrookdale ownership from 1733-57).⁵²⁷ Of these six furnaces, three (including Willey) had connections with the Boycott grouping, who were a Shropshire network comparable in size to the Hanburys in South Wales.⁵²⁸ Thus, even in Shropshire Quakers were not a controlling party in the industry.

The West Midlands includes plants sited across the West Midland Quarterly Quaker Meetings (parts of Herefordshire Worcestershire & Wales, Cheshire & Staffordshire, and Warwickshire

⁵²⁴ King, 'The Iron Trade in England and Wales', pp.91-2.

⁵²⁵ Allen, 'The Harford Family', pp.226-9.

⁵²⁶ Trinder, *Industrial Revolution*, p.38; King, 'The Iron Trade in England and Wales', pp.389-414, appendix 15.

⁵²⁷ Trinder, *Industrial Revolution*, pp.25, 32.

⁵²⁸ King, 'The Iron Trade in England and Wales', pp.85, 89.

Leicestershire & Rutland). This is treated, for the purposes of this section, as synonymous with the Black Country which, as shown in Table 6.1 and appendix 6, contributed 9% of pig iron production and 20% of bar production. Even at this early date, the concentration of metal activity is clear. According to Raistrick, the Lloyd family's activity is the cornerstone of the Quaker contribution – but, as noted above, they were more traders and processors than iron producers, though they were involved in production as partners in the Bersham furnace (Wrexham), with the non-Quaker Woods.⁵²⁹ Their contribution is not to be ignored but will be considered further below when control of trading is discussed. Wood had other links with Quakers, being involved with experiments in coke smelting at Rushall with Richard Baddeley and the Quaker ironmonger and gunmaker Joseph Farmer.⁵³⁰ Once again it is difficult to see a level of Quaker control of iron production.

In Yorkshire and Derbyshire, the picture of Quaker control, taken from Raistrick, depends on the Spencer and Fell networks being Quaker. There are also connections with the Derbyshire industry. As shown above, these networks were neither Quaker-dominated, nor particularly close. So, although Yorkshire and Derbyshire account for up to 14% of both pig and bar iron, any Quaker interest is in combination with other parties with no outright control.

The Lancashire iron industry based around the Furness area does contain a significant Quaker presence, and the Backbarrow Company is one which was Quaker-controlled. Backbarrow continued long into the eighteenth century and built blast furnaces. But in the early part of the century, Lancashire was the last outpost of the old bloomery process, and although the picture of a Quaker industry is supportable, it contributed around 2% to 3% of the iron (Table

⁵²⁹ King, *Gazeteer*, p.250.

⁵³⁰ Rowlands, *Masters and Men*, p.62; Satia, *Empire of Guns*, pp.31, 73.

6.1 indicates 490 tons of bar produced. Bloomery iron is not included in pig iron production, but 490 tons would add about 2% to the approximately 24,000 tons of pig produced).

Cheshire & Staffordshire was a Quarterly Meeting where plants were located, but with a Quaker distributional presence only. It was connected with the West Midlands industry located in south Staffordshire, but there was also an industry spreading from the Potteries into Cheshire and the North Wales borders - the NW Midlands industry which contributed 12% of pig iron and 11% of bar production (Table 6.1 and appendix 6). The Cheshire industry had many connections with the Yorkshire network families of Cotton, Dickin and Spencer, and it was also connected to the Furness industry at Cunsey through the Hall family.⁵³¹ By noting these connections, Raistrick makes an implied connection to his Furness and Yorkshire networks. There is one important Quaker connection in this region. In 1717, Charles Lloyd of mid-Wales initiated the building of Bersham furnace near Wrexham.⁵³² This became a large and long-lived production site. It was sold to John Hawkins, who was connected to the Coalbrookdale concern, upon Lloyds bankruptcy in 1727.⁵³³ Under Hawkins it was not successful and was sold again to Isaac Wilkinson in 1753 after becoming profitable from 1735 under more direct Coalbrookdale control.⁵³⁴ The industry around the Potteries was based on the North Staffordshire coal field. There was no Quaker interest, and from 1707 onwards it was owned by the parties controlling the Cheshire industry.⁵³⁵

⁵³¹ Awty, 'Charcoal Ironmasters of Cheshire and Lancashire', pp.85-93; King, 'The Iron Trade in England and Wales', p.86.

⁵³² Raistrick, *Quakers in Science and Industry*, p.115.

⁵³³ Raistrick, *Dynasty*, p.59.

⁵³⁴ Raistrick, *Dynasty*, p.61.

⁵³⁵ Peter King, *Gazeteer*, pp. 220-22.

Thus, from the point of view of iron production it is very difficult to see that Hyde's claim of Quaker control of more than half of the industry stands up. There is some control in Shropshire, where the Darby's Coalbrookdale concern was becoming significant in this period, and there was some control in South Wales under the Hanbury family. Elsewhere, the Lloyds had some influence in the West Midlands and through Bersham in the NW Midlands and the Rawlinsons at Backbarrow were a significant force in Furness – though this was a minor production area. In Derbyshire and Yorkshire there was some Quaker involvement, but any contribution above a passive financial interest has not been shown, and in Southern England there was effectively no representation. These last two regions produced 44% of the England's pig iron in the period without any significant Quaker input. In the Forest of Dean, which produced 12% of the pig iron, the non-Quaker Foley family had the biggest influence.

6.4.2 The Distribution Sector

Production of a commodity is only one aspect of an industry. As there was overlap between large ironmongers as distributors and producers in this period, the distribution of iron should also be considered in the context of Hyde's claim. This sector is different from the production sector discussed above. From Table 6.1 I proposed a total market for bar iron of 30,000 tons per annum, including imported iron. Adding the 6,000 tons of cast metal used in the Weald, this gives a total of 36,000 tons to be distributed. As for production, the cast iron industry of the Weald is outside any distribution networks operating across the rest of the country. Their gunfounding product was sold to the government, the imperial trading

companies or exported.⁵³⁶ This near 17% of the English iron distribution sector was outside Quaker influence. During the first third of the eighteenth century, naval contracts were highly prized. Ambrose Crowley's company was one of two or three main suppliers to the navy, and in the first decade of the century, he is said to have forged 400 tons of iron, which equated to about 15% of the firm's needs.⁵³⁷ This suggests that this firm was supplying of the order of 2,667 tons of iron each year – or 7.5% of the total English market. While the Crowley family were Quakers at one time, by this period they were not. In 1707 Ambrose had accepted a knighthood following service as a Sheriff of the City of London and was marrying his daughters to non-Quaker London merchants. He maintained Quaker contacts, notably with Sampson Lloyd, a brother-in-law.⁵³⁸ He was also a paternalistic employer, displaying traits more associated with Quaker employers such as the later Rowntrees and Cadburys, thus demonstrating a sympathy with the movement, but was no longer a member.⁵³⁹ Arising from the Weald and Crowley alone, almost 25% of national iron distribution was outside Quaker control. This implies that if Hyde's upper limit of 75% control was reached, all distribution in all other areas would need to be controlled by Quakers.

Turning to the Black Country, Table 6.1 and appendix 6 suggest that 40% of English bar (or 33.3% of total iron) was used there, although the 12,115 tons given looks high in the context of information such as that from Abraham Spooner's report to Parliament of 9,000 tons of iron being manufactured (turned into products) within 10 miles of Birmingham in 1737.⁵⁴⁰

⁵³⁶ Henry Cleere and David W. Crossley, *The Iron Industry of the Weald; with Contributions by Bernard Worssam and Members of the Wealden Iron Research Group*, ed. by Jeremy Hodgkinson, 2nd.ed, (Cardiff: Merton Priory Press, 1995), p.206.

⁵³⁷ Flinn, *Men of Iron*, pp.101, 149.

⁵³⁸ Flinn, *Men of Iron*, pp.55-7.

⁵³⁹ Flinn, *Men of Iron*, pp.219-232.

⁵⁴⁰ Abraham Spooner, 'Importation of Iron from America', *House of Commons Journal*, 22 (1737), p.854.

The Midland iron trading business was fragmented, especially between 1700 and 1730. In the seventeenth century the Foley concern was huge, latterly controlling much of the Forest of Dean pig production, and then feeding their own forges, notably in the Stour valley. After 1700 poor management caused their influence to decline. After 1730 the Knight partnership emerged as a strong Midland wholesaler. Their sales, of the order of 1,900 tons per annum from the Stour Valley forges, were big enough to properly dominate the market.⁵⁴¹

Rowlands identifies 17 families of significant ironmongers operating in the West Midlands.⁵⁴² Of these the Fidoes, Lloyds, Parkes and Pembertons are identified as Quakers, but the Bretts, Finches and Jessons are identified as presbyterian. Other Quaker families involved are the Hopkins, Hortons and Hunyatts (possibly connected to the 1707 Hunniat blacksmith of Bromsgrove seen in my database), and the Quaker iron warehouseman Samuel Milner of Bewdley is mentioned. Thus, there is a case to be made for significant Quaker influence within the West Midland iron trading world of the early eighteenth century, but control would appear to be too strong a word.

There are two other combinations of regions in Table 6.1 that use significant amounts of bar iron. South Wales and the Forest of Dean together use 20% of the total. During this period the rolling of plate began to become a significant industry in which the Harfords were instrumental, but as already noted their interest in the Tintern wire works was gone. Unlike the West Midlands, iron trading was more limited as the manufacturers were physically close to the producers, and supply chains were well established. But it was a region of some

⁵⁴¹ Rowlands, *Masters and Men*, pp.169-71. Appendices 1&2 give sales aggregated over 1692-1705 for the Foleys and 1733-50 for the Knights, the figure of 1,900 tons is based on an average for those years, and further represents a balance between the Foleys average of 1,619 tons and the Knights 2,157 tons.

⁵⁴² Rowlands, *Masters and Men*, pp.110, 111, 119.

Quaker influence. Yorkshire and Derbyshire used 16% of the nation's bar. In Yorkshire the Spencer networks were users as well as producers: in 1742 William Spencer employed 120 nailers.⁵⁴³ Some Yorkshire iron was sold elsewhere, and the Quaker general merchant Nehemiah Champion of Bristol is cited as a conduit for the output of several of Raistrick's Quaker networks, including Yorkshire and Cumbria.⁵⁴⁴ In Derbyshire the Staveley industry was under Yorkshire network control and selling locally, but in the southern part of the county and in the Trent Valley, iron works were run by families and their connections who had West Midland ironmonger origins.⁵⁴⁵ The Jennens/Vaughton/Manders were one dynasty, and the Lloyds and Pembertons were present, too. There was some Quaker influence in the south of the region, but where it was more connected into the West Midlands.

Importing iron into England was mostly done through London.⁵⁴⁶ Some was imported directly by larger users such as the Crowley concern; indeed, Crowley regarded Sweden as his main source of bar.⁵⁴⁷ Within this study's database there are eleven London-based ironmongers active within the period, of whom four are Guild members and so potential merchants (see 6.2.3 above). The Plumsted family was noted as being likely iron merchants. By the mid-century they were active in the Atlantic trade and were importing iron from America, as well as exporting products, as part of their activity, having earlier been described as 'merchant ironmongers'.⁵⁴⁸ Whether they were involved in earlier trade with Sweden is not clear, but again there appears little likelihood of Quaker control of the trade.

⁵⁴³ Rowlands, *Masters and Men*, p.80.

⁵⁴⁴ Raistrick, *Quakers in Science and Industry*, pp.98-9, 158.

⁵⁴⁵ King, *Gazeteer*, pp.190-91, 207-8.

⁵⁴⁶ King, 'The Iron Trade in England and Wales', pp.425-438.

⁵⁴⁷ Flinn, *Men of Iron*, p.106.

⁵⁴⁸ S. D. Smith and T. R. Wheeley, 'Requisites of a Considerable Trade': The Letters of Robert Plumsted, Atlantic Merchant, 1752-58', *The English Historical Review*, CXXIV.508 (2009), pp. 547, 549-50.

This section should not close without a brief comment on the nailers. The eighteenth-century nail industry was large, using up to half of the country's iron. Crowley's business was based on nail-making, as shown by his challenge to Midland ironmasters on setting up his Sunderland factory in 1685.⁵⁴⁹ However, nailing was not significant for Quakers; there are 27 listed in my database, with another 4 found in the additional data used in this chapter. Of these, 18 were active between 1690 and 1730 inclusive, of whom 10 were in Lancashire.

6.5 Conclusions

Hyde's claim of 50-75% control of the early eighteenth-century iron industry by Quakers is not supportable. Synthesising data from studies of the iron industry has provided a new analysis of the industry, bringing together production and consumption analyses. Pig iron production is well spread around the country, though there is a concentration of 30% in Southern England. Between 8% and 10% was located in each of the regions of the Black Country, Derbyshire, the Forest of Dean, the NW Midlands, Shropshire and South Wales. Bar production is less well defined, though both the bar to pig ratio model and King's analysis show that the regions of the Black Country, the Forest of Dean, the NW Midlands and Shropshire are major pig to bar converters, with the Black Country and Shropshire above 15% each. The models differ for bar production between the ratio and King estimates for Derbyshire, South Wales and Southern England, with estimates of 6%-10%, except that King suggests 14% of bar production for Southern England. Bar usage is heavily skewed, with 40% of consumption being in the Black Country, and 10%-12% being used in each of the

⁵⁴⁹ Flinn, *Men of Iron*, pp.35-8, 253.

Forest of Dean, South Wales and Yorkshire. These distributions also show the importance of the Severn as a trade conduit for the iron industry. The records from my database, supplemented by names from a sample of digested Quaker birth and death records and some information from registers and documents contained in the commercial Ancestry system, show only a small number of Quakers involved with the iron industry. In the early eighteenth century there were 35 active Quakers identified, of whom 32 were distributors, as ironmongers. There was a concentration of 12 in London and 6 in the Herefordshire Worcestershire & Wales Meeting. Thus, the analyses show neither the production nor distribution of pig or bar iron was Quaker-controlled.

However, there was a significant Quaker input into the industry, and there was contact between both Quaker and non-Quaker participants in the industry. Quaker control is at best an over-interpretation of Raistrick's view of the industry as a series of regionally connected networks.

A significant part of the case against Hyde arises from the Wealden industry where there is no Quaker involvement (apart from the Gringos at Titchfield in Hampshire) which accounted for 17% of the industry. In the West Midlands there was a significant Quaker presence in the industry, but as distributors, not producers. The Lloyds, Fidoes, Parkes and Pembertons were all major ironmongering families, but the local industry was large enough for many others.⁵⁵⁰ Besides the Quaker families, Rowlands specifically notes the Bretts, Jessons and Finches as presbyterian. By the early eighteenth century the Crowleys had moved away from their Quakerism and the West Midlands.⁵⁵¹ Quakers were present in South Wales where the

⁵⁵⁰ Rowlands, *Masters and Men*, p.111.

⁵⁵¹ Flinn, *Men of Iron*, pp.54-5.

Hanbury family operated, and this influence extended to the Forest of Dean.⁵⁵² But the controlling Forest partnership there was not Quaker.⁵⁵³ Raistrick makes much of the Yorkshire network, but there is little evidence presented here that supports a significant Quaker presence, and none for control. Shropshire is where Quakers were big iron producers, through the Darbys, but in the early part of the century, other families such as the Boycotts were still very active.⁵⁵⁴ It cannot be said that there was any Quaker control of the industry. There were instances where broad partnerships were made and some local monopolistic activity took place, such as in Cheshire, or even Yorkshire, but such associations tended to break up and reform as different alliances after a few years.⁵⁵⁵ Even the largest of them, such as the Foleys on the Severn, changed and did not necessarily dominate their markets.⁵⁵⁶

Hyde's claim relies significantly on Raistrick's work and appears to be an interpretation of Raistrick's presentation of regional Quaker networks. But Raistrick does not explicitly suggest Quaker industry control in those networks, although he is implicitly suggesting very significant Quaker influence. Raistrick's notion of these networks came from his reading of Quaker diaries and correspondence, sources which are only acknowledged in the introduction to his work, not as detailed references. Analysis of the digested marriage records, and the data extension I described earlier, does not support such a significant Quaker presence in the industry. Coupling this slighter presence with the industry analysis I have made does not show Quaker control even in the regions where they have a presence capable of exerting

⁵⁵² Allen, 'The Harford Family', pp.224-5.

⁵⁵³ King, 'The Iron Trade in England and Wales', pp.91-2.

⁵⁵⁴ King, 'The Iron Trade in England and Wales', p.85.

⁵⁵⁵ Awty, 'Charcoal Ironmasters of Cheshire and Lancashire', pp.92-100; King, *Gazeteer*, pp.137-143, 161-8.

⁵⁵⁶ King, 'The Iron Trade in England and Wales', pp.89-93.

influence. This suggests that Hyde has over-interpreted Raistrick and his other sources, to make a dramatic, but unsupportable, conclusion about Quaker control over the industry. It is the dramatic nature of this finding that has led to its continued repetition – which should now cease.

Chapter 7: Comparison of this Quaker Population with Other Studies

The objectives of this chapter are to compare the findings of this study, presented in the preceding three chapters, with findings from previous studies of Quaker occupational geography and with the national population. These prior studies of Quakers were introduced in chapter 1, but a more in-depth discussion and comparison will now be made here. The second part of the chapter compares the Quaker population to the general population before commenting on the geography. Underlying the comparisons are the main themes found in this study that artisanal work is the largest section amongst Quakers, that artisans are spread across England and through the century, and that the retail and commercial sectors became more popular as the century progressed. The eight functional areas used – namely Agriculture, Commerce, Artisan, Food, Manufacture, Other, Professional and Retail, are a mixture of skill- and industry-based ones, and the choices made were influenced by the need to allow comparison with the preceding studies from Richard Vann and David Eversley, Leigh Shaw-Taylor and Tony Wrigley and Andrew Fincham.⁵⁵⁷ I show that there is broad agreement on the importance of artisan work to Quakers, and their increasing involvement with the commercial world, but there are limitations in the comparisons due to methodological differences and geographical restrictions. In comparison with the general population, Quakers are much less involved with Agriculture. Geographically, Quakers are more likely to be urban dwellers than the general population.

⁵⁵⁷ Vann and Eversley, *Friends in Life and Death*; Shaw-Taylor and Wrigley, 'Occupational Structure and Population'; Shaw-Taylor and Wrigley, 'The Occupational Structure of England'; Fincham, 'Origins of Commercial Success'.

7.1 Occupational Comparison with Other Studies of Quakers

The work of Richard Vann and David Eversley has been considered one of the prime sources for information concerning Quakers' work patterns – although their real focus was on marriage patterns.⁵⁵⁸ They presented occupational data for rural and urban environments, but for the purposes of this chapter, their overall results are of interest. Their data are not easy to compare. The first difference is that their cohort dates are birth dates not marriage dates, though the occupations come from marriage records. Thus, their 1650-99 cohort corresponds, very approximately, to a marriage date cohort of 1675-1724. Hence their three data cohort ranges of birth dates 1650-99, 1700-49 and 1750-99 provide approximate comparisons with the data cohorts here of 1710, 1750 and 1790. This is simply assuming a marriage age of 25 to shift the birth cohorts to a marriage cohort 25 years later, giving marriage cohorts of 1675-1724, 1725-1774 and 1775-1824 and middle years of 1700, 1750 and 1800. A second complicating factor is Vann and Eversley's use of frequent dual recording of occupations. The note to their Table 2.5, from which the data derives, states that 'many occupational groups are listed more than once' including the example of merchants included as Professional and Wholesale (in Commerce).⁵⁵⁹ Table 7.1 compares overall results from my database and those from Vann and Eversley. The figures from my database are from Table 3.1 (at sector level, noting that Commerce here includes both commerce and retail sectors) and Tables 5.2 and 5.11 (the percentage deriving from the database totals in those tables divided by the total database size).

⁵⁵⁸ Vann and Eversley, *Friends in Life and Death*.

⁵⁵⁹ Vann and Eversley, *Friends in Life and Death*, pp.70-71.

Table 7.1 - Comparison of this Study and Vann and Eversley for the Eighteenth-Century Period

Sector/industry		Vann and Eversley	This study
Agriculture	<i>Sector</i>	16.8%	15.8%
Textiles	<i>Industry</i>	23.1%	27.8%
Commerce	<i>Sector</i>	52.1%	25.1%
Artisans	<i>Sector</i>	29.3%	26.6%
Food	<i>Industry</i>	22.2%	14.9%

Note that neither column totals 100%. Because of the analysis classes used by Vann and Eversley, and their propensity for dual classifications, the comparisons given are the only reasonable ones that can be made, and they show a mixture of sectors and industries. In Vann and Eversley's case, their use of multiple analyses of one data point automatically leads to totals differing from 100%, and in my data as given above the need to mix sectors and industry figures leads to a less than 100% total. Given the differing sample sizes (10,179 here and 1,862 from Vann and Eversley), there is fair agreement between agriculture, artisans and textiles. The difference in food industry participation can be explained by Vann and Eversley's sample containing the four Quarterly Meetings with the highest fractions of food industry participation (Berkshire & Oxfordshire, Bristol & Somerset, London & Middlesex and Yorkshire). Although tertiary (service sector) employment expanded later in the century, the difference between the studies in the Commerce sector is striking. Vann and Eversley have included retail in their commerce class, which has been allowed for in the comparison by comparing it with Commerce and Retail from this study. But they have also cross-analysed between retail and artisans, for example, with tailors and the leather trades. The difference is thus explained by Vann and Eversley's addressing of the making/selling overlap referred to earlier by including many more entries under a 'selling' heading.

But looking at complete databases over a whole century of change gives limited information.

Table 7.2 allows some closer data and trend comparison.

Table 7.2 - Changes Over the Eighteenth Century in this Study and Vann and Eversley							
Sector/industry		Vann and Eversley	This study	Vann and Eversley	This study	Vann and Eversley	This study
		1650-99	1710	1700-49	1750	1750-99	1790
Agriculture	sector	16.3%	16.80%	15.7%	12.90%	18.3%	15.40%
Textiles	industry	29.8%	31.5%	22.7%	28.6%	16.6%	20.6%
Commerce	sector	40.5%	20.4%	52.2%	22.8%	64.2%	28.6%
Artisans	sector	40.1%	30.50%	26.4%	27.60%	21.2%	22.1%
Food	industry	13.9%	13.7%	23.5%	17.3%	29.5%	17.9%

As for Table 7.1, there is some agreement. Agricultural populations are close, although the smaller sample shows a slight rise over the century compared to a smaller fall in the present study. The trends in textiles are similar in both studies, as are those in artisans. I commented above that in my study there appeared to be a shift from artisan work to manufacturing – a sector that Vann and Eversley did not recognise, which is surprising in a study covering the time of the emergence of the industrial revolution. As in the overall comparison, there are differences in the commerce sector, which are probably due to differences in classification, and in food, where again the suspicion is that double analysis is inflating the Vann and Eversley figures.

Andrew Fincham's recent work examined the interaction of eighteenth-century Quakers and the commercial world. He used the Quaker marriage records from London & Middlesex, Essex, Suffolk and Norfolk & Norwich and organised the data into three classes with eight

sub-classes. Commerce contained commerce, citizens and merchant sub-classes, Craftsmen contained craftsmen and food, and Other contained agriculture, professional and other, and he only reports aggregated data across all counties at the Class level.⁵⁶⁰ These eight sub-classes informed my classification method, but there are differences. I am not so heavily focussed on commercial aspects as he is, so I am not reporting aggregated sectors under broad headings. But to make a comparison with Fincham, some aggregation has had to be made. Table 7.3 gives the comparison, noting that the composition of the three Fincham Classes for my data is Commerce – commerce, manufacturing and retail (the inclusion of manufacturing here creates the difference from Table 7.2); Craftsmen – artisans and food; and Other – agriculture, other and professional.

Table 7.3 - Comparison with Fincham Data during the Eighteenth Century						
Occupational Class	1710		1750		1790	
	Fincham	This study	Fincham	This study	Fincham	This study
<i>Commerce</i>	18%	38%	30%	42%	40%	50%
<i>Craftsmen</i>						
Craftsman	53%	30%	47%	28%	28%	22%
Food	8%	8%	9%	11%	8%	7%
<i>Other</i>	21%	23%	14%	19%	24%	21%

The major differences are between commerce and craftsmen, and this is explained by differing treatments of occupations related to manufacturing. Fincham does not recognise manufacturing as a sector, nor did Vann and Eversley. In my classification methodology I took artisan processes as being reliant on manual skill, whereas manufacturing required more capital investment and division of labour and contained an element of commercial thinking.

⁵⁶⁰ Fincham, 'Origins of Commercial Success', p.57, fig. 2.6.

Consequently, occupations such as card maker, duffield maker and dyer appear in manufacturing in this study but are treated as craft occupations in Fincham. The effect of this is to transfer economic activity from Fincham's Craftsmen section to my Commerce section for this comparison. The end result strengthens Fincham's thesis of high Quaker involvement in commercial activity and supports his conclusion that Quaker commercial activity increased through the century.

The main themes found in this study are that artisanal work is the largest section amongst Quakers, followed by retailing, and that these artisans and retailers are spread across England and through the century. These conclusions are supportive of those drawn by Fincham, though his sample is more geographically condensed than the data here, and does include London and Norwich, two of the largest English urban centres. However, considering commercial activity, I find that the level of artisan work, which includes a commercial element, is high in the main urban centres at 31% in London & Middlesex, 40% in Norwich (Norfolk & Norwich) and 27%, the average level, in Bristol & Somerset. The Norwich level is boosted by the number of weavers operating in the textile industry, and Bristol's level is likely to be diluted by the impact of rural Somerset. The actual commercial activity is highest (in proportional terms) in Durham and Sussex & Surrey at 17-18%. But there are other Meetings which show raised activity, London & Middlesex and Bristol & Somerset are both around 15%, and there are other Meetings in the 13-14% range, including the rural ones of Bedfordshire & Hertfordshire, Berkshire & Oxfordshire and Buckinghamshire. So, while Fincham's conclusions are supported, his sample contained a boosted artisanal contribution and lower commercial activity such as that related to foodstuff trading to supply the growing towns. Cole's view of the lack of 'ruling class' members amongst early Quakers is

supported, as nationally this class does not appear in the years of the 1700s considered here.⁵⁶¹ Vann disputes Cole's finding from his examination of the individual circumstances of some Buckinghamshire Quakers, but does concede that his 'gentlemen' did not go on to found Quaker families – again supporting the findings here.⁵⁶² Judith Hurwith's view of a rural Warwickshire is supported in the earlier part of the period considered here,⁵⁶³ but the rise of Birmingham and its industry seen here provides a changed view towards the end of the eighteenth century.

7.2 Occupational Comparison with the General Population

Although comparisons with, and comment on, other Quaker-based work is desirable, it is more useful to compare the Quaker occupational spread with the wider national one. The comparison here is with the studies of Leigh Shaw-Taylor and Tony Wrigley,⁵⁶⁴ who also draw on other work, particularly for earlier years. Their earlier study primarily calls upon data from militia records for the eighteenth century, being prior to the first national census of 1811, and is a preliminary report from a much wider study, *The occupational structure of Britain 1379-1911*, carried out by the Cambridge Population Group. The later study brings in evidence from Parish records. Their methodology was novel in classifying occupations in economic terms as primary (land-based), secondary (processing) or tertiary (distribution and service). Such a description has been useful in my study when analysing different classes. The information in Table 7.4 is sourced from Nicholas Crafts as cited by Shaw-Taylor and

⁵⁶¹ Cole, 'Social Origins', pp.116-8.

⁵⁶² Vann, 'Interregnum', p.81.

⁵⁶³ Hurwith, 'Social Origins', pp.158-9.

⁵⁶⁴ Shaw-Taylor and Wrigley. 'The Occupational Structure of England', pp.8-12; Shaw-Taylor and Wrigley, 'Occupational Structure and Population', pp.53-88.

Wrigley.⁵⁶⁵ The data for 1688 is derived from Gregory King's well-known study from 1688 which has been frequently commented on and reanalysed, not only by Crafts as used by Shaw-Taylor and Wrigley, but by Peter Lindert and Jeffrey Williams and Tom Arkell and John Dodgson more recently.⁵⁶⁶ Their own data for the period are summarised and restated in Table 7.5.⁵⁶⁷ That restatement has put the data into a format consistent with the classes used here.

Table 7.4 - Shaw-Taylor & Wrigley National PST data

Year	1688	1759	1801/3	1841
	%	%	%	%
Primary	55.6	48.0	41.7	22.2
Secondary	18.5	23.8	24.7	40.5
Tertiary	25.9	28.2	33.6	37.3
Total	100.0	100.0	100.0	100.0

The Shaw-Taylor and Wrigley figures show a national picture of declining primary sector involvement and increasing secondary and tertiary activity. Both these tables show a move to secondary-sector employment earlier in the eighteenth century – a key finding as it suggests an earlier onset of industrialisation than the traditional popular view of a late eighteenth-century phenomenon. The fall in agricultural employment is expected in the century of agricultural enclosure and improvement,⁵⁶⁸ but over the century the impact of increased coal and ore mining has not stopped the fall in primary-sector employment. The secondary sector where materials are processed is the key to the changes in the eighteenth

⁵⁶⁵ Nicholas F.R. Crafts, *British Economic Growth during the Industrial Revolution* (Oxford: Oxford University Press, 1985), pp.11-15 cited by Shaw-Taylor and Wrigley, 'Occupational Structure and Population' p.56.

⁵⁶⁶ Lindert and Williamson, 'Revising England's Social Tables'; Arkell, 'Illuminations'; Dodgson 'Gregory King'.

⁵⁶⁷ Shaw-Taylor and Wrigley, 'Occupational Structure and Population', p.59, Table 2.2.

⁵⁶⁸ Ackroyd, *Revolution*, pp.42-5.

century and the introduction of industrialisation. The traditional view of the industrial revolution is of a step change later in the eighteenth century,⁵⁶⁹ but this was challenged in the 1990s.⁵⁷⁰ As with most of these disputes, there is value in both arguments. Peter King pointed out that the protagonists were looking at different criteria, Crafts and Harley examining economic growth and Deane and Cole, production.⁵⁷¹ In occupational terms the data above show a move towards a more industrial pattern of employment from the earlier eighteenth century, which is explicable by the introduction of Smithian distributed labour systems such as in textiles and needle making.⁵⁷² The step change production-based revolution late in the century is explained by the introduction of mechanisation.⁵⁷³ Note that Shaw-Taylor and Wrigley do not specifically identify food as a sector. The growth in tertiary-sector employment is also expected as society became more sophisticated and services such as specialised retail were introduced.⁵⁷⁴

The comparative figures for the Quaker population are taken from Table 3.2, noting that the ‘Other’ section has been allocated across the PST segments. The first and most immediate observation is that the proportion of Quakers in the primary sector, which is essentially agricultural, is much lower than that of the general population as reported by Shaw-Taylor and Wrigley. While the Quaker proportion did fluctuate slightly over the century, it remained relatively stable at around or just below 15%. The general population proportion is

⁵⁶⁹ Phyllis Deane and W. A. Cole, *British Economic Growth, 1688-1959: Trends and Structure*, 2nd ed. (London: Cambridge University Press, 1969), Monographs (University of Cambridge. Department of Applied Economics), No. 8; Maxine Berg and Pat Hudson, ‘Rehabilitating the Industrial Revolution’, *Economic History Review*, 45.1 (1992), 24–51.

⁵⁷⁰ N. F. R. Crafts and C. K. Harley, ‘Output Growth and the British Industrial Revolution: A Restatement of the Crafts-Harley View’, *Economic History Review*, 45.4 (1992), 703–31.

⁵⁷¹ King, ‘Production and Consumption’, pp.26-7.

⁵⁷² Smith, *Wealth of Nations*, pp.109-11; Mathias, *The First Industrial Nation*, pp.114-6; Jones, ‘Needle Manufacturing’, p.360.

⁵⁷³ For example Riello, *Cotton*, pp.227-37.

⁵⁷⁴ Smith, *Material Goods*, pp.49-50, 60.

three times higher (the gap reduces somewhat at the end of the century), though the trend of the proportion is downwards with time. The declining trend in the general population is expected and has been commented on previously, but it is notable that such a trend is not seen so strongly within the Quaker population. These observations suggest that it was possible for Quakers to avoid agriculture, or at least that it was not a very attractive option. The suggestion that the need for payment of tithes within agriculture was a negative factor is discussed by Sally Gold, and there was definitely significant suffering for Quakers as a result of their refusal to pay them.⁵⁷⁵ It is certainly the case that the Quaker position of opposition to the established church meant that they were theologically and vehemently opposed to tithing (which supported the paid clergy).⁵⁷⁶ As early as the 1650s funds were being used to relieve Quakers imprisoned for non-payment of tithes,⁵⁷⁷ and even after the Toleration Act of 1689 allowed Quaker worship, tithing was still forcibly enforced.⁵⁷⁸ The Quaker national Meeting for Sufferings was established to recognise such distress, and the many instances were recorded by Joseph Besse.⁵⁷⁹ Such impediments to involvement with agriculture must have stayed with families for a long time. The other major aspect of primary-sector employment relates to mining. Here the general population involvement increases with time, but little Quaker involvement is noted. A notable instance of Quaker mining activity was concerned with the London Lead Company, whose provision of silver to the Royal Mint was noted in section 3.3.6. This company was an early example of an enlightened employer, ensuring that its workers above remote Teesdale and in the very upper South Tyne area had good terms and conditions.⁵⁸⁰ At the end of the eighteenth century, the provision of good

⁵⁷⁵ Gold, 'Quakerism, Localism and Law', pp.246-9, 264-7.

⁵⁷⁶ Punshon, *Portrait*, pp.72-3; Morgan, *Lancashire Quakers*, pp.172-5.

⁵⁷⁷ Braithwaite, *Beginnings*, p. 136.

⁵⁷⁸ Braithwaite, *Second Period*, p. 599.

⁵⁷⁹ Besse, *Sufferings*.

⁵⁸⁰ Raistrick, *Two Centuries of Industrial Welfare*.

housing and sanitation, leisure facilities and the time to enjoy them, day schools and a workmen's health fund were advanced benefits for the time. However, the education given was of its time and was designed to foster loyalty and benefit to the company. Wages were fair, but not high.

Table 7.5 - Comparison with Shaw-Taylor and Wrigley for the Eighteenth Century						
Year	C 1710	1710	1750	1790	C 1817	1851
Sector	<i>S-T & W</i>	<i>Cook</i>	<i>Cook</i>	<i>Cook</i>	<i>S-T & W</i>	<i>S-T & W</i>
Primary						
Agriculture	49.8%	16.8%	12.9%	15.4%	35.7%	26.9%
Other (share)	1.0%	0.2%			3.7%	5.5%
Total primary	50.8%	17.0%	12.9%	15.4%	39.4%	32.4%
Secondary						
Food		8.3%	11.3%	7.0%		
Manufacturing	11.8%	17.7%	18.8%	20.9%	11.9%	12.2%
Artisan	13.8%	30.5%	27.6%	22.1%	14.6%	14.8%
Other (share)	11.6%	0.1%		0.3%	15.6%	17.6%
Total secondary	37.2%	56.6%	57.7%	50.3%	42.1%	44.6%
Tertiary						
Professional	5.1%	1.6%	1.5%	2.5%	8.7%	10.4%
Retail	2.5%	11.7%	12.1%	17.7%	3.4%	4.7%
Commerce		8.7%	10.7%	10.9%		
Other (share)	4.4%	4.5%	5.0%	3.1%	6.4%	7.7%
Total Tertiary	12.0%	26.5%	29.3%	34.2%	18.5%	22.8%
Labour force	100.0%	100.1%	99.9%	99.9%	100.0%	99.8%
		Rounding	Rounding	Rounding		Rounding

This lower level of agricultural employment is balanced by a higher level of secondary-sector employment. The secondary sector is the solid heart of Quaker activity. The proportions are higher than for the general population although, again, the gap closes towards the end of the century. The opportunities here are concerned with processing materials and adding value. Tithes are not an issue. There are three main sub-sectors, food, artisan work and manufacturing. Food (which is not separated out from Other by Shaw-Taylor and Wrigley, but their Other and the Quaker Food categories do appear to correspond) has much to do with processing cereals: milling, malting and baking being the major activities. There is some overlap between skill-based artisan work and process-based manufacturing as both are creating products to be sold. There is also overlap with the commercial sector as artisans, particularly, are usually selling in a retail market. Manufacturing increases in importance over the century as the Artisan sector shows some decline. There is an obvious conclusion that the business of making artefacts becomes more organised and capital-intensive with time, a trend accelerated through the nineteenth century with the advent of widespread steam-powered factories,⁵⁸¹ and that some artisans are able and willing to take advantage of these opportunities and become manufacturers.

Quakers appear to be heavily represented in the Tertiary or service-driven sector. This would appear to be due to their widespread interest in dealing and selling as they were excluded from the English universities, and therefore the professions, during this period. The growth of the services industry is an indication of the development of the economy. Quakers were involved with the establishment of specialised financial firms dealing with the newly

⁵⁸¹ See for example Robert C. Allen, *The British Industrial Revolution in Global Perspective* (Cambridge: University Press, 2009), New Approaches to Economic and Social History, pp.272-5; Mokyr, *Enlightened Economy*, pp.79-98.

emerging tradeable bills of exchange. In 1797 the firm of Overend, Gurney and Company was set up to broker such bills between buyers and sellers, charging a small fee for doing so – this was the first bill-broking enterprise and was an offshoot of the Quaker Gurney family's banking activity.⁵⁸²

7.3 Geographical Comparisons

The comparative studies of Quaker occupations discussed above are focussed on aspects other than the geography of the Quaker population. Andrew Fincham focussed on the commercial aspects of his sample, which covered the marriage records of the Meetings in Norfolk & Norwich, Suffolk, Essex and London & Middlesex.⁵⁸³ Although presenting some data on a county-by-county basis, he made little attempt to examine differences between them – and the London & Middlesex sample is much larger than the others. Fincham did give brief and specific geographical information by quoting earlier or local writings – which have been covered in chapter 1. Briefly, Earnest Taylor notes 50 of the North-West based 'Valiant 60' have recorded occupations, split as 34 agricultural, 8 trade and 8 professional.⁵⁸⁴ Under the classification system used here, the 66 people listed by Taylor in the Valiant 60 would consist of 32 agricultural, 4 artisans, 2 food, 7 other, 6 professional, 2 retail, 12 women (including 3 servants) and 1 not given.⁵⁸⁵ Fincham cites Beck and Ball who compared 250 London occupations in 1680 and 1780, with the result showing agriculture at below 2% and the majority being involved with making and selling artifacts, with an increasing mercantile share

⁵⁸² Raistrick, *Quakers in Science and Industry*, pp.328-9.

⁵⁸³ Fincham, 'Origins of Commercial Success'.

⁵⁸⁴ Fincham, 'Origins of Commercial Success'. pp.40-41; Taylor, *Valiant Sixty*, p.42.

⁵⁸⁵ Taylor, *Valiant Sixty*, pp.40-41.

later.⁵⁸⁶ This reported commercial emphasis is, of course, pertinent to Fincham's thesis. Other studies including some Quaker geography are older and more limited in scope and concentrate on the social origins of early Quakers, though with some comments concerning the early eighteenth century. Alan Cole's work of 1957 was based on marriage records for Lancashire, Gloucestershire, Buckinghamshire, Bristol and London and concluded that rural Quakers were more involved in artisan trades than agriculture, with some textile industry presence.⁵⁸⁷ Unlike Cole, Richard Vann found a significant presence of Quakers who should be considered as gentlemen in his work on Quakers in Buckinghamshire and Norwich and Norfolk & Norwich.⁵⁸⁸ He acknowledged that these people would not appear in Cole's sample and considered whether the pattern was unusual – but concluded that a century after appearing, Quakers had become more 'bourgeois'. Judith Hurwich used Warwickshire Quakers to disagree with Vann.⁵⁸⁹ Her findings were that Warwickshire Quakers were mostly rural, 50% still being from rural parishes in the 1700-20 period, and that there was no prominent Quaker 'upper bourgeoisie'. None of these studies have the geographical spread given here. The work of Richard Vann and David Eversley has little to say about the geography of Quakers.⁵⁹⁰ Although superficially they considered geographical regions, the authors' agglomeration of data into regions of Northern England and Southern is not helpful here, although the Urban category provides some insight.

Comparison with the national population shows Quakers as being more urbanised. In England the urban population is reported as being 17% in 1700 and 28% in 1801, based on

⁵⁸⁶ Fincham, 'Origins of Commercial Success', p.46 citing Beck and Ball, *The London Friends' Meetings*.

⁵⁸⁷ Cole, 'Social Origins'.

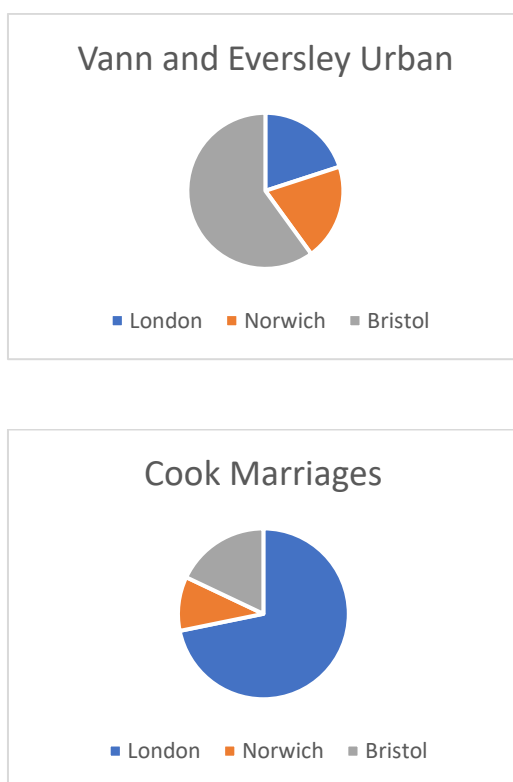
⁵⁸⁸ Vann, 'Interregnum'.

⁵⁸⁹ Hurwich, 'Social Origins'.

⁵⁹⁰ Vann and Eversley, *Friends in Life and Death*.

those living in towns with more than 5,000 people.⁵⁹¹ For Quakers, Vann and Eversley give 32% (1700-49) and 26% (1750-99).⁵⁹² This is their 'Urban' class of Quakers living in London, Norwich and Bristol. However, they summarise the distribution of these Quakers in their pie chart, which appears to show roughly 60% of their urban Quakers located in Bristol and 20% each in London and Norwich (figure 7.1 Vann and Eversley).⁵⁹³ In the database used in this study, London Quakers are 17% of the total recorded occupations and 28% of the marriages, with Bristol & Somerset being 6% and 7%, respectively, and Norfolk & Norwich being 3% and 4% (figure 7.1 Cook).

Figure 7.1 - Comparison of Reported Urban Marriage Spreads



⁵⁹¹ Wrigley, 'Urban Growth', p.688.

⁵⁹² Vann and Eversley, *Friends in Life and Death*, p.44.

⁵⁹³ Vann and Eversley, *Friends in Life and Death*, p.37.

This appears to be a distorted distribution on Vann and Eversley's part as London was the largest city in England by some margin during the century, and its recorded Quaker population was the largest too. They also exclude urban communities in the North of England and the Midlands (especially important later in the century). Combining these factors suggests they underestimate the urban Quaker population. My study is based on the Quarterly Meetings, and hence there is no definable urban/rural split.

However, a rudimentary estimate taking all London & Middlesex occupied Quakers as urban and half of those in Yorkshire, Bristol & Somerset, Lancashire and Norfolk & Norwich as urban gives a figure of 43% for urban Quakers – noting that this also ignores the contribution from Midland Quakers, notably in Birmingham. It should be noted that these urban figures for Quakers are for those with recorded occupations; Wrigley's figures appear to be for total populations. A comparable figure from my data for all marriages reduces the 43% estimate to 33%. The difference is explained by the reduction in occupational recording rates with distance from London discussed at section 2.2, whereby there are comparatively more marriages in these distant rural regions than in urban areas where occupations have been recorded.

Making geographical comparisons on a national basis is little easier than with Quaker studies, but there are some data that can be compared in the study by Leigh Shaw-Taylor and Tony Wrigley, which are included in Table 7.6.⁵⁹⁴ The 'Cook' data are from this study. The main concern about such a comparison is the small size of the individual samples in Quaker data. This is taken to an extreme in the 1750 cohort for Northamptonshire, for which there were no

⁵⁹⁴ Shaw-Taylor and Wrigley, 'The Occupational Structure of England'.

records. Another question of comparability arises in Hertfordshire, where the Quaker Meeting covers Bedfordshire and Hertfordshire, Yorkshire, where the Quaker records are for the whole county not just West Yorkshire and London, where the Quaker Meeting covers London and Middlesex. For comparison, the 1750 cohort from this study has been taken to be comparable with the Shaw-Taylor and Wrigley data of the 1750s, and the 1790 cohort to lie between the 1780 and 1820 data. The national figures from Table 7.5 have also been repeated to aid discussion.

The national general population position was one of decreasing agriculture (primary) and increasing secondary and tertiary activity. The national Quaker position differs slightly in that there was some transfer of focus from secondary to tertiary at the end of the century, particularly as Quakers became retailers. The specific county data did show some differences, but it is only presented for the second half of the century. The two counties of Hertfordshire and Northamptonshire reflected a still strong agricultural position in the general population in the latter half of the century, and the secondary and tertiary position was in line with the national one. The Quaker sample in each case was too small to provide a fair comparison, except to suggest a higher secondary activity than primary, again similar to the national position. The rise in the general population's primary share of the Northamptonshire workforce was discussed at section 4.4. The general populations of Lancashire and West Yorkshire were heavily slanted towards the secondary sector. For Shaw-Taylor and Wrigley, this early shift to secondary employment marked the region as being one of the European proto-industrial areas – even if it was not yet distinguishable as the powerhouse it would become.⁵⁹⁵

⁵⁹⁵ Shaw-Taylor and Wrigley, 'The Occupational Structure of England', p.33.

Arguably, the Quaker population was even further along the economic development path because of their high levels of tertiary sector activity (noting that Yorkshire retained a significant agricultural presence which is explicable by the Quaker figures additionally including North and East Yorkshire). London Quakers, too, appeared to be further along the commerce-driven journey down the economic pathway. While the secondary activity in the general population was increasing nationally over the years from c1750 to c1820, that in London & Middlesex began to decrease from 66% to 60%, while the Quaker levels declined from an already lower 60% in 1750 to 47% in 1790. Concomitantly the general tertiary activity rose from 30% to 38% while the Quaker population increased its tertiary activity by one-third from 35% to 48% in a shorter period.

A comparison of the geography of the numbers of Quakers is possible, with qualifications. As discussed earlier, the number of Quakers in England can only be estimated. This is a problem with the general English population, too. Tony Wrigley has estimated the English population on a county-by-county basis and gives figures for years including 1761 and 1801.⁵⁹⁶ His modelling used marriage rates and data from the first census in 1801. From his results, it is possible to see where the population was concentrated, and where it was growing.

⁵⁹⁶ E. Tony Wrigley, 'English County Populations in the Later Eighteenth Century', *The Economic History Review*, 60.1 (2007), 35–69.

Table 7.6 - Comparison of County Specific Sectoral Data between the General and Quaker Populations in the Eighteenth Century

County	Primary		Secondary		Tertiary		Population in this study
	<i>S-T & W</i>	<i>Cook</i>	<i>S-T & W</i>	<i>Cook</i>	<i>S-T & W</i>	<i>Cook</i>	
Hertfordshire							
1758/1750	59%	0%	31%	68%	10%	33%	3
c1780	57%		31%		12%		
1790		10%		70%		20%	10
c1820	59%		28%		13%		
Lancashire							
c1755/1750	25%	22%	66%	51%	9%	27%	38
c1780	24%		66%		10%		
1790		9%		52%		39%	65
c1820	25%		64%		11%		
London							
1750	4%	4%	66%	61%	30%	35%	162
1790		5%		47%		48%	119
c 1820	2%		60%		38%		
Northamptonshire							
1750		0%		0%		0%	0
1777	49%		42%		9%		
1790		31%		54%		15%	13
c1820	55%		33%		12%		
West Yorkshire							
c1755/1750	25%	14%	67%	69%	8%	17%	92
c1780	23%		68%		9%		
1790		20%		69%		21%	123
c1820	25%		64%		11%		
National							
c1710	51%	17%	37%	57%	12%	27%	
1750		13%		58%		29%	
1790		15%		50%		34%	
c1820	39%		42%		19%		

A similar estimate for the Quaker population can be produced from the data reported in Table 2.2 for the total number of marriages. The advantage of using total marriages over those with occupations given is one of completeness, although clearly it ignores any unmarried Quakers. However, by assuming a constant ratio of married to unmarried Quakers in time and place, the use of percentages rather than numbers gives a comparison. Also, the Quaker figures are across the eighteenth century. The comparison shows that the largest Quaker populations were located in the regions of England that were also the most populous (Table 7.7). The table provides selected county numbers as percentages of the total for the national and Quaker populations, and for the national population, the ratio of the populations at the two dates. Note that Wrigley does not report figures for London; his figures are described only as Middlesex.

The table shows that more than half of Quakers were concentrated in five Meetings, three of which were also the most populated regions nationally. London & Middlesex and Yorkshire had significantly larger shares of the Quaker population than the national population, while in Lancashire the share of the national population had overtaken the Quaker share in 1801, but these figures give no information on the dynamics of the Quaker population. Westmorland is an anomaly, its Quaker population being established in the founding years of the movement. Other counties where Quaker and national shares are out of step include Bristol & Somerset (Quakers over-represented), Gloucestershire & Wiltshire, Cheshire & Staffordshire, Derbyshire & Nottinghamshire and Devonshire (all showing Quaker under-representation). As an aside, the number ratio gives a measure of the absolute estimated increase in population in the counties. England overall showed a 37% estimated increase, with the emerging industrial areas of Lancashire, Yorkshire and Derbyshire & Nottinghamshire in the vanguard.

London's continuing economic progress attracted new residents, and Cheshire & Staffordshire also grew (in this case driven by Staffordshire and its industry in the Potteries and the Black Country).⁵⁹⁷

Table 7.7 - Comparison of Eighteenth-Century National and Quaker Populations					
Quarterly Meeting	National %age⁵⁹⁸		Growth ratio		Quaker %age
	<i>1761</i>	<i>1801</i>	<i>on number</i>	<i>on %age</i>	
London & Middlesex	9.1%	9.9%	1.489	1.084	16.7%
Yorkshire	9.4%	10.4%	1.512	1.100	15.4%
Lancashire	4.8%	8.1%	2.334	1.699	7.5%
Westmorland	0.6%	0.5%	1.185	0.862	6.1%
Bristol & Somerset	3.6%	3.3%	1.260	0.917	6.0%
Gloucestershire & Wiltshire	6.3%	5.3%	1.147	0.834	3.4%
Cheshire & Staffordshire	4.8%	5.2%	1.500	1.092	2.8%
Derbyshire & Nottinghamshire	3.2%	3.6%	1.538	1.119	1.5%
Devonshire	4.7%	4.1%	1.200	0.873	0.9%
England			1.374		

7.4 Conclusions

Comparison of the entire database (which covers the entire country and all of the long-century period) shows some agreement with the Vann and Eversley study, notably in the areas of agriculture, artisanal employment and the textile industry. But I find lower employment in the food sector and in commerce. The latter is accounted for by Vann and Eversley double counting some classes, for example including artisans as makers and sellers and so counting

⁵⁹⁷ Wrigley, 'English County Populations', pp.54-5.

⁵⁹⁸ Wrigley, 'English County Populations', pp.54-5. This is also the source of the growth ratios.

them as artisans and in the commercial class. I support Fincham's conclusion of an increasing concentration on commercial activity, though there are two competing observations. His inclusion of London and Norwich has possibly overstated his artisan population compared to the national level. But in comparing the two studies, my definition of manufacturing has potentially led to some transfer of activity from Craftsmen to Commerce, thus strengthening the argument for increasing commercial activity.

Comparison with the general population patterns using the Shaw-Taylor and Wrigley study has been, necessarily, at a broader level. The studies of Quakers have found a Quaker working population where around 16% was involved with agriculture. This is considerably less than levels seen in the wider English population. Quaker involvement in secondary activities of making and manufacturing was higher, and they appeared to be less represented in professional services, although their overall tertiary sector involvement was higher due to retail and commercial activity.

My large database has provided a picture of Quakers across England and Wales as being less involved in agriculture than the general population, and more involved with secondary-sector activities of materials processing, and with tertiary-sector commercial activities. It also shows that most Quakers were integrated with their local economies rather than being on the outside. Thus, when making comparisons with other studies, care is needed because those studies were more limited by the regions covered in the comparator studies and by their agglomeration of data over wider areas.

Chapter 8: Conclusions

8.1 Introduction

This chapter discusses the academic consequences of the key findings and outlines the original contribution to knowledge that this thesis makes. There are seven main findings which can be grouped into three areas. First, the methodology of the study with its large database, geographical analysis and concentration on occupations is original and demonstrates that there are regional variations in the quality of data recording. Second, the largest groupings of Quaker occupations were found to be either artisans or retailers, and this challenges the view of Quakers as a middle-class body. Third, the popular perception of Quaker exceptionalism is challenged by the finding that the Quaker occupational distribution tends to mirror that of the local economy (excepting the low level of agricultural activity nationwide). This exceptionalism is further challenged by the finding that Hyde's claim of Quaker control of the iron industry is insupportable. However, even these ordinary Quakers were early participants in the urbanisation movement, a possible indicator of independence of social thought alongside their spiritual radicalism. These three areas of main findings are considered in turn.

8.2 Methodological Conclusions

This study utilises a database of 10,179 identified, occupied Quakers, almost all of whom were men.⁵⁹⁹ This is a uniquely large database which cover all of England and Wales and

⁵⁹⁹ The development of the database and the discussion of its limitations are laid out in chapter 3.

spans the entire eighteenth century. The data are a distillation from the complete marriage records for those Quakers expected to be economically active in the century. To ensure this complete coverage, records for a decade either side of the century's start and finish were included. The group came from 36,578 marriage records (therefore approximately 18,289 marriages). A side finding from the national coverage of the database has been a crude estimate of the impact of missing data on estimates of the national Quaker population. Previous estimates, mostly also based on marriage records, have indicated a Quaker population of about 40,000 in the eighteenth century, but with a decline over time. My calculation in chapter 2 suggests a possible underestimate of between 25% in 1710 and 50% in 1790 and a revised population of 52,000 and 34,000 for 1710 and 1790, respectively.

A second, and important, insight arose from looking at the patterns of recording the data in the Meetings also examined in chapter 2. By comparing the fraction of occupations and fraction of marriages each Quarterly Meeting contributed to the database, it was possible to assess the care taken in recording occupational data. Here a clear pattern emerged. As distance from London increased, the proportion of occupations recorded decreased (with exceptions in Lancashire and Yorkshire where the Meetings had deep roots in Quaker culture and a sense of political independence from London). This is an important factor to consider when the context of any more local study is being considered.

However, these conclusions, and the discussion below relies on the validity of the use of marriage records as a data source. The specific patterns of marriage were not the subject of this study, but they do underpin the analysis.⁶⁰⁰ Up to 1750 the Quaker marriage age tracked

⁶⁰⁰ These patterns are discussed by Vann and Eversley, *Friends in Life and Death*.

that of the general population; after that there was a divergence as the Quaker marriage age rose. This was in line with the Hajnal NW Europe model where marriage occurred when the participants were able establish a separate, stable economic unit, rather than the traditional, more communal family arrangement.⁶⁰¹ However, as this study is based on marriages, the activity of single people is excluded. I have considered the potential impact of two specific classes of singletons, apprentices and agricultural workers. I concluded that the former would be eventually included in the records as they were likely to marry after their apprenticeship – their entry being delayed rather than their activity being missed. Unskilled agricultural labourers were more difficult to quantify, their marriage prospects largely depending on the quality of harvests. There are some references to such people in sources such as Quaker minutes, but they are not common. I have considered the contribution of women to the data. They comprise half of the marriage database, but only 86 of the 10,179 recorded occupations. Although women were active in the Society of Friends, they were not then expected to be economically active on their own account – although many worked extremely hard within family enterprises. The pattern of marriage leading to new economic family units and the lack of impact from apprentices and agricultural labourers leads to the conclusion that the use of marriage records to examine occupational trends is valid.

8.3 Social Class Considerations

This section discusses the development of class descriptions during the eighteenth century and connecting them to class structures recognised today. It goes on to place my findings within those structures, thus challenging the view of Quakers as monolithically middle-class.

⁶⁰¹ Hajnal, 'European Marriage Patterns'.

Received wisdom has it that in the eighteenth-century Quakers were largely middle-class. This view is expressed in the work of Richard Vann and David Eversley, building on and developing earlier work.⁶⁰² Not all of that earlier work agreed with these findings, and the timing of the studies spanned the later seventeenth- and earlier eighteenth-centuries. In Warwickshire Judith Hurwich found that more than half of later seventeenth-century Quakers were categorised as poor.⁶⁰³ Alan Cole found Quakers mostly in trade, but with a few gentlemen, in locations around the country and at the turning of the seventeenth to eighteenth centuries.⁶⁰⁴ Hugh Barbour identified Quakers as mostly ordinary men, but he was looking at puritan England.⁶⁰⁵ Alan Anderson suggested that Lancashire Friends were wealthy and of the ‘middling sort’ from looking at probate records.⁶⁰⁶ Helen Forde found middle-class agricultural, agricultural processing and cloth trade activity in Derbyshire by looking at wills and ‘sufferings’ (Quaker records of the impacts of persecution).⁶⁰⁷ Such records are likely to show a bias towards wealth. Barry Reay surveyed Essex, Cheshire and Somerset Quakers and concluded that they were of the ‘middling sort’, but with regional variations.⁶⁰⁸ Adrian Davies also looked at Essex and found, in the later seventeenth century, a preponderance of ‘middling ranks’ but also ‘converts from both extremes of the social hierarchy’.⁶⁰⁹ In their recent examination of seventeenth- and early eighteenth-century Quakers in class terms,

⁶⁰² Vann and Eversley, *Friends in Life and Death*, pp.254-5.

⁶⁰³ Hurwich, ‘Social Origins’, p.161.

⁶⁰⁴ Cole, ‘Social Origins’, pp.116-8.

⁶⁰⁵ Hugh Barbour, *The Quakers in Puritan England*, (New Haven, CT: Yale University Press, 1964), Yale Publications in Religion.

⁶⁰⁶ Alan Anderson, ‘The Social Origins of the Early Friends’, *Quaker History*, 68.1 (1979), p.39.

⁶⁰⁷ Helen Forde, ‘Derbyshire Quakers 1650-1761’ (unpublished PhD, University of Leicester, 1977), pp.83-7, 99.

⁶⁰⁸ Barry Gordon Reay, ‘Early Quaker Activity and Reactions to It, 1652-1664’ (unpublished PhD, University of Oxford, 1980), pp.234-5.

⁶⁰⁹ Adrian Davies, *The Quakers in English Society, 1655-1725* (Oxford: Clarendon Press, 2000), p.150.

which included consideration of the work cited above, Richard Allen and Rosemary Moore conclude that first-generation Quakers were of mixed class.⁶¹⁰

Although the work above suggests that Quakers were somewhere in the middle of the social spectrum the use of middle-class, middling sort and middling ranks requires some clarification. ‘Rank’ and ‘order’ were terms that had been in use for a long time to describe social position, but implied a position conferred at birth, though they were still seen in the eighteenth century.⁶¹¹ As society changed in the seventeenth century the agricultural labouring group and the landed aristocracy remained, but the group in the middle began to alter. Increasing urbanisation brought about larger numbers of professionals and merchants, but urban labourers appeared too.⁶¹² Additionally there was increasing connection between these new urban groups and existing rural communities.⁶¹³ Thus the groups between the labourers and the aristocracy became more varied and more fluid – they were described as an ill-defined ‘middle sort’.⁶¹⁴ The complexity of definition is summarised by the variation of systems used. Keith Wrightson, focussing on agriculture as described in section 3.3.1, uses title to land and the amount farmed as a measure – 50 acres being a boundary where yeomen appear.⁶¹⁵ Margaret Hunt uses a straightforward income measure - £50-£80 being the minimum necessary to fund a middling lifestyle.⁶¹⁶ However, Henry French provides a

⁶¹⁰ Richard C. Allen and Rosemary Moore, ‘Friends and Business in the Second Period’, in *The Quakers 1656-1723, The Evolution of an Alternative Community*, ed. by Richard C. Allen and Rosemary Moore (University Park, PA: Penn State University Press, 2018), pp.239-44.

⁶¹¹ Penelope J. Corfield, ‘Class by Name and Number in Eighteenth-Century Britain’, *History* (London), 72.234 (1987), p.47.

⁶¹² Peter Earle, *The Making of the English Middle Class: Business, Society, and Family Life in London, 1660-1730*, (Berkeley, CA: University of California Press, 1989), p.4.

⁶¹³ Keith Wrightson, *English Society*, pp.36-7.

⁶¹⁴ Henry R. French, ‘The Search for the “Middle Sort of People” in England, 1600-1800’, *The Historical Journal*, 43.1 (2000), p.277.

⁶¹⁵ Wrightson, *English Society*, p.39.

⁶¹⁶ Margaret R. Hunt, *The Middling Sort: Commerce, Gender, and the Family in England, 1680-1780*, (Berkeley, CA: University of California Press, 1996), p.15.

more complex view, additionally incorporating definitions based on attitudes towards common economic activity, civic responsibility and shared leisure.⁶¹⁷ Vann and Eversley excluded only peasants, labourers and aristocratic landowners.⁶¹⁸ For the purposes of this chapter the dividing line at the bottom of the middling sort is of interest.

The following occupations have been identified as included in the middle: artisans, skilled craftsmen, innkeepers, wholesalers, shopkeepers, small merchants, substantial merchants, surveyors, stewards, tenant farmers, yeomen, husbandmen, attorneys, barristers, tutors, teachers, eminent clergymen, the inferior clergy, rich factors, London "monied interest", Grub Street writers, doctors, surgeons, apothecaries, military and naval professions and people who worked but ideally did not get their hands dirty.⁶¹⁹ Conversely, there are occupations excluded from the middle layer. Hunt specifically lumps small shopkeepers and smaller independent artisans with labourers and the unemployed as being in her below-middle remainder in London.⁶²⁰ In the rural environment Wrightson equates less successful craftsmen and piece work tradesmen with labourers and notes the overlap between husbandmen and labourers.⁶²¹ French states that almost anyone could qualify as middling, but then implies a split between the lowest trades (weavers, shoemakers, tailors and petty retailers) and those above.⁶²² Earle specifically includes poor farmers and most artisans in his working classes, and implies that getting your hands dirty puts you there too.⁶²³

⁶¹⁷ French, 'Middle Sort', p.287-8 quoting Jonathan Barry, 'Bourgeois collectivism? Urban association and the Middling Sort', in *The Middling Sort of People: Culture, Society and Politics in England*, ed. By Jonathan Barry and Christopher Brooks (Basingstoke: Macmillan, 1994, pp.84-112.

⁶¹⁸ Vann and Eversley, *Friends in Life and Death*, p.57.

⁶¹⁹ French, 'Middle Sort', pp.281, 283-4; Hunt, *The Middling Sort*, p.19; Wrightson, *English Society*, p.43.

⁶²⁰ Hunt, *The Middling Sort*, p.16.

⁶²¹ Wrightson, *English Society*, pp.41,43.

⁶²² French, 'Middle Sort', pp.281, 283-4.

⁶²³ Earle, *The Making of the English Middle Class*, pp.3-4.

Having established that there is a significant body of workers who could fall below the middling-sort description popular in the seventeenth century the limitations of that terminology in setting boundaries appear. During the eighteenth century the use of ‘class’ emerged. Corfield notes that class was a more adaptable term than the amorphous sort, and could be used as a noun, adjective or verb.⁶²⁴ Class struggle was a concept that was yet to emerge, but rank struggle would just not work. By the middle of the eighteenth century, class became accepted as a term and Nelson proposed a five-class system for English society.⁶²⁵ However, simpler two-class models were more popular. But three-class systems became established for more serious writing and by the 1750’s and 1760’s higher-, middling- and lower-class were current usages.⁶²⁶ Working-class appeared in 1789.⁶²⁷ So, at the end of the eighteenth century working-class/middle-class models were current. From the analysis above such an eighteenth-century working-class contained the labourers, many artisans, smaller retailers, together with factory workers who were not yet as important as they became in the nineteenth century. This was a class system recognisable to a modern audience and which is relatable to current models such as that used by Catherine Rethon.⁶²⁸ So, although some commentators refer to Quakers as being of the middling sort it is reasonable to use the terms middle- and working-class to provide a more nuanced analysis in terms that are more familiar to today’s readers.

⁶²⁴ Corfield, ‘Class by Name’, pp.47-9.

⁶²⁵ James Nelson, *Gentlemen’s Magazine*, XXIII (1753), p.509.

⁶²⁶ Corfield, ‘Class by Name’, pp.51-5.

⁶²⁷ Corfield, ‘Class by Name’, p.57, citing the appearance in John Gray’s contribution to ‘Some Reflections intended to Promote the Success of the Said Society’ in George Dempster, *A Discourse containing... Proceedings...of the Society for Extending the Fisheries and Improving the Sea Coasts of Great Britain* (London, G. and T. Wilkie, St. Paul’s Church-Yard and J. Debrett, Piccadilly 1789), p. 50.

⁶²⁸ Catherine Rethon, ‘Women, Men and Social Class Revisited: An Assessment of the Utility of a “Combined” Schema in the Context of Minority Ethnic Educational Achievement in Britain’, *Sociology*, 42.4 (2008), 691-708.

I found that artisan and manufacturing work was the largest sector within the database, with 27% and 18% of the entries, respectively.⁶²⁹ There was change over the century with the artisan class falling from 31% in 1710 to 22% in 1790 and manufacturing rising from 18% to 21% for the same cohorts. This shows a transfer from artisanal to manufacturing over time and reflects the increasing importance within English society of manufacturing as the industrial revolution gathered pace. However, aggregating the two sectors shows a fall in the proportion of Quakers involved in making things, from 48% to 43%. This might indicate the successful drift to commerce noted by Andrew Fincham, but it could also be part of a drift away from ‘harder’ occupations towards banking as suggested by Jacob Price.⁶³⁰

Most of these ‘making’ occupations were associated with the textile industry. Of 2,709 artisans, 1,051 were related to textiles, including 663 weavers. In manufacturing, 1,152 of the 1,850 entries were textile-making related. This total of 2,203 is 22% of the data and excludes any Quakers distributing textile-related goods. Given the importance of textiles to the eighteenth-century English economy, this is unsurprising. Outside of textiles, 283 artisan and 159 manufacturing entries were concerned with metals (of which more later) and 534 with construction and wood (including 56 wheelwrights and 68 shipwrights). The presence of 33 bricklayers, mostly in London and the South-East, shows a presence in an expanding form of building construction.

Agriculture provided 1,607 entries, with the bulk being described as yeomen (678 or 6.6% of the total database) or husbandmen (614 or 6%), but 246 described themselves as farmers, a designation that increased in popularity over time, which might suggest, as discussed in

⁶²⁹ The detail supporting section is contained within chapter 3.

⁶³⁰ Fincham, ‘Origins of Commercial Success’. pp.319-24; Price, ‘Great Quaker Business Families’, pp.384-5.

section 3.3.1, an openness to the new agricultural ideas that emerged during the century.

Yeoman and husbandmen were both terms that had a degree of flexibility and some overlap, referring to independent farmers who could be making little more than subsistence or could be substantial landowner. But the total agricultural sector within Quakers was much lower (at 16%) than the approximately 50% seen in the general population. Quakers were involved in food processing, too, with 804 entries, notably 179 maltsters, 122 millers, 249 bakers, 70 distillers and 49 brewers. There were connections to agriculture through the maltsters and millers but also some overlap with the commercial sector, where bakers especially could be treated as retailers. Grocers are not included here but as retailers, and a move towards the grocery trade, and indeed the bakery trade, can be seen as the century progressed.

The Quaker commercial world is similar in size to the total food sector, with 1,142 involved with commerce and 1,416 retailers making up 25% of the population. In the commercial sector the largest individual descriptor is that of merchant. These merchants are spread across the country, though the mercantile centres of London and Bristol are heavily represented. Besides these general merchants, cloth and other commodity sellers (including corn and meal merchants, harking back to the food section) and 25 wholesalers are specifically described. Within commerce there is a transport subsection. This included 19 boatmen, most of whom were on the Thames, and most of whom disappeared early in the century, victims, I suggest, of the newly built Thames bridges in London. There were also 44 Master Mariners operating on the East coast, where a trade developed to bring coal to London to heat the expanding city. The retail side of the commercial activity was dominated by textiles (458 entries) and food (460 entries); together they were 65% of the retailers and 9% of total occupations. In both drapery and grocery there is likely to be some overlap with

wholesaling and direct commercial activity. Of note are the 93 druggists, who provide a connection to the world of science within the Quaker world.

The worlds of professional and other are small, with 651 people in total. Professional contains 120 schoolmasters, an indication of the Quaker interest in education, and accountants and lawyers begin to appear late in the century. The Other section contains the small set of identified unskilled workers, with gardeners, labourers and ordinary mariners making up 283 of the entries. But there are also 110 physicians, surgeons and barbers (the latter two not being easily distinguished back then).

The majority of the Quaker population as described here is effectively self-employed, either as artisans or retailers. As the century progressed, there was some movement into the industrial world of manufacturing by the artisans and some movement from food processing to distribution. There is some overlap between both these sets of occupations and commercial activities, with support for Andrew Fincham's claim of an increasing level of commerciality within the Society.⁶³¹ Although agriculture was less popular than in the general population, it was still an important sector for Quakers. Though small, there were groups of unskilled workers, medical men and other professionals. The ability to see smaller or more differentiated occupational groups in this broad study (such as the unskilled workers) provides an important view of the complexity of the national pattern of eighteenth-century Quaker occupations that cannot be found from more local studies.

⁶³¹ Fincham, 'Origins of Commercial Success', pp.70-71.

This study suggests that Quakers were a group whose largest constituent were artisans, but also with many other self-employed members such as shopkeepers and millers. As analysed above, such people, particularly shopkeepers, might easily be taken as working-class or lower-middle class. These class descriptions were being used in eighteenth century thought but communities were smaller, especially in rural England, and relationships such as the one between the wheelwright and the local gentry were more individually defined. Because those communities were smaller, they were more integrated than a modern population, with inter-class behaviour being defined by the individual relationships noted. Artisans, too, can be placed in either class. This difficult split is still being addressed. Catherine Rotheron puts artisans in the middle of her scale of seven classes but aggregates them into the lowest of three collapsed classes.⁶³² The challenge in classifying trades is that crafts such as plumbing or carpentry are manual by nature (working-class work) but often carried out on a contractual rather than employed basis (self-employment being seen as crossing into middle-class territory).

This study has used an economic activity classification system and is, therefore, more aligned with the newer class model rather than traditional ones based on ranks, orders or sorts. The artisan group (2,709 entries) straddles the traditional boundary between the middle- and working-class boundary. It constitutes 27% of the database. Moving through my occupational categories by size, manufacturing contains a mix of occupations that cover making artefacts. A manufacturer could be anything from a single artisan to a large factory owner. But the category also contains occupations that are employed in some form of industrial system, such as cotton or glass workers. These 393 employed workers are of the

⁶³² Catherine Rotheron, 'Social Class Revisited', p.696.

working-class and make up 21% of the manufacturing sector and 3.8% of the database. The agricultural occupations are difficult to classify. However, Ernest Taylor's study of early Quakers concerning the *Valiant Sixty* (a group of 66 Quakers who by 1654 had begun to travel to spread the Quaker message across England) implies a level of material comfort for many of the agriculturalists included.⁶³³ Among the 66 are 13 identified as yeomen and 17 as husbandmen. The yeomen's comfort is indicated by the size and substance of their houses. For Taylor, husbandmen were traditionally tenants on land, but he describes many of those in the '60' as possessors of land. Within this group there was more variation in farm size and quality of housing. The earlier discussion of yeomen and husbandmen in section 3.3.1 indicates that yeomen should be thought of as middle-class and husbandmen as another group that straddles the middle- working-class boundary. The solitary agricultural labourer in the database is working-class. The retailers are frequently defined by their title as specialist rather than 'retailer', with most of these general retailers being described as 'shopkeeper'. As might be expected from the popular knowledge of Quakers and their association with chocolate, there are many grocers. However, booksellers are present, as are china and glass retailers, drapers and druggists (or apothecaries). There are 196 (1.9% of the database) of these shopkeepers, many of whom are in rural locations. Assuming that their shops are small and that they have no specialist knowledge of the goods sold, they are working-class. The specialist retailers, who have some specialist product knowledge, are middle-class, and those such as the china and glass specialists are in the vanguard of the emerging consumer society.⁶³⁴ Using the classifications noted above, commercial activity is considered to be middle-class, and the Quaker merchants and bankers epitomise this. But the sector as defined in this thesis also covers transport, and the group of 19 boatmen, mostly in London on the

⁶³³ Taylor, *Valiant Sixty*, pp.40-66.

⁶³⁴ Smith, *Material Goods*, pp.70-75.

Thames, are a working-class commercial occupation. The food group is another that covers a range of activity. Some of the Quaker brewers became well-known, Truman's in London becoming Truman and Hanbury when Sampson Hanbury joined them.⁶³⁵ The other part of the food group comprised bakers, butchers and the like who would overlap the artisan world, and even down to a few cooks. The professional class is middle-class by definition, covering occupations such as teaching and law which are not manual and require knowledge and intellectual input. The remaining Other group is split, containing working- and middle-class elements. The 283 ordinary mariners, gardeners and labourers are the bulk of the category, who would be considered as working-class, but this group contains doctors and surgeons (middle-class) and the few gentlemen, who would be counted as upper-class.

Overall, this deeper analysis identified 8% of the database as working-class, outside the rural shopkeepers noted above and excluding all but 39 artisans and husbandmen (39 of the 2,709 artisans were included in the 8% identified as working-class). If this 8% are added to the artisans (26% after the adjustment noted) and the rural shopkeepers (2%), then 36% of the database can be plausibly argued as lower- or working-class, which strongly challenges the view of the Society of Friends as a middle-class grouping. This is a coarse analysis, but if some artisans are removed, as is likely to be reasonable, then some husbandmen, and even yeomen, should be added – the argument still stands.

The above argues that Quakers should not be viewed as a middle-class monolith. But another potential factor to consider is the variation in occupational recording with geographical location shown in this thesis and summarised below. The reduced level of

⁶³⁵ Price, 'Great Quaker Business Families', p.381.

recording in regions distant from London may mean that the agricultural proportion as reported is lower than stated, and possibly that the incidence of humbler occupations is higher than reported. These suggestions are explained by the agricultural nature of the far counties, and the lack of drive to publicly acknowledge your status as a subsistence-earning member of society. However, the conclusions drawn in this thesis are not dependent on these suggestions, nor is it likely that contributions from this additional factor would drive Quakers to being equally working- and middle-class. There is one final suggestion to be made, again which again requires more work to evidentially support. In the eighteenth century the Society contained a preponderance of independent tradesmen. This is not surprising as early eighteenth-century society was not one of mass employment. As the century progressed, employment in industrial settings became more common. I have shown in this thesis that Quakers moved from artisan work to industrial manufacturing during the century, as both industrial organisers and managers (with titles such as manufacturer) or as employed hands (such as cotton workers). These employed workers, and any potential unrecorded agricultural labourers, could go on to form the beginnings of a recognisable Quaker working-class. Even though the possibilities suggested in this paragraph are not necessary for the view of middle-class Quakerism in the eighteenth century to be challenged they would provide a fruitful area for others to work on.

8.4 Quaker Exceptionalism

8.4.1 Quakers and Local Economies

Although Quakers were spread throughout England, four of the county-based Quarterly Meetings held half of the population.⁶³⁶ These were London & Middlesex, Bristol & Somerset, Yorkshire and Lancashire. London was far larger than any other city, and Bristol was one of England's five largest cities, a major trading port and an outlet for trade flowing along the River Severn. Yorkshire is the largest English county, and northern Lancashire is part of 1652 country, which is the location of much early Quaker activity.⁶³⁷ Thus, the size of these Meetings is explained by their co-location with national population – except the particular case of Lancashire, where Quaker history is the driver. The occupational trends outlined above (low agricultural activity and artisan or manufacturing work) are reflected in the geographical trends, but within a geographical region, the local economy is still the governing factor in the employment pattern. Agricultural counties such as Cheshire show a higher agricultural fraction, and the urban areas generally show higher levels of activity such as retailing or manufacturing.

The largest employment sector, that of artisans, is reasonably evenly distributed across the country, with the highest concentration in Norfolk & Norwich, where 40% of the Quakers were artisan. In the early part of the century, Norwich was the second largest city in England, and a production centre of the textile industry. So, the finding that many of these artisans there were weavers is not surprising. In a wider view, besides weaving, the Quaker

⁶³⁶ These conclusions are supported by the work in chapter 4 here.

⁶³⁷ Rosemary Moore, *The Light in their Consciences*, p.3; Dandelion, *An Introduction to Quakerism*, p.13.

artisans were well placed to serve their local communities as shoemakers, tailors and carpenters. There are other clusters of work that emphasise Quaker interaction with the local economy, an example being the group of Quaker glovers around Worcester, the centre of English glove-making for much of the century. As manufacturing became more important and Quakers migrated to this sector from artisan work, so their spread became more uneven, with Cornwall, Derbyshire & Nottinghamshire, Devonshire, Dorset & Hampshire, Durham, Gloucestershire & Wiltshire, Lancashire, Norfolk & Norwich, Warwickshire Leicestershire & Rutland, Westmorland, and Yorkshire all showing manufacturing proportions above 20%. As seen in chapter 4, all these concentrations were based on textiles apart from leather in Durham and the rise of Birmingham's metal industry later in the century. Seeing Cornwall and Devon as manufacturing centres is a reminder that some of these Meetings were small, and a few people, possibly even from one family, in a particular activity would give an overly weighted presentation.

Agriculture and food formed a vital sector to the country, but less so, economically, for the Quaker population. However, it was still very important in some areas. In the remote hill country regions of Cumberland, Northumberland and Westmorland, it was the dominant activity. It was important in the South-East, too, where rich soils and the growing London market made it an attractive proposition. In the East Midlands, Lincolnshire had almost half of its Quakers as agriculturalists, and in Northamptonshire, the fraction exceeded a third. In the North-West, Cheshire's rich land supported a dairy industry, and Lancashire's 25% involvement in agriculture was only marginally surpassed by artisans. I showed in chapter 3 that a food-processing sector was connected to agriculture, in which the Quaker involvement was mostly milling and malting. This Quaker industry was widespread around South-East

England, with outposts in Lincolnshire, Gloucestershire & Wiltshire and Herefordshire Worcestershire & Wales. It appears that this Quaker activity was supporting food supply into the urban areas of London and Bristol. It is notable that although Cheshire Quakers were strongly agricultural, they were not represented in food processing. One explanation might be that in the eighteenth century, Cheshire cheese became a well-marketed, distinctive product and that the separate, outsider Quaker community was excluded from the coordinated activity taking place.⁶³⁸

Commerce and retail together are of a similar size to agriculture and food. The retailers are spread across the country, the commercial activity less. Although grouped with commerce, as both are concerned with monetary transactions, retail at that time was based around small, independent enterprises. Like artisanal work, it was a profession suited to Quakers who were not always integrated into communities, and a shop was relatively easy to establish, even in a small community. Later in the century, Quaker retailers were seen in the developing economy as database entries showed that they became involved in specialist consumer society retailing in areas such as china and glass and books. The Quaker commercial sector was more dependent on access to capital, and that requirement contributed to its more geographically concentrated nature. General trading merchants of diverse character were seen on the Thames in London and Sussex & Surrey, in Bristol & Somerset and in Gloucestershire & Wiltshire, with smaller groups in Norfolk & Norwich (Norwich), Lancashire (Liverpool and Lancaster) and Dorset & Hampshire (Poole). More specialised merchants dealing in cloth, corn and meal and iron were spread about the country. The much-publicised Quaker bankers emerged later in the century, both in London and in the

⁶³⁸ Blundel and Tregear, 'From Artisans to Factories'.

provinces, with such names as Backhouse, Gurney and Lloyd.⁶³⁹ The East coast Quaker shipping community identified in chapter 4 should not be forgotten.

The Other and Professional categories were numerically small, but the four large Meetings were over-represented amongst the professionals. This reflected the Quaker interest in education and, later, the interest in business-related activity such as accountancy. The Other category is strong in Cornwall, Cumberland & Northumberland (on the West coast) and Dorset & Hampshire, where all three Meetings showed a population of ordinary mariners. There were ordinary mariners on the North-East coast, too, as well as in London, but at a lower fraction than in a larger population.

Overall, the Quaker population showed the occupational trends outlined above, but within these trends their activity aligned towards local economies. It is important to recognise that the occupations of the Quaker population are broadly in line with those of the surrounding general population whether that region was urban or rural, with the caveat that the agricultural fraction was often lower.

8.4.2 Urbanisation

In the early eighteenth century, Quakers, although spread throughout England, were already concentrating geographically. These concentrations were around London and Bristol, two of the largest cities, and in Yorkshire, the largest county, and Lancashire, where there was much Quaker activity. This is an early indication of the big change in social structure in

⁶³⁹ For example L. S. Pressnell, *Country Banking in the Industrial Revolution* (Oxford: Clarendon Press, 1956), pp.106, 114.

eighteenth-century England, which was the drift of the population to towns. Tony Wrigley's figures for urban populations of 17% in 1700 and 28% in 1801 have been given in chapter 7. Vann and Eversley have argued that Quakers were already more urbanised than that, with figures of 32% in the first half of the century and 26% in the second half,⁶⁴⁰ and I found higher figures than that, with 46% of occupied Quakers in 1710 and 32% in 1790.

London & Middlesex, Yorkshire, Bristol & Somerset and Lancashire held 56% of occupied Quakers in the 1710 cohort, 63% in 1750 and 47% in 1790. This fraction of about half persisted through the century, noting that it dipped just below half late on.

London was the biggest city in England with a population that grew from 575,000 *circa* 1700 to 675,000 *circa* 1750 and 959,000 in 1801.⁶⁴¹ In 1710 London's share of the occupied Quakers was 33%, an indication of the early Quaker urbanisation. This share fell to 30% in 1750 then to 16% in 1790; Quaker activity in the capital became less visible. This was a period when commercial London was developing, but there were two factors that are particularly relevant to Quakers. Firstly, there is a tendency within successful families for the drive for success to diminish in second and third generations as the accumulated wealth provides some insulation against the threat of poverty. Secondly, and peculiarly to Quakers, there was the increasing insularity of the Quietist period when many Quakers withdrew from the world and others withdrew from Quakerism, not being prepared to adjust to the strictures demanded. Jacob Price argues that successful London Quaker families showed trends of wealth generation over more than one generation, but their activity changed from risky entrepreneurial overseas trading or innovative manufacturing to safer activities, with an

⁶⁴⁰ Vann and Eversley, *Friends in Life and Death*, p.44.

⁶⁴¹ Wrigley, 'Urban Growth', p.686.

emphasis on banking and brewing. He finds a second common trend from around 1770 whereby the families reduced their Quaker involvement, a trend facilitated by the emergence of methodism.⁶⁴² Such a pathway was not restricted to Quakers. The Whitbread family of Bedfordshire became extremely successful brewers in the mid-eighteenth century, but the second generation was not interested in the trade, and the family's direct activity moved to land ownership (but with employed management) and politics.⁶⁴³ The success of the Shropshire Darby family in maintaining family management of their firm over five generations is unusual.⁶⁴⁴

While the proportion that London contributed to the occupied Quaker population halved in the latter part of the century, that in Yorkshire rose by more than half in the earlier part, going from 11% in 1710 to 17% in 1750 and down to 16% in 1790. It seems unlikely that London was subject to outward migration, but the growth of the population in Leeds, from circa 6,000 in 1710 to 53,000 in 1801 strongly suggests inward migration.⁶⁴⁵ The timing of the growth in Yorkshire Quakers, assuming that it is connected to the expansion of the textile industry, suggests that the wool trade rather than cotton was the driver. The Yorkshire wool industry was already beginning its industrial organisation through the putting-out system by 1730, and sizes of concerns were growing.⁶⁴⁶ The detail in the database shows a rise in the proportion of Yorkshire Quakers involved with manufacturing, with the larger rise between 1710 and 1750, which suggests some migratory contribution from Quakers to the textile industry.

⁶⁴² Price, 'Great Quaker Business Families', pp.384-9.

⁶⁴³ Dean Rapp, 'Social Mobility in the Eighteenth Century: The Whitbreads of Bedfordshire, 1720-1815', *The Economic History Review*, 27.3 (1974), 380-94.

⁶⁴⁴ Raistrick, *Dynasty*.

⁶⁴⁵ Wrigley, 'Urban Growth', p.686.

⁶⁴⁶ John Smail, *Merchants, Markets and Manufacture: The English Wool Textile Industry in the Eighteenth Century* (Basingstoke: Macmillan, 1999), pp.22-7.

Lancashire was a different case, their contribution to the occupied records showing a small rise from 6% to 8½%, but with a small fall in actual numbers from 1710 to 1790. This is in a county where the populations of Manchester and Liverpool rose by a factor of ten in the same period.⁶⁴⁷ In this county the change was from agriculture, with the biggest increase being seen in commercial and retail. There was some shift from artisanal to manufacturing activity and an overall increase in that joint sector from 47% to 52%. These changes can be rationalised by the growth of mercantile activity through Liverpool and the beginnings of the Lancashire cotton trade. Lancashire's cotton boom was more a nineteenth-century phenomenon.⁶⁴⁸ There was possibly a little Quaker migration into Lancashire at the end of the century as the boom began, and those Quakers already present did alter their activity.

Similarly, Bristol's share of occupied Quakers remained in the 6-8% range, but here the artisan/manufacturing (61% in 1710 and 52% in 1790) and the commercial/retail (28% in 1710, 24% in 1790) sectors declined slightly in proportional terms. This lack of increase in such activity is potentially explained by the rise of Liverpool, and possibly Glasgow, as alternative destinations for American-sourced imports.⁶⁴⁹ This diversion of imports then squeezed mercantile and supporting activity in Bristol. A further factor which was emerging was the growing queasiness amongst Quakers concerning involvement in trade which involved slavery. In 1822 the Society of Friends in London was sufficiently abolitionist to issue a publication aimed at Europe-wide extinction of the trade.⁶⁵⁰

⁶⁴⁷ Wrigley, 'Urban Growth'. p.686.

⁶⁴⁸ Riello, *Cotton*, pp.211-4.

⁶⁴⁹ Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century*, pp.219-20.

⁶⁵⁰ Society of Friends London Yearly Meeting, *An Address to the Inhabitants of Europe on the Iniquity of the Slave Trade Issued by the Religious Society of Friends, Commonly Called Quakers, in Great Britain and Ireland* (London: printed by W. Phillips, 1822).

In the other, smaller Meetings, proportional contributions to the database were less susceptible to trend analysis. As the London fraction of the occupied Quakers fell with time, small rises were seen in several Meetings, though at small numbers. There were some changes of note. The contributions from Berkshire & Oxfordshire and Gloucestershire & Wiltshire fell from 6% to 3%. The former showed some shift to commercial activity, with some loss of making activity, and the latter followed Bristol with losses in making and commercial activity and also showed a significant reduction in numbers, probably influenced by the proximity of nearby Bristol. Cheshire & Staffordshire was much reduced in numbers, its contribution to the occupational records dropping from 4% in 1710 to 1% in 1790. This was a Meeting bordered by Manchester, Liverpool and the Black Country, all of which were growing urban areas.⁶⁵¹ Warwickshire Leicestershire & Rutland increased its share of occupational records from 2% to 5% along with its actual numbers, held its artisanal and manufacturing share at 50% and increased its commercial activity from 12% to 23%. This is clearly a consequence of the growing influence of the industrialisation of Birmingham.

Overall, there appears to have been the possibility of some Quaker migration, notably into West Yorkshire and Birmingham, but the changes were not as dramatic as those seen in the movements in the general population. This is easily explained by the higher urban population in Quakers early in the period. There was a noticeable drop in the contribution of London Quakers to the national occupational Quaker activity as time progressed, and some suggestion that increasing wealth diluted commitment to the cause. In most Meetings the Quaker population made some changes to its activity. Looking at the detail of the data shows

⁶⁵¹ Wrigley, 'Urban Growth', p.686.

that retailing became more popular with Quakers later in the century, rising from 12% in 1710 to 18% in 1790, and within that food retailing rose from 34% to 42%, respectively, much of this being in urban locations. Allied to that, the fraction of bakers within the food section rose from 28% to 43%. These are examples of Quakers seeking to establish independent businesses in sectors that were essential to society and where commercial skills were required. They were adapting and integrating, at an ordinary level, to a modernising society. This is an important finding because it illustrates the mechanism whereby Quakers were finding their way to take part in secular society while remaining true to their principles. To make that adjustment, they became urbanised earlier than the general population, which showed their independence of mind in secular activities as well as spiritual ones.

8.4.3 The Hyde Claim

Quakers have always been a small percentage of the population, but many authors have a high opinion of their impact on society. Edward Milligan puts forward the very general idea of Quakers as people of strong minds who question ideas in all fields.⁶⁵² In industry, Geoffrey Hill made the claim that Quaker influence on industrial development was out of all proportion to their numbers.⁶⁵³ In business David Windsor referred to Quakers as ‘dominant influences’ and implied that they held ‘industrial England in the palms of their hands’.⁶⁵⁴ Some Quakers were very successful, as individuals or families, but most were ordinary folk with moderate success in life. There is some mythology within the movement that Quakers are inherently high achievers and have made large contributions in many fields. In the eighteenth century

⁶⁵² Edward H. Milligan, *Quakers and Railways* (York: Ebor Press, 1992), p.2.

⁶⁵³ Geoffrey Hill, *The Worsdells: A Quaker Engineering Dynasty* (Glossop: The Transport Publishing Company, 1991), p.17.

⁶⁵⁴ Windsor, *Quaker Enterprise*, pp.1-2.

there were families whose names have become remembered across time. The Lloyds are remembered for beginning banking in Birmingham, and their name is attached to one of today's high street banks, as indeed is that of the Barclays. In science, a more surprising claim has been advanced that Quakers were 40 times more likely to be a member of the Royal Society than the general population. This repeated claim has been examined and challenged by Geoffrey Cantor.⁶⁵⁵

The most spectacular claim for Quaker exceptionality is that made by Charles Hyde, who asserted that in the early eighteenth century, Quakers controlled between 50% and 75% of the English iron industry.⁶⁵⁶ The boldness of this claim has led to its being part of more recent work, including Priya Satia's study of the eighteenth-century gun makers.⁶⁵⁷ Because of the changes that occurred in the iron industry during the eighteenth century and their impact on the direction of the English economy, the Hyde claim requires assessing for validity in my study of eighteenth-century Quaker occupations and economic activity. There is no doubt that there was a Quaker influence in the industry – the widely reported work of the Quaker Darby family at Coalbrookdale provided the technology for its transformation into the behemoth it became during the nineteenth century. But from the evidence within this database from the Quaker marriage records, augmented and confirmed for this section of work by reference to Arthur Raistrick, Edward Milligan and the Ancestry database, there was only a small amount of Quaker activity in the industry.⁶⁵⁸ Much of that work was concerned

⁶⁵⁵ Geoffrey Cantor, 'Quakers in the Royal Society, 1660-1750', *Notes and Records of the Royal Society in London*, 51.2 (1997), pp.175-7.

⁶⁵⁶ Hyde, *Technological Change*, p.16. Chapter 6 here contains more detail of Quaker involvement in the iron industry.

⁶⁵⁷ Satia, *Empire of Guns*, p.70.

⁶⁵⁸ Raistrick, *Quakers in Science and Industry*; Milligan, *Biographical Dictionary*; Records of English Quaker births, marriages and deaths on Ancestry.com.

with iron trading rather than production (though in the first third of the century, demarcation lines were often blurred). In particular, there was no Quaker activity amongst the Wealden gunfounders, a region that accounted for a quarter of the English industry. This alone made it difficult to see how the claim would be valid. When combined with the low activity levels identified elsewhere, the Hyde claim cannot be supported.

8.5 Implications of the Study and Future Work Directions

The aims of this study were to look at what Quakers did to survive and prosper in the eighteenth century; where did they carry out this activity; and how did they interact with their surrounding communities. The unstated implication in these questions was to look at all Quakers, not just those who were wealthy and educated enough to leave voluminous records.

The use of a much larger database than those seen previous studies was central to these aims. The larger number of data points and elimination of selection by geography or name has made it possible to provide occupational insights that are less biased and more focussed. The use of the marriage records as a valid source has been established. But there are still areas that would benefit from study. The digested records have been taken as true records of the registers, and the cross checks carried out here support that assumption. But there has not been a definitive published comparison between the two sources. Similarly, the use of digitised records such as those contained within the Ancestry system is now common, but there is no available comment on the completeness, or otherwise, of the information available. Such comments on limitations go to the heart of the question of Quaker record survival and detailing such survival, while useful, would be laborious. Extracting and tabulating data

from these records is also time consuming. The Quaker Family History Society has ceased its digitisation project because of the open availability of scanned registers. It would be helpful, and useful, if scholars collaborated and shared their own extracted data to build up further such datafiles.

An unexpected finding was that recording of occupational data in the marriage records showed systematic regional variations, being poorer as distance from London increased. I have tentatively suggested that this could be a factor in the lower proportion of agricultural representation amongst Quakers than in the general population, and also that it could be a factor in the extremely low number of agricultural labourers. I have not relied upon this suggestion in drawing conclusions, but it would be a fruitful area for localised studies to address. This is an example of how this study makes a point (here the comparatively small sized Quaker agricultural sector) and sets itself up for future criticism. However, this regional recording variation is a factor that any Quaker writer working with the marriage records or making geographical comparisons needs to be aware of and acknowledge.

Received wisdom has it that eighteenth-century Quakers were middle-class, or of the middling sort as some have described them. This difference of description arose because of the development of social classification from the seventeenth century and the difficulty of applying modern class systems. However, I showed above that by the end of the eighteenth century the concept and terminology of the middle-class state was supplanting the ill-defined and wide idea of the middling sorts. The existence of a very large group of artisans and retailers amongst Quakers is enough to challenge the idea of the Religious Society of Friends as a middle-class grouping. But to properly address this challenge requires the detailed work

that only be carried out at a local level by deep analysis of a range of sources. It is the type of work that will be complicated by need to look at the lives of ordinary people in depth – lives that are not often routinely recorded.

This suggestion of Quakers as a group of ordinary people leads to the second challenge to received and popular wisdom – the idea of Quaker exceptionality and that they were a uniquely achieving society. The findings of this study are not so different from other significant studies of Quakers. Their low level of engagement with agriculture and significant artisanal sector broadly agrees with Vann and Eversley's work, and the commercial bent identified by Fincham is confirmed. The latter is potentially enhanced when the impact of my identification of manufacturing as a separate sector is included. But the scope and size of my study shows up minor differences and possible biases in previous work arising from their sample limitations. However, it is when comparing with the national general population that the idea of exceptionality breaks down, although I must immediately highlight that the Quaker population was considerably less likely, nationally, to be working in agriculture. The spread of artisans across the country and the Quaker involvement with textiles are markers of this integration into normal society. Local clusters such as the glovers in Worcester only serve to reinforce this Quaker integration into wider economies. Even the limited associations of Quakers with slavery reported here are an example of that lack of exceptionality. Writers must be extremely careful when making grandiose claims such as that made by Hyde – which I have showed is unsustainable. There is no doubt that Quaker families did make hugely significant contributions to the economic developments of the eighteenth century, but any such claim for over-performance by Quakers as a body, in

comparison with the general population, must be established as real and not due to the talents of one or two families.

This study has provided a new view of the eighteenth-century Quaker body as one with a substantial population that is not middle-class as is so often supposed. It has also given a view of a body much more closely aligned with the national population than popular views like to believe. Its findings are firmly based in an extensive study of the marriage records of the time. The range of that study provides a value extending that from previous studies in examining Quakers' position in the eighteenth-century economic environment. It provides a platform for specialised studies to build onto, and possibly criticise. The unexpected patterns of data recording must inform others too. In time, I can foresee a body of work emerging which provides local detail for individual Meetings and for specific economic sectors, although the usual difficulty of finding data on the mass of the humble, unrecorded population will exist. Jordan Landes focussed on Quakers in the Atlantic trade and argued that the London Quakers were at the heart of Quaker networks integrated into this trade.⁶⁵⁹ Andrew Fincham found that with their discipline and policies, the Society of Friends provided a congenial and attractive home for commercially minded individuals. He was clear, though, that the Society never attempted to be a primarily commercial group over being a spiritual one.⁶⁶⁰ Esther Sahle has also looked at Quakers in commercial business, but from the viewpoint of how the changing Quaker discipline informed their behaviour and the policing of it.⁶⁶¹ Banking or brewing would be useful sectors where the Quaker activity should be

⁶⁵⁹ Landes, 'Creation of a Quaker Transatlantic Community'; Landes, *London Quakers in the Trans-Atlantic World*.

⁶⁶⁰ Fincham, 'Origins of Commercial Success', p.328.

⁶⁶¹ Sahle, 'A Faith of Merchants'; Sahle, *Quakers in the British Atlantic World*; Fincham, 'Origins of Commercial Success', pp.141-4.

investigated, banking specifically being an industry where a huge Quaker influence is claimed.⁶⁶²

There is still uncertainty as to the impact of Quaker mores on their choice of activity.

Testimony is the term used by Quakers for the few concepts essential to the practice of their religion. Quakerism is driven by practice rather than belief, with the traditional testimonies being simple living, equal treatment to all, integrity in life and using peaceful means to resolve conflict. Rachel Muers has discussed the Quaker approach to testimony-driven living, and the existence of these concepts in the wider Christian world.⁶⁶³ While it is clear that the actions of later luminaries, such as the Cadburys in their chocolate business, were driven by Quaker principles, it is not so clear how those principles were acted on by humbler eighteenth-century Quakers. Considering the early Quaker urbanisation, an inference can be drawn that it was a choice made in the light of the Society's advanced, testimony-based, social and economic thinking. But this is an idea that requires much more work to substantiate. Alternatively, the urbanisation could have been driven by social and economic considerations such as the pressure to pay tithes.

'A Peculiar People' is a phrase sometimes used in Quaker circles to describe the movement and which originates in the King James version of the bible.⁶⁶⁴ I suggest that eighteenth-century Quakers were not such a peculiar people after all.

⁶⁶² For example Mark Freeman, 'Quakers, Business and Philanthropy', in *The Oxford Handbook of Quaker Studies*, ed. by Stephen W. Angell and Pink Dandelion (Oxford: Oxford University Press, 2015), p.422.

⁶⁶³ Rachel Muers, *Testimony: Quakerism and Theological Ethics* (Norwich: SCM Press, 2015).

⁶⁶⁴ See for example Joseph John Gurney, *A Peculiar People: The Rediscovery of Primitive Christianity* (Richmond IN.: Friends United Press, 2008). The Biblical origins are Titus ch.2 v.14 and 1 Peter ch.2 v.9, *The Holy Bible - Authorised King James Version* (Oxford: Oxford University Press). The quote from Titus appears on the title page of the 1678 edition of Barclays Apology reproduced in 2002 (Robert Barclay, *An Apology for the True Christian Divinity First Published in 1678* (Farmington, ME: Quaker Heritage Press, 2002)), which

explains its popularity amongst Quakers, but not on some editions of the same such as that of 1826 printed in New York by Samuel Wood and Sons and available on Google Books.

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Appendices

Appendix 1 – List of Occupations and Standardisation

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Accomptant	Accountant	Basket mkr	Basket maker
Accountant	Accountant	Battery maker	Mill wright
Agent	Agent	Bay maker	Bay maker
Anchor smith	Anchor smith	Baymaker	Bay maker
Apothecary	Druggist	Bed lace maker	Lace maker
Apothecary & Citizen	Druggist	Bed tick manufacturer	Cloth maker
Apothecary & druggist	Druggist	Bedder	Bed maker
Apothecary & surgeon	Druggist	Bellows maker	Bellows maker
Armorer & Citizen	Armourer	Blacksmith	Blacksmith
Attorney	Lawyer	Blacksmith & Citizen	Blacksmith
Attorney at law	Lawyer	Bladesmyth	Blade smith
Bagmaker	Bag maker	Blanket maker	Blanket maker
Baize maker	Baize maker	Blanket weaver	Blanket maker
Baker	Baker	Blanket weaver	Blanket maker
Baker & Citizen	Baker	Bleacher	Bleacher
Baker & draper & Citizen	Baker	Block maker	Block maker
Baker & long bow string maker & Citizen	Baker	Block maker and joiner	Block maker
Baker and brewer	Baker	Blockmaker	Block maker
Baker and flax man	Baker	Blue maker	Blue maker
Baker of London & Citizen	Baker	Boatman	Boatman
Balber and Chirgionce	Barber	Bodace maker	Stay maker
Balnket maker	Blanket maker	Boddice maker	Stay maker
Banker	Banker	Boddice seller	Stay maker
Banker & Citizen	Banker	Bodice maker	Stay maker
Barber	Barber	Bodiesmaker	Stay maker
Barber & Citizen	Barber	Bodis maker	Stay maker
Barber and periwig maker	Barber	Book keeper	Accountant
Barber and peruke maker	Barber	Bookbinder & barber surgeon & Citizen	Bookbinder
Barber and Surgeon	Barber	Bookkeeper	Accountant
Barber surgeon & Citizen	Barber	Bookseller & stationer	Bookseller
Basket maker	Basket maker	Bottell maker	Bottle maker
Basket maker & Citizen	Basket maker	Bottle maker	Bottle maker
Basket maker and turner	Basket maker	Braizier	Brazier
Basket maker, saddle maker and citizen	Basket maker	Brasier	Brazier
Basket mkr	Basket maker	Brasier & Citizen	Brazier

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Brass & bell founder	Brass founder	Butcher or brewer	Butcher
Brass founder	Brass founder	Butter mould maker	Butter mould maker
Brass melter	Brass founder	Button factor	Button seller
Brazier	Brazier	Button maker	Button maker
Brazier & Citizen	Brazier	Button merchant	Button seller
Brazier & tinman	Brazier	Button merchant	Button seller
Brazier and tinman	Brazier	Cabinet maker	Furniture maker
Bread weaver	Weaver - broad	Cabinet maker & upholder & Citizen	Furniture maker
Breeches maker	Breeches maker	Cabinetmaker	Furniture maker
Breeches maker	Breeches maker	Calenderer	Calenderer
Brewer	Brewer	Calendor	Calenderer
Brewer - common	Brewer	Calico manufacturer	Calico manufacturer
Brewer & Citizen	Brewer	Calico printer	Printer
Brick maker	Brick maker	Calker	Caulker
Bricklayer	Brick layer	Callico printer	Printer
Bricklayer & bow string maker & Citizen	Brick layer	Card maker	Card maker
Bricklayer & Citizen	Brick layer	Cardmaker	Card maker
Bricklayer, citizen and fishmonger	Brick layer	Cards maker	Card maker
Brickmaker	Brick maker	Carpenter	Carpenter
Brightsmith	Smith - bright	Carpenter & blockmaker	Carpenter
Broad clothier	Cloth maker	Carpenter & Citizen	Carpenter
Broad glass maker	Glass maker	Carpenter and joiner	Carpenter
Broad silk weaver	Weaver - silk	Carrier	Carrier
Broad weaver	Weaver - broad	Carver	Carver
Broadweaver	Weaver - broad	Carver & Citizen	Carver
Broker	Broker	Caulker	Caulker
Bruschmaker	Brush maker	Chain maker	Chain maker
Brush maker	Brush maker	Chair maker	Furniture maker
Brush manufacturer	Brush maker	Chairmaker	Furniture maker
Brushmaker	Brush maker	Chandler	Chandler
Bucket maker	Bucket maker	Chandler & Soap Boiler	Chandler
Buckle maker	Buckle maker	Chapman	Chapman
Builder	Builder	Chayremaker	Furniture maker
Buket maker	Bucket maker	Check weaver	Weaver - check
Butcher	Butcher	Cheese factor	Cheese seller

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Cheese monger	Cheese seller	Cloathmaker	Cloth maker
Cheesefactor	Cheese seller	Cloathworker	Cloth worker
Cheesemonger	Cheese seller	Clock & watchmaker	Clock and watch maker
Cheesemonger & Citizen	Cheese seller	Clock maker	Clock and watch maker
Cheesemonger & merchant tailor & Citizen	Cheese seller	Clock maker & Citizen	Clock and watch maker
Cheesemonger & skinner & Citizen	Cheese seller	Clock pinion maker	Clock and watch maker
Cheesemonger & woolman & Citizen	Cheese seller	Clockmaker	Clock and watch maker
Cheesemonger, loriner and citizen	Cheese seller	Clockmaker & Citizen	Clock and watch maker
Cheesmonger	Cheese seller	Clog maker	Shoemaker
Chemist	Druggist	Clogger	Shoemaker
Chemist & druggist	Druggist	Clogger and leather cutter	Shoemaker
Cheymist	Druggist	Cloth dresser	Cloth worker
Child coat maker	Tailor	Cloth maker	Cloth maker
Chilndler	Chandler	Cloth maker & Citizen	Cloth maker
China and glass dealer	China and glass seller	Cloth manufacturer	Cloth maker
Chirurgion	Surgeon	Cloth supervisor	Cloth worker
Chisurgeon	Surgeon	Cloth weaver	Weaver - cloth
Chiuerurgeon	Surgeon	Cloth worker	Cloth worker
Chocolate maker	Chocolate maker	Cloth worker & citizen	Cloth worker
Chocolate manufacturer	Chocolate maker	Clothdresser	Cloth worker
Chymist	Druggist	Clothier	Cloth maker
Chymist & druggist	Druggist	Clothmaker	Cloth maker
Chyrurgeon	Surgeon	Clothworker	Cloth worker
Chyurgeon	Surgeon	Clothworker &	Cloth worker
Citizen	Merchant	Clothworker & Citizen	Cloth worker
Citizen & apothecary	Druggist	Clothworker and citizen	Cloth worker
Citizen & baker	Baker	Clothyer	Cloth maker
Citizen & draper	Draper	Clothyer	Cloth maker
Citizen & pattin maker	Pattern maker	Coach & coach harness maker	Coach maker
Clay potter	Potter	Coach harness maker of London	Coach maker
Clerk	Clerk	Coach maker	Coach maker
Clerk to Lawley Castings (?) Co.	Clerk	Coachcarrier	Carrier
Clerk to Sarah Darby	Clerk	Coachmaker	Coach maker
Clerk to the Coalbrookdale Co.	Clerk	Coachman	Coach man
Cloath maker	Cloth maker	Coal dealer	Coal merchant
Cloath worker	Cloth worker	Coal factor	Coal merchant

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Coal filter	Coal merchant	Corn buyer	Corn seller
Coal merchant	Coal merchant	Corn chandler	Corn seller
Coal miner	Coal miner	Corn dealer	Corn seller
Coalfactor	Coal merchant	Corn factor	Corn seller
Coard wainer	Shoemaker	Corn factor & Citizen	Corn seller
Coard wainer	Shoemaker	Corn merchant	Corn seller
Coardwainer	Shoemaker	Cornchandler	Corn seller
Coardwainer & Citizen	Shoemaker	Cornfactor	Corn seller
Cole miner	Coal miner	Cornfactor & draper & Citizen	Corn seller
Cole worker	Coal miner	Cossier	Shoemaker
Collar maker	Collar maker	Cotton carder	Cotton worker
Coller maker and roper	Collar maker	Cotton goods dealer	Cotton seller
Collermaker	Collar maker	Cotton manufacture	Cotton maker
Coller-maker	Collar maker	Cotton spinner	Cotton worker
Collier	Coal miner	Cotton ware maker	Cotton goods maker
Colourman	Dye seller	Coullerman	Dye seller
Comb maker	Comb maker	Cow keeper	Husbandman
Comber	Wool worker	Cowper	Cooper
Combmaker	Comb maker	Currier	Leather maker
Combmaker & Citizen	Comb maker	Currier & Citizen	Leather maker
Common brewer	Brewer	Currier & leather cutter	Leather maker
Comon brewer	Brewer	Currier and leather cutter	Leather maker
Confectioner	Confectioner	Currier of London	Leather maker
Confectioner & dyer & Citizen	Confectioner	Currier of London & Citizen	Leather maker
Conveyancer	Lawyer	Cutler	Cutler
Cooard Hand	Shoemaker	Cutler & citizen	Cutler
Cook	Cook	Cutler and silversmith	Cutler
Cook & Citizen	Cook	Cyder merchant	Cider seller
Cooper	Cooper	Deal merchant	Wood seller
Cooper & Citizen	Cooper	Dealer & chapman	Chapman
Cooper & Tobacconist & Citizen	Cooper	Dealer in coals	Coal merchant
Cooper and citizen	Cooper	Dealer in glass	China and glass seller
Cordwainer	Shoemaker	Dealer in wine	Vintner
Cordwainer & Citizen	Shoemaker	Dealer in wines	Vintner
Cordwander	Shoemaker	Dier	Dyer
Cordwayner	Shoemaker	Distiller	Distiller
Cordwinder	Shoemaker	Distiller & Citizen	Distiller
Cork cutter	Cork cutter	Distiller and chymist	Distiller
Corn & flour factor	Corn seller	Distiller and citizen	Distiller
Corn and flour dealer	Corn seller	Doctor	Physician

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Doctor in Physic	Physician	Engine tender	Engine worker
Doctor of medicine	Physician	Engineer	Engineer
Doctor of phisick & surgery	Physician	Engraver	Engraver
Doctor of Physic	Physician	Factor	Wholesaler
Draper	Draper	Factor & coal dealer	Coal merchant
Draper & Baker & Citizen	Draper	Farmer	Farmer
Draper & Citizen	Draper	Farmer & grazier	Farmer
Draper & Ironmonger by Compy, Citizen	Draper	Farmer and grazier	Farmer
Draper & Joiner & Citizen	Draper	Farrier	Blacksmith
Draper & salesman	Draper	Fell cooper	Cooper
Draper & tailor	Draper	Fell monger	Hide seller
Draper &c.	Draper	Fellmanger	Hide seller
Draper (& widower)	Draper	Fellmonger	Hide seller
Draper and citizen	Draper	Fellmonger & leather dresser	Hide seller
Draper and Citizen of London	Draper	Felmonger	Hide seller
Draper and grocer	Draper	Felt maker	Cloth maker
Draper and hosier	Draper	Felt maker & Citizen	Cloth maker
Draper and mercer	Draper	Felt maker and citizen	Cloth maker
Draper haberdasher & Citizen	Draper	Felt monger	Cloth seller
Draper haberdasher of small wares & Citizen	Draper	Feltmaker	Cloth maker
Druget maker	Cloth maker	Feltmaker & Citizen	Cloth maker
Drugget maker	Cloth maker	Fick(?) manufacturer	Cloth maker
Druggist	Druggist	Filesmith	File smith
Druggist & glover & Citizen	Druggist	Fisherman	Fisherman
Druggist and grocer	Druggist	Fishmonger	Fish monger
Drugster	Druggist	Fishmonger & bricklayer & Citizen	Fish monger
Drysalter	Salter	Fishmonger & Citizen	Fish monger
Duck manufacturer	Cloth maker	Flax dealer	Flax seller
Duffield maker	Cloth maker	Flax dresser	Flax worker
Duffill weaver	Weaver - cloth	Flaxman	Flax worker
Dyer	Dyer	Florist	Florist
Dyer & Citizen	Dyer	Flour factor	Corn seller
Dyer & Tallow Chandler & Citizen	Dyer	Flour man	Corn seller
Dyer and printer	Dyer	Flour miller	Miller
Dyer of London & Citizen	Dyer	Flower dresser	Miller
Earthenware, glass dealer	China and glass seller	Flowerman	Corn seller
Edge loom maker	Loom maker	Founder	Founder
Enameller	Enameller	Founder & Citizen	Founder

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Founder & grocer & citizen	Founder	Glazier plumber	Glazier
Founder and citizen	Founder	Glove manufacturer	Glover
Frame knitter	Frame knitter	Glove seller	Glove seller
Frame smith	Frame smith	Glover	Glover
Frame work knitter	Frame knitter	Glover & Cheesemonger & Citizen	Glover
Frame work knitter & Citizen	Frame knitter	Glover & citizen	Glover
Framework knitter	Frame knitter	Glover & tin plate worker & Citizen	Glover
Freemason	Mason	Glover & Woollen draper & Citizen	Glover
Fringe and lace maker	Lace maker	Glover and citizen	Glover
Fruiterer	Greengrocer	Glover and fellmonger	Glover
Fruiterer & Citizen	Greengrocer	Glover seller & Citizen	Glove seller
Fuller	Fuller	Gloveseller	Glove seller
Furne spinner	Thread worker	Goldsmith	Smith - Gold
Furrier	Fur seller	Goldsmith & Citizen	Smith - Gold
Fustian dyer	Dyer	Graissuer	Grazier
Fustian manufacturer	Cloth maker	Grasier	Grazier
Fustian ware manufacturer	Cloth goods maker	Grasser	Grazier
Fustian weaver	Weaver - fustian	Grazier	Grazier
Fustian? Hessian? Maker	Cloth maker	Grocer	Grocer
Fustin maker	Cloth maker	Grocer & citizen	Grocer
Fustin weaver	Weaver - fustian	Grocer & cooper & Citizen	Grocer
Gager	Tax collector	Grocer & draper	Grocer
Gallipot maker	Potter	Grocer & tallow chandler	Grocer
Gardener	Gardener	Grocer and chandler	Grocer
Gardiner	Gardener	Grocer and citizen	Grocer
Gardner	Gardener	Grocer and confectioner	Grocer
Geldar	Gelder	Grocer and draper	Grocer
General merchant	Merchant	Grocer and druggist	Grocer
Gent	Gentleman	Grocer and flax dresser	Grocer
Gentleman	Gentleman	Grocer and linen draper	Grocer
Gilder	Gilder	Grocer and Mercer	Grocer
Glas maker	Glass maker	Grocer and sailcloth maker	Grocer
Glasier	Glazier	Grocer and tallow chandler	Grocer
Glass grinder	Glass worker	Grocer and tea dealer	Grocer
Glass house pot maker	Glass maker	Grocer and woollen draper	Grocer
Glass maker	Glass maker	Grosser	Grocer
Glazier	Glazier	Groster and whip maker	Whip maker
Glazier & Citizen	Glazier	Gunsmith	Gun smith

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Haberdasher	Haberdasher	Hosier & manufacturer	Hosier
Haberdasher & Citizen	Haberdasher	Hosier and citizen	Hosier
Haberdasher & Cooper by Compy, Citizen	Haberdasher	Hosyer	Hosier
Haberdasher and citizen	Haberdasher	Hot presser	Mill worker
Haberdasher of hats	Haberdasher	Hotpresser	Mill worker
Haberdasher of hats & long bow string maker & Citizen	Haberdasher	House carpenter	Carpenter
Haberdasher of small things	Haberdasher	House carpenter and joiner	Carpenter
Hard wood turner	Turner	House carpenter and wheelwright	Carpenter
Hardware seller	Hardware seller	Housekeeper to John Dawson	Housekeeper
Hardwareman	Hardware seller	Hovere	????
Hardwood turner	Turner	Hoyman	Mariner
Hat dresser	Hatter	Hubandman	Husbandman
Hat maker and citizen	Hatter	Husbandmaqn	Husbandman
Hat manufacturer	Hatter	Husbandmen	Husbandman
Hat-band maker & Citizen	Hatter	Husbandsman	Husbandman
Hatmaker	Hatter	Imbroiderer & Citizen	Embroiderer
Hatter	Hatter	Imbroyderer & Grocer & Citizen	Embroiderer
Hatter & Citizen	Hatter	Indigo maker	Dye maker
Hatter & hosier	Hatter	Inn holder	Inn keeper
Hatter & wheelwright & Citizen	Hatter	Inn holder & Citizen	Inn keeper
Hay wright	Farm worker	Inn keeper	Inn keeper
Heckler	Flax worker	Instrument case maker	Instrument case maker
Hemp dresser	Flax worker	Iron dealer	Iron monger
Hemp dresser and roper	Flax worker	Iron founder	Iron founder
Hingemaker	Hinge maker	Iron master	Iron master
Hoastler	Ostler	Iron merchant	Iron monger
Hoop maker	Cooper	Iron monger	Iron monger
Hoop shaver	Cooper	Iron pot founder	Iron founder
Hoope shaver	Cooper	Ironfounder	Iron founder
Hooper	Cooper	Ironmaster	Iron master
Hop factor	Hop seller	Ironmonger	Iron monger
Hop merchant	Hop seller	Ironmonger & cloth worker & Citizen	Iron monger
Hop seller	Hop seller	Ironmonger & draper & citizen	Iron monger
Hosier	Hosier	Ironmonger & pattin maker	Iron monger
Hosier & bow string maker & citizen	Hosier	Ironmonger and brush maker	Iron monger
Hosier & glover	Hosier	Ironmonger and citizen	Iron monger
Hosier & long bow string maker & Citizen	Hosier	Ironmonger by trade a wine merchant & Citizen	Iron monger

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Ithuldrit???	Wheelwright	Leather stay maker	Stay maker
Jersey Weaver	Weaver - Jersey	Leather stay mkr.	Stay maker
Jersy drawer	Weaver - Jersey	Leather staymaker	Stay maker
Joiner	Carpenter	Leather-cutter	Leather maker
Joiner & citizen	Carpenter	Letter founder	Letter founder
Joiner and blockmaker	Carpenter	Lighterman	Boatman
Joiner and cabinet maker	Carpenter	Lincey maker	Cloth maker
Joiner and citizen	Carpenter	Linen & woolen draper	Draper
Joyner	Carpenter	Linen draoer	Draper
Joyner and house carpenter	Carpenter	Linen Draper	Draper
Joynr.	Carpenter	Linen draper & clockmaker & Citizen	Draper
Knife case maker & grocer & Citizen	Instrument case maker	Linen draper, citizen and clock maker	Draper
Knife cutler	Cutler	Linen dyer	Dyer
Laborer	Labourer	Linen manufacturer	Linen maker
Labourer	Labourer	Linen merchant	Linen seller
Labourer in the Gospel	Minister	Linen weaver	Weaver - linen
Labouring man	Labourer	Linen weaver and bleacher	Weaver - linen
Lace maker	Lace maker	Linen weaver and draper	Weaver - linen
Lace manufacturer	Lace maker	Linen webster	Weaver - linen
Land farmer	Farmer	Linendraper	Draper
Land surveyor	Surveyor	Linimer of London & Citizen	Draper
Landfarmer	Farmer	Lining draper	Draper
Last maker	Shoemaker	Lining weaver	Weaver - lining
Lathrender	Plasterer	Linnen draper	Draper
Lathrender	Plasterer	Lock smith	Locksmith
Law man	Lawyer	Locksmith	Locksmith
Lawyer	Lawyer	Long bow string maker & Citizen	Merchant
Lead ore miner	Lead miner	Looking glass maker	Mirror maker
Leather cutter	Leather maker	Lorimer & Citizen	Metal goods maker
Leather cutter & Citizen	Leather maker	Maid servant	Servant
Leather dealer	Leather seller	Malster	Maltster
Leather dresser	Leather maker	Malt maker	Maltster
Leather dresser (Spanish leather)	Leather maker	Malt man	Malt seller
Leather dresser and glover	Leather maker	Malter	Maltster
Leather factor	Leather seller	Maltfactor	Malt seller
Leather seller	Leather seller	Maltman	Malt seller
Leather seller & Citizen	Leather seller	Mantua maker	Tailor
Leather seller & Tallow chandler	Leather seller	Manufacturer	Manufacturer

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Manufacturer of small wares	Manufacturer	Merchant's clk.	Clerk
Mariner	Mariner	Miliner	Milliner
Marriner	Mariner	Milkman	Milkman
Marriner	Mariner	Mill wright	Mill wright
Mason	Mason	Miller	Miller
Mason & Citizen	Mason	Miller & baker	Miller
Mason and bricklayer	Mason	Miller and baker	Miller
Mast maker	Carpenter	Miller and mealman	Miller
Master mariner	Master mariner	Miller, singleman	Miller
Master marrinr.	Master mariner	Milliner	Milliner
Mathematician	Mathematician	Milliner and grocer	Milliner
Maullman	Meal seller	Millner	Mill worker
Maulster	Maltster	Millwright	Mill wright
Maultster	Maltster	Millwright and engineer	Mill wright
Meal factor	Meal seller	Milner	Mill worker
Meal man	Meal seller	Miner	Miner
Mealfactor	Meal seller	Money scrivener	Lawyer
Mealman	Meal seller	Mustard flour maker	Mustard maker
Mealman and citizen	Meal seller	Mustard maker	Mustard maker
Mealman and maltster	Meal seller	Nail & iron monger	Iron monger
Mealman or maltman	Meal seller	Nail Ironmonger	Iron monger
Mealsman	Meal seller	Nail smith	Nailer
Mercer	Cloth seller	Nailer	Nailer
Mercer & Citizen	Cloth seller	Narrow weaver	Weaver - narrow
Mercer & draper & Citizen	Cloth seller	Nayler	Nailer
Mercer & weaver & Citizen	Cloth seller	Naylor	Nailer
Mercer and draper	Cloth seller	Needle maker	Needle maker
Mercer and grocer	Cloth seller	Needle maker & Citizen	Needle maker
Mercer and woollen draper	Cloth seller	Netliesoier	???
Merchant	Merchant	Norway merchant	Merchant
Merchant & Citizen	Merchant	not readable - Norsinfereant	???
Merchant & draper & Citizen	Merchant	Notary Public	Lawyer
Merchant and Grocer and Citizen	Merchant	Oatmeal maker	Miller
Merchant and taylor	Merchant	Oatmeal man	Meal seller
Merchant tailor	Merchant	oil and colour manufacturer	Dye maker
Merchant tailor & Citizen	Merchant	Oil leather dresser	Leather maker
Merchant tailor and citizen	Merchant	Oil merchant	Oil seller
Merchant taylor & Citizen	Merchant	Oil miller	Miller

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Oilman	Oil seller	Plaisterer	Plasterer
Orrice weaver	Lace maker	Plaisterer & Citizen	Plasterer
Oylman	Oil seller	Plane maker	Plane maker
Oylmiller	Miller	Planter	Planter
Painter & stainer	Painter and stainer	Plated buckle maker	Buckle maker
Paper maker	Paper maker	Plater	Plater
Parchment maker	Parchment maker	Plater	Plater
Partner	Merchant	Ploughwright	Plough wright
Pastry cook	Cook	Plowright	Plough wright
Pastry cook & vintner & Citizen	Cook	Plumber	Plumber
Patten & last maker	Shoemaker	Plumber & glazier	Plumber
Patten maker	Shoemaker	Plumber and glazier	Plumber
Patten maker & citizen	Shoemaker	Plummer	Plumber
Patten wood cutter	Shoemaker	Pocket book maker	Pocket book maker
Pattern maker	Pattern maker	Pot founder	Founder
Pattin maker	Shoemaker	Pot painter	Pottery painter
Pattin maker & Citizen	Shoemaker	Potter	Potter
Pattinmaker & Citizen	Shoemaker	Poulterer	Poulterer
Pattinmaker & ironmonger	Shoemaker	Poulterer & Citizen	Poulterer
Paviour	Mason	Poulterer & indigo maker & Citizen	Poulterer
Paviour & Citizen	Mason	Poulterer & Leath. Seller & Citizen	Poulterer
Payle maker	Payle maker	Practiser of phisick	Physician
Perfumer	Perfumer	Practitioner in Physic	Physician
Periwig maker	Wig maker	Practitioner in physick	Physician
Perriwigg maker	Wig maker	Practitioner of phisick	Physician
Peruke maker	Wig maker	Practitioner of physic	Physician
Pewter maker	Smith - pewter	Practitioner of physic	Physician
Pewterer	Smith - pewter	Practitioner of physick	Physician
Pewterer & Citizen	Smith - pewter	Printer	Printer
Pewterer and citizen	Smith - pewter	Printer & stationer & Citizen	Stationer
Pewterer and flax dresser	Smith - pewter	Private teacher	Teacher
Phesician	Physician	Psiler	Filer
Physician	Physician	Pully maker	Block maker
Pin maker	Pin maker	Rakemaker	Rake maker
Pin maker & Citizen	Pin maker	Razor maker	Razor maker
Pinn maker	Pin maker	Razor maker	Razor maker
Pipe maker	Pipe maker	Razormaker	Razor maker

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Riding master	Teacher - riding	School mistress	Teacher
Rope maker	Rope maker	Schoolmaster	Teacher
Ropemaker	Rope maker	Schoolmistress	Teacher
Roper	Rope maker	Scissorsmith	Scissor smith
Ropery manager	Rope maker	Schoolmaster	Teacher
Rower	Boatman	Screw filer	Screw filer
Sack gatherer	Labourer	Scribbler	Wool machine tender
Sack maker	Sack maker	Scribler	Wool machine tender
Sackcloth maker	Sack maker	Scrivener	Copyist
Saddle face maker	Saddler	Scrivenor	Copyist
Saddle maker	Saddler	Scrivinor	Copyist
Saddle tree maker	Saddler	Scurrier?	Scurrier
Saddler	Saddler	Seamster	Sewer
Sadler	Saddler	Seamstress	Sewer
Sadler & Citizen	Saddler	Searge maker	Cloth maker
Saigin?	???	Searge maker??	Cloth maker
Sail canvas maker	Sail maker	Seed crusher	Miller
Sail cloth manufacturer	Sail maker	Seedsman	Seed seller
Sail maker	Sail maker	Semster	Sewer
Sailmaker	Sail maker	Serg maker	Cloth maker
Sailsman	Sail maker	Serg weaver	Weaver - serge
Salesman	Retailer	Serge and stuff weaver	Weaver - serge
Salesman & draper	Draper	Serge dresser	Cloth worker
Salesman and draper	Draper	Serge maker	Cloth maker
Salt merchant	Merchant	Serge weaver	Weaver - serge
Salter	Salter	Serge weaver or cloth worker	Weaver - serge
Salter & Citizen	Salter	Serge worker	Cloth worker
Salter & seedsman	Salter	Sergeweaver	Weaver - serge
Salter or Tatler	Salter	Sergmaker	Cloth maker
Sawyer	Sawyer	Servant	Servant
Sawyer & Weaver & Citizen	Sawyer	Setter founder	Founder
Say maker	Cloth maker	Shag weaver	Weaver - shag
Sayl maker	Sail maker	Shagg weaver	Weaver - shag
Saymaker	Cloth maker	Shagreen case maker & grocer & Citizen	Leather seller
Say-maker	Cloth maker	Shalloon weaver	Weaver - shalloon
School master	Teacher	Shallow weaver	Weaver - shalloon

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Shear smith	Shear smith	Silver cutler	Cutler
Shearman	Cloth worker	Silver plater	Plater
Shearman dyer	Cloth worker	Silver refiner	Refiner - silver
Shephard	Husbandman	Silversmith	Smith - silver
Shew maker	Shoemaker	Silversmith & Citizen	Smith - silver
Ship carpenter	Ship wright	Silversmith and plater	Smith - silver
Ship joiner	Ship wright	Single man, cordwainer	Shoemaker
Ship owner	Ship owner	Skinner	Leather maker
Ship smith	Ship wright	Skinner & Citizen	Leather maker
Ship wright	Ship wright	Skinner and citizen	Leather maker
Ship's agent	Ship agent	Skinner/husbandman	Leather maker
Ships carpenter	Ship wright	Slate merchant	Slate seller
Shipwright	Ship wright	Slater	Slater
Shipwright & Citizen	Ship wright	Slop seller	Retailer
Shipwright & salter & Citizen	Ship wright	Smith	Smith
Shoe maker	Shoemaker	Smith and ironmonger	Smith
Shoe warehouseman	Wholesaler	Snuff maker	Tobacconist
Shoemaker	Shoemaker	Soap boiler	Soap boiler
Shoemaker & baker & Citizen	Shoemaker	Soap boiler and chandler	Soap boiler
Shoemaker & fish monger & Citizen	Shoemaker	Soap maker	Soap boiler
Shoemender	Shoemaker	Sordwainer	Shoemaker
Shop keeper	Retailer	Spade maker	Spade maker
Shop keeper and mealman	Retailer	Spanish leather dresser	Leather maker
Shopkeeoer	Retailer	Spinner	Thread maker
Shopkeeper and corn dealer	Retailer	Spinster & chandler	Chandler
Shopker	Retailer	Stationer	Stationer
Shopman	Retailer	Stationer & Citizen	Stationer
Shpkeeper	Retailer	Stay maker	Stay maker
Silk and cotton manufactiurer	Cloth maker	Stay maker and tailor	Stay maker
Silk dyer	Dyer	Staymaker	Stay maker
Silk dyer & scourer	Dyer	Stock broker	Broker
Silk manufacturer	Cloth maker	Stocken maker	Hosier
Silk master	Cloth maker	Stockiner	Hosier
Silk merchant	Cloth seller	Stocking maker	Hosier
Silk milliner	Milliner	Stone cutter	Mason
Silk shietister	???	Stone mason	Mason
Silk weaver	Weaver - silk	Stonemason	Mason
Silkman	Cloth seller	Stuff maker	Cloth maker
Silkweaver	Weaver - silk	Stuff manufacturer	Cloth maker

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Stuff merchant	Cloth seller	Tea merchant	Tea seller
Stuff weaver	Weaver - stuff	Teacher of languages	Teacher - languages
Sugar baker	Sugar maker	Teacher of mathematicks	Teacher - mathematics
Sugar refiner	Sugar maker	Thatcher	Thatcher
Surgeon	Surgeon	Thread maker	Thread maker
Surgeon & apothecary	Surgeon	Thread manufacturer	Thread maker
Surgeon & Citizen	Surgeon	Threadmaker	Thread maker
Surgeon and apothecary	Surgeon	Threadman	Thread seller
Surgeon and citizen	Surgeon	Throwster	Wool machine tender
Surgeon and dentist	Surgeon	Timber merchant	Wood seller
Sweet wine maker	Wine maker	Timber merchant & joiner & Citizen	Wood seller
Tailer	Tailor	Timber mercht.	Wood seller
Tailor	Tailor	Timberman	Wood seller
Tailor & clothworker & Citizen	Tailor	Tin & iron plate worker	Tin plate worker
Tailor & salesman	Tailor	Tin plate worker	Tin plate worker
Tailor and stay maker	Tailor	Tin plate worker & Citizen	Tin plate worker
Takerer	Takerer	Tin plate worker and citizen	Tin plate worker
Tallow Chandler	Chandler	Tinman	Tin plate worker
Tallow chandler & Citizen	Chandler	Tinman and brazier	Tin plate worker
Tallow chandler & oilman & butcher & Citizen	Chandler	Tinner	Tin plate worker
Tallow chandler and citizen	Chandler	Tinplate worker	Tin plate worker
Tallow chandler and maltster	Chandler	Tinplate worker & Citizen	Tin plate worker
Tallow chandler and soap boiler	Chandler	Tobacco cutter	Tobacconist
Tallow chandler of London & Citizen	Chandler	Tobacconess	Tobacconist
Tallow-chandler & oilman	Chandler	Tobacconist	Tobacconist
Tanar	Leather maker	Tobacconist and snuff maker	Tobacconist
Taner	Leather maker	Toyman	Metal goods maker
Tanner	Leather maker	Tradesman	Tradesman
Tatler	Lace maker	Tuckerer	Cloth worker
Tayler	Tailor	Turner	Turner
Taylor	Tailor	Turner & Citizen	Turner
Tea dealer	Tea seller	Turner and citizen	Turner
Tea dealer and grocer	Tea seller	Tutor, private	Teacher

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Twillweaver	Weaver - twill	Waterman	Boatman
Twine spinner	Thread maker	Wax chandler & Citizen	Chandler
Twist spinner	Thread maker	Weaver	Weaver
Twisterer	Thread maker	Weaver & Citizen	Weaver
Tyler and plaisterer	Plasterer	Weaver & goldsmith & Citizen	Weaver
Umbrella maker	Umbrella maker	Weaver & woolcomber	Weaver
Upholder	Upholsterer	Weaver and citizen	Weaver
Upholder & Citizen	Upholsterer	Weaver and clothier	Weaver
Upholster & Citizen	Upholsterer	Weaver and dyer	Weaver
Upholsterer	Upholsterer	Weaver and woolcomber	Weaver
Upholsterer and citizen	Upholsterer	Weaver of jersey	Weaver - jersey
Upholsterer, by compy, merchant tailor & Citizen	Upholsterer	Weaver of London & Citizen	Weaver
Vicktiler	Grocer	Webster	Weaver
Victualer	Grocer	Wet cooper	Cooper
Victualler	Grocer	Wharfinger	Labourer
Victualler or butcher	Grocer	Wheel wright	Wheel wright
Victualling office	Grocer	Wheelborgh	Wheel wright
Victuler	Grocer	Wheeler	Wheel wright
Vinegar maker	Vinegar maker	Wheelwright	Wheel wright
Vinter	Vintner	Wheelwright & Citizen	Wheel wright
Vintner & Citizen	Vintner	Wheelwright & cloth worker & Citizen	Wheel wright
Vintner and citizen	Vintner	Whik clothier	Cloth maker
Vintner of & Citizen	Vintner	Whip maker	Whip maker
Vintner of London & Citizen	Vintner	Whitacier	Cloth worker
Vittler or bucher	Butcher	White liner	Plasterer
Waggoner	Carrier	White smith	Smith -white
Waler	Mariner	Whitesmith	Smith -white
Waller	Builder	Wholesale linen draper	Wholesaler
Warehouse clerk	Clerk	Widow & grocer	Grocer
Warehouseman	Wholesaler	Widow, pastry cook	Cook
Watch & clock maker	Clock and watch maker	Widower, baker	Baker
Watch maker	Clock and watch maker	Widower, carpenter	Carpenter
Watch motion maker	Clock and watch maker	Widower, weaver	Weaver
Watchmaker	Clock and watch maker	Widower, woolcomber	Wool worker
Watchmaker & merchant tailor & Citizen	Clock and watch maker	Wine cooper	Cooper

Appendix 1- List of Occupations and Standardisation, continued

<i>As recorded</i>	<i>Standardised</i>	<i>As recorded</i>	<i>Standardised</i>
Wine cooper & Citizen	Cooper	Woollen draper	Draper
Wine dealer	Vintner	Woollen draper & vintner & Citizen	Draper
Wine dealer & Citizen	Vintner	Woollen draper & woolman & citizen	Draper
Wine manufacturer	Wine maker	Woollen draper and citizen	Draper
Wine merchant	Vintner	Woollen draper and wool stapler	Draper
Winecooper & Citizen	Cooper	Woollen manufacturer	Wool cloth maker
Wire drawer	Wire drawer	Woollen weaver	Weaver - wool
Wiredrawer & Citizen	Wire drawer	Woollendraper	Draper
Woll coamer	Wool worker	Woolman	Wool seller
Wollen draper	Draper	Woolman & Citizen	Wool seller
Wollen manufacturer	Wool cloth maker	Woolman & Cordwainer & Citizen	Wool seller
Wollen weaver	Weaver - wool	Woolman and citizen	Wool seller
Wood turner	Turner	Woolman of London & Citizen	Wool seller
Woodmonger	Wood seller	Woolstapler	Wool worker
Wool comber	Wool worker	Woolsted weaver	Weaver - worsted
Wool comber and worsted weaver	Wool worker	Working brewer	Brewer
Wool sorter	Wool worker	Working master	Teacher
Wool stapler	Wool worker	Worsted and stuff maker	Wool cloth maker
Wool weaver	Weaver - wool	Worsted brinber	Wool worker
Woolcard maker	Wool tool maker	Worsted comber	Wool worker
Woolcomber	Wool worker	Worsted comer	Wool worker
Wool-comber	Wool worker	Worsted maker	Wool cloth maker
Woolcomber and weaver	Wool worker	Worsted man	Wool cloth seller
Woolcomber and worsted weaver	Wool worker	Worsted manufacturer	Wool cloth maker
Woolcomer	Wool worker	Worsted seller	Wool cloth seller
Woolen draper	Draper	Worsted stuff maker	Wool cloth maker
Woolen draper & merchant tailor & Citizen	Draper	Worsted weaver	Weaver - worsted
Woolen draper, of the woolman's company	Draper	Writing master	Teacher - writing
Woolen weaver	Weaver - wool	Yarn factor	Thread seller
Woollendraper	Draper	Yarn maker	Thread maker
Woolkember	Wool worker	Yarnmaker	Thread maker
Woollcomber	Wool worker	Yeoman	Yeoman
Wooll-comber	Wool worker	Yeoman and shoemaker	Yeoman
		Yeoman/clothier	Yeoman

Appendix 2 – List of Standard Occupations and Classification

<i>Standardised</i>	<i>Class</i>	<i>Standardised</i>	<i>Class</i>
Accountant	Professional	Calenderer	Manufacture
Agent	Professional	Calico manufacturer	Manufacture
Anchor smith	Artisan	Card maker	Manufacture
Armourer	Artisan	Carpenter	Craftsman
Bag maker	Artisan	Carrier	Commerce
Baize maker	Manufacture	Carver	Craftsman
Baker	Food	Caulker	Manufacture
Banker	Commerce	Chain maker	Manufacture
Barber	Other	Chandler	Retail
Basket maker	Artisan	Chapman	Retail
Bay maker	Manufacture	Cheese seller	Retail
Bed maker	Artisan	China and glass seller	Retail
Bellows maker	Artisan	Chocolate maker	Food
Blacksmith	Artisan	Cider seller	Food
Blade smith	Artisan	Clerk	Other
Blanket maker	Manufacture	Clock and watch maker	Craftsman
Bleacher	Manufacture	Cloth goods maker	Manufacture
Block maker	Artisan	Cloth maker	Manufacture
Blue maker	Manufacture	Cloth seller	Commerce
Boatman	Commerce	Cloth worker	Manufacture
Bookbinder	Retail	Coach maker	Craftsman
Bookseller	Retail	Coach man	Commerce
Bottle maker	Manufacture	Coal merchant	Commerce
Brass founder	Manufacture	Coal miner	Other
Brazier	Artisan	Collar maker	Retail
Breeches maker	Artisan	Comb maker	Manufacture
Brewer	Food	Confectioner	Food
Brick layer	Artisan	Cook	Food
Brick maker	Manufacture	Cooper	Craftsman
Broker	Professional	Copyist	Other
Brush maker	Artisan	Cork cutter	Craftsman
Bucket maker	Artisan	Corn seller	Commerce
Buckle maker	Artisan	Cotton goods maker	Manufacture
Builder	Artisan	Cotton maker	Manufacture
Butcher	Food	Cotton seller	Commerce
Butter mould maker	Food	Cotton worker	Manufacture
Button maker	Manufacture	Cutler	Craftsman
Button seller	Commerce	Distiller	Food

Appendix 2 - List of Standard Occupations and Classification, continued

<i>Standardised</i>	<i>Class</i>	<i>Standardised</i>	<i>Class</i>
Draper	Retail	Hatter	Manufacture
Druggist	Retail	Hide seller	Commerce
Dye maker	Manufacture	Hinge maker	Craftsman
Dye seller	Commerce	Hop seller	Commerce
Dyer	Manufacture	Hosier	Manufacture
Embroiderer	Craftsman	Housekeeper	Other
Enameller	Craftsman	Husbandman	Agriculture
Engine worker	Other	Inn keeper	Food
Engineer	Other	Instrument case maker	Craftsman
Engraver	Craftsman	Iron founder	Manufacture
Farm worker	Agriculture	Iron master	Manufacture
Farmer	Agriculture	Iron monger	Commerce
File smith	Craftsman	Labourer	Other
Fish monger	Food	Lace maker	Manufacture
Fisherman	Food	Lawyer	Professional
Flax seller	Commerce	Lead miner	Other
Flax worker	Manufacture	Leather maker	Manufacture
Florist	Retail	Leather seller	Commerce
Founder	Manufacture	Letter founder	Other
Frame knitter	Manufacture	Linen maker	Manufacture
Frame smith	Manufacture	Linen seller	Commerce
Fuller	Manufacture	Locksmith	Craftsman
Fur seller	Commerce	Loom maker	Manufacture
Furniture maker	Manufacture	Malt seller	Commerce
Gardener	Other	Maltster	Food
Gelder	Agriculture	Manufacturer	Manufacture
Gentleman	Other	Mariner	Other
Gilder	Craftsman	Mason	Craftsman
Glass maker	Manufacture	Master mariner	Commerce
Glass worker	Manufacture	Mathematician	Other
Glazier	Craftsman	Meal seller	Commerce
Glove seller	Commerce	Merchant	Commerce
Glover	Craftsman	Metal goods maker	Manufacture
Grazier	Agriculture	Milkman	Food
Greengrocer	Retail	Mill worker	Manufacture
Grocer	Retail	Mill wright	Manufacture
Gun smith	Craftsman	Miller	Food
Haberdasher	Retail	Milliner	Craftsman
Hardware seller	Retail	Miner	Other

Appendix 2 - List of Standard Occupations and Classification, continued

<i>Standardised</i>	<i>Class</i>	<i>Standardised</i>	<i>Class</i>
Minister	Other	Servant	Other
Mirror maker	Craftsman	Sewer	Craftsman
Mustard maker	Food	Shear smith	Craftsman
Nailer	Manufacture	Ship agent	Commerce
Needle maker	Manufacture	Ship owner	Commerce
Oil seller	Commerce	Ship wright	Manufacture
Ostler	Other	Shoemaker	Craftsman
Painter and stainer	Craftsman	Slate seller	Commerce
Paper maker	Manufacture	Slater	Craftsman
Parchment maker	Manufacture	Smith	Craftsman
Pattern maker	Manufacture	Smith - bright	Craftsman
Payle maker	Craftsman	Smith - Gold	Craftsman
Perfumer	Craftsman	Smith - pewter	Craftsman
Physician	Other	Smith - silver	Craftsman
Pin maker	Manufacture	Smith -white	Craftsman
Pipe maker	Manufacture	Soap boiler	Manufacture
Plane maker	Manufacture	Spade maker	Craftsman
Planter	Agriculture	Stationer	Retail
Plasterer	Craftsman	Stay maker	Retail
Plater	Craftsman	Sugar maker	Food
Plough wright	Manufacture	Surgeon	Other
Plumber	Craftsman	Surveyor	Professional
Pocket book maker	Craftsman	Tailor	Craftsman
Potter	Craftsman	Takerer	Commerce
Pottery painter	Manufacture	Tax collector	Commerce
Poulterer	Food	Tea seller	Commerce
Printer	Manufacture	Teacher	Professional
Rake maker	Craftsman	Teacher - languages	Professional
Razor maker	Craftsman	Teacher - mathematics	Professional
Refiner - silver	Other	Teacher - riding	Professional
Retailer	Retail	Teacher - writing	Professional
Rope maker	Manufacture	Thatcher	Craftsman
Sack maker	Manufacture	Thread maker	Manufacture
Saddler	Manufacture	Thread seller	Commerce
Sail maker	Manufacture	Thread worker	Manufacture
Salter	Food	Tin plate worker	Manufacture
Sawyer	Other	Tobacconist	Retail
Scissor smith	Craftsman	Tradesman	Craftsman
Screw filer	Craftsman	Turner	Craftsman
Scurrier	Other	Umbrella maker	Craftsman
Seed seller	Commerce	Upholsterer	Craftsman

Appendix 2 - List of Standard Occupations and Classification, continued

<i>Standardised</i>	<i>Class</i>	<i>Standardised</i>	<i>Class</i>
Vintner	Retail	Weaver - worsted	Craftsman
Weaver	Craftsman	Wheel wright	Craftsman
Weaver - broad	Craftsman	Whip maker	Craftsman
Weaver - check	Craftsman	Wholesaler	Commerce
Weaver - cloth	Craftsman	Wig maker	Craftsman
Weaver - fustian	Craftsman	Wine maker	Food
Weaver - Jersey	Craftsman	Wire drawer	Manufacture
Weaver - linen	Craftsman	Wood seller	Commerce
Weaver - lining	Craftsman	Wool cloth maker	Manufacture
Weaver - narrow	Craftsman	Wool cloth seller	Commerce
Weaver - serge	Craftsman	Wool comber	Manufacture
Weaver - shag	Craftsman	Wool machine tender	Manufacture
Weaver - shalloon	Craftsman	Wool seller	Commerce
Weaver - silk	Craftsman	Wool tool maker	Manufacture
Weaver - stuff	Craftsman	Wool worker	Manufacture
Weaver - twill	Craftsman	Working master	Other
Weaver - wool	Craftsman	Yeoman	Agriculture
Weaver - worsted	Craftsman		

Appendix 3 – Detail of Cohort Sizes by Quarterly Meeting, 1710, 1750 and 1790

Quarterly Meeting		Meeting number	Cohort totals	Cohorts		
				1710	1750	1790
Bedfordshire & Hertfordshire	Count	189	44	31	3	10
	% age		23.3%	70.5%	6.8%	22.7%
Berkshire & Oxfordshire	Count	581	149	78	48	23
	% age		25.6%	52.3%	32.2%	15.4%
Bristol & Somerset	Count	692	171	74	43	54
	% age		24.7%	43.3%	25.1%	31.6%
Buckinghamshire	Count	205	40	25	4	11
	% age		19.5%	62.5%	10.0%	27.5%
Cambridgeshire & Huntingdonshire	Count	92	30	18	1	11
	% age		32.6%	60.0%	3.3%	36.7%
Cheshire & Staffordshire	Count	332	85	57	19	9
	% age		25.6%	67.1%	22.4%	10.6%
Cornwall	Count	44	12	5	0	7
	% age		27.3%	41.7%	0.0%	58.3%
Cumberland & Northumberland	Count	168	32	2	3	27
	% age		19.0%	6.3%	9.4%	84.4%
Derbyshire & Nottinghamshire	Count	119	24	6	1	17
	% age		20.2%	25.0%	4.2%	70.8%
Devonshire	Count	59	16	8	0	8
	% age		27.1%	50.0%	0.0%	50.0%
Dorset & Hampshire	Count	261	52	14	15	23
	% age		19.9%	26.9%	28.8%	44.2%
Durham	Count	168	35	13	4	18
	% age		20.8%	37.1%	11.4%	51.4%
Essex	Count	270	72	17	21	34
	% age		26.7%	23.6%	29.2%	47.2%
Gloucestershire & Wiltshire	Count	415	115	77	16	22
	% age		27.7%	67.0%	13.9%	19.1%
Herefordshire Worcestershire & Wales	Count	172	38	6	4	28
	% age		22.1%	15.8%	10.5%	73.7%
Kent	Count	85	22	3	2	17
	% age		25.9%	13.6%	9.1%	77.3%
Lancashire	Count	665	176	74	37	65
	% age		26.5%	42.0%	21.0%	36.9%
Lincolnshire	Count	95	18	8	2	8
	% age		18.9%	44.4%	11.1%	44.4%

Appendix 3 – Detail of Cohort Sizes by Quarterly Meeting, 1710, 1750 and 1790 – continued

Quarterly Meeting		Meeting number	Cohort totals	Cohorts		
				1710	1750	1790
London & Middlesex	Count	2,812	678	402	158	118
	% age		24.1%	59.3%	23.3%	17.4%
Norfolk & Norwich	Count	387	77	43	18	16
	% age		19.9%	55.8%	23.4%	20.8%
Northamptonshire	Count	51	17	4	0	13
	% age		33.3%	23.5%	0.0%	76.5%
Suffolk	Count	142	35	23	0	12
	% age		24.6%	65.7%	0.0%	34.3%
Surrey & Sussex	Count	369	111	67	19	25
	% age		30.1%	60.4%	17.1%	22.5%
Warwickshire Leicestershire & Rutland	Count	252	76	25	12	39
	% age		30.2%	32.9%	15.8%	51.3%
Westmorland	Count	364	39	16	1	22
	% age		14.8%	41.0%	2.6%	56.4%
Yorkshire	Count	1,290	347	135	90	122
	% age		26.9%	38.9%	25.9%	35.2%
Totals	Count			1,231	521	759
	% age			49.0%	20.7%	30.2%
<i>Cohort total %age is cohort total as %age of meeting number</i>						
<i>Cohort %age is %age of cohort total</i>						

Appendix 4 – Occupational Groupings

Table A4.1 - Agricultural Occupations, 1691 to 1809

	Occupations					
	Farm worker	Farmer	Grazier	Husbandman	Planter	Yeoman
Number	1	246	67	614	1	678
%age	0.1%	15.3%	4.2%	38.2%	0.1%	42.2%

Table A4.2 - Commercial Occupations, 1691 to 1809

	Occupations							
	Finance	Transport	Cloth sellers	Corn & meal sellers	Hide, fur & leather sellers	Ironmongers	Other trade sellers	Wholesale
Number	412	69	152	232	44	93	66	74
%age	36.1%	6.0%	13.3%	20.3%	3.9%	8.1%	5.8%	6.5%

Table A4.3 - Artisans' Occupations, 1691 to 1809

Occupation	Number	%age
Clockmakers	131	4.8%
Clothing & shoemakers	913	33.7%
Carpentry & construction	466	17.2%
Coopers	123	4.5%
Smiths & metalworkers	279	10.3%
Tool & equipment makers	73	2.7%
Weavers	663	24.5%
Sundry	61	2.3%

Table A4.4 - Food-Related Occupations, 1691 to 1809

	Occupations					
	Animal products	Bakers	Drink	Ingredients	Sweets	Sundry
Number	80	249	122	308	11	34
%age	10.0%	31.0%	15.2%	38.3%	1.4%	4.2%

Appendix 4 – Occupational Groupings continued

Table A4.5 - Manufacturing Occupations, 1691 to 1809

	Occupations							
	Cotton	Wool	Other textile	Furniture	Leather	Metal	Ships	Sundry
Number	26	292	816	51	285	159	97	124
%age	2.4%	15.8%	44.1%	2.8%	15.4%	8.6%	5.2%	5.7%

Table A4.6 - Other Occupations, 1691 to 1809

	Occupations				
	Gardener	Labourer	Mariner	Medical & barber	Other
Number	80	249	122	308	34
%age	10.0%	31.0%	15.2%	38.3%	4.2%

Table A4.7 - Professional Occupations, 1691 to 1809

	Occupations					
	Accountant	Agent	Broker	Lawyer	Surveyor	Teacher
Number	25	2	10	10	6	120
%age	14.5%	1.2%	5.8%	5.8%	3.5%	69.4%

Table A4.8 - Retail Occupations, 1691 to 1809

	Occupations							
	Chandler	Draper	Other clothing & textile	Druggist	Grocer	Other food	Retailers	Sundry
Number	107	343	115	93	336	124	196	102
%age	7.6%	24.2%	8.1%	6.6%	23.7%	8.8%	13.8%	7.2%

Appendix 5 – Geographical Information

Table A5.1 - Marriage Records with Occupations in Cumberland & Northumberland, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	2	1	11	65
Artisans	0	1	6	40
Commercial	0	1	4	12
Food	0	0	0	1
Manufacturing	0	0	2	21
Other	0	0	3	14
Professional	0	0	0	1
Retail	0	0	1	14
Total	2	3	27	168

Table A5.2 - Marriage Records with Occupations in Durham, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	0	0	1	9
Artisans	2	1	1	22
Commercial	2	1	1	30
Food	1	0	1	10
Manufacturing	3	1	9	47
Other	3	1	0	13
Professional	0	0	0	3
Retail	2	0	5	34
Total	13	4	18	168

Appendix 5 – Geographical Information, continued

Table A5.3 - Marriage Records with Occupations in Westmorland, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	8	1	7	91
Artisans	6	0	5	65
Commercial	0	0	2	18
Food	0	0	1	6
Manufacturing	1	0	3	54
Other	0	0	0	2
Professional	1	0	0	5
Retail	0	0	4	23
Total	16	1	22	264

Table A5.4 - Marriage Records with Occupations in Cornwall, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	0	0	1	2
Artisans	3	0	1	11
Commercial	0	0	3	6
Food	0	0	1	2
Manufacturing	0	0	0	9
Other	1	0	0	5
Professional	0	0	0	1
Retail	1	0	1	8
Total	5	0	7	44

Appendix 5 – Geographical Information, continued

Table A5.5 - Marriage Records with Occupations in Devonshire, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	1	0	0	9
Artisans	4	0	1	12
Commercial	0	0	0	3
Food	0	0	0	1
Manufacturing	3	0	4	23
Other	0	0	1	1
Professional	0	0	0	1
Retail	0	0	2	9
Total	8	0	8	59

**Table A5.6 - Marriage Records with Occupations in Herefordshire
Worcestershire & Wales, 1691-1809**

Cohort	1710	1750	1790	Total
Sector				
Agriculture	0	1	0	21
Artisans	3	0	9	50
Commercial	0	1	1	24
Food	1	1	1	20
Manufacturing	1	1	6	27
Other	0	0	2	5
Professional	0	0	2	6
Retail	1	0	7	19
Total	6	4	28	172

Appendix 5 – Geographical Information, continued

**Table A5.7 - Marriage Records with Occupations in Warwickshire
Leicestershire & Rutland, 1691-1809**

Cohort	1710	1750	1790	Total
Sector				
Agriculture	5	2	2	33
Artisans	7	7	5	72
Commercial	3	1	4	28
Food	3	1	4	25
Manufacturing	7	1	15	60
Other	0	0	3	7
Professional	0	0	1	2
Retail	0	0	5	25
Total	25	12	39	252

**Table A5.8 - Marriage Records with Occupations in Cheshire &
Staffordshire, 1691-1809**

Cohort	1710	1750	1790	Total
Sector				
Agriculture	30	10	3	165
Artisans	16	4	0	74
Commercial	0	0	1	11
Food	2	0	0	7
Manufacturing	4	2	0	32
Other	1	0	0	5
Professional	1	0	0	4
Retail	3	3	5	34
Total	57	19	9	332

Appendix 5 – Geographical Information, continued

Table A5.9 - Marriage Records with Occupations in Northamptonshire, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	0	0	4	19
Artisans	2	0	4	13
Commercial	0	0	2	4
Food	1	0	1	6
Manufacturing	0	0	2	2
Other	1	0	0	2
Professional	0	0	0	1
Retail	0	0	0	4
Total	4	0	13	51

Table A5.10 - Marriage Records with Occupations in Lincolnshire, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	2	1	5	46
Artisans	3	1	1	10
Commercial	0	0	0	3
Food	1	0	1	13
Manufacturing	1	0	0	6
Other	0	0	0	4
Professional	0	0	0	0
Retail	1	0	1	13
Total	8	2	8	95

Appendix 5 – Geographical Information, continued

Table A5.11 - Marriage Records with Occupations in Derbyshire & Nottinghamshire, 1691-1809

Cohort Sector	1710	1750	1790	Total
Agriculture	0	0	4	24
Artisans	1	0	3	26
Commercial	0	0	0	4
Food	0	0	1	3
Manufacturing	1	0	7	33
Other	2	0	0	5
Professional	0	0	0	2
Retail	2	1	2	22
Total	6	1	17	119

Table A5.12 - Marriage Records with Occupations in Dorset & Hampshire, 1691-1809

Cohort Sector	1710	1750	1790	Total
Agriculture	1	1	3	18
Artisans	3	5	2	46
Commercial	1	0	2	35
Food	1	2	1	28
Manufacturing	7	3	9	68
Other	0	0	1	24
Professional	0	0	1	3
Retail	1	4	4	39
Total	14	15	23	261

Appendix 5 – Geographical Information, continued

Table A5.13 - Marriage Records with Occupations in Gloucestershire & Wiltshire, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	13	1	4	71
Artisans	14	1	3	86
Commercial	9	3	3	39
Food	10	6	2	49
Manufacturing	20	3	5	103
Other	2	1	0	8
Professional	0	0	1	4
Retail	10	1	4	55
Total	78	16	22	415

Table A5.14 - Marriage Records with Occupations in Berkshire & Oxfordshire, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	15	11	4	113
Artisans	27	12	6	176
Commercial	6	8	3	73
Food	14	7	4	81
Manufacturing	8	4	1	64
Other	1	5	1	25
Professional	0	0	1	7
Retail	7	1	3	42
Total	78	48	23	581

Appendix 5 – Geographical Information, continued

Table A5.15 - Marriage Records with Occupations in Cambridgeshire & Huntingdonshire, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	6	0	0	24
Artisans	7	1	6	28
Commercial	0	0	0	0
Food	0	0	3	10
Manufacturing	2	0	0	10
Other	1	0	0	4
Professional	0	0	0	0
Retail	2	0	2	16
Total	18	1	11	92

Table A5.16 - Marriage Records with Occupations in Suffolk, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	5	0	0	23
Artisans	7	0	6	41
Commercial	1	0	2	9
Food	5	0	0	22
Manufacturing	3	0	3	17
Other	0	0	0	2
Professional	1	0	0	1
Retail	1	0	1	27
Total	23	0	12	142

Appendix 5 – Geographical Information, continued

Table A5.17 - Marriage Records with Occupations in Essex, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	5	4	12	67
Artisans	1	2	6	61
Commercial	0	0	2	11
Food	4	4	2	36
Manufacturing	6	3	1	32
Other	0	2	1	9
Professional	0	0	0	3
Retail	1	6	10	51
Total	17	21	34	270

Table A5.18 - Marriage Records with Occupations in Norfolk & Norwich, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	2	1	4	33
Artisans	20	9	3	156
Commercial	1	1	2	24
Food	1	2	3	21
Manufacturing	18	0	1	94
Other	0	0	0	6
Professional	0	0	0	2
Retail	1	5	3	51
Total	43	18	16	387

Appendix 5 – Geographical Information, continued

Table A5.19 - Marriage Records with Occupations in Bedfordshire & Hertfordshire, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	8	0	1	48
Artisans	6	1	3	31
Commercial	4	1	0	24
Food	3	0	3	22
Manufacturing	1	1	1	19
Other	2	0	0	8
Professional	2	0	0	6
Retail	5	0	2	31
Total	31	3	10	189

Table A5.20 - Marriage Records with Occupations in Buckinghamshire, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	11	3	2	59
Artisans	8	0	1	46
Commercial	2	0	3	29
Food	1	0	3	22
Manufacturing	2	0	1	16
Other	0	1	0	6
Professional	0	0	0	1
Retail	1	0	1	26
Total	25	4	11	205

Appendix 5 – Geographical Information, continued

Table A5.21 - Marriage Records with Occupations in Kent, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	0	0	1	8
Artisans	0	1	4	26
Commercial	2	0	3	8
Food	1	1	2	9
Manufacturing	0	0	2	7
Other	0	0	0	5
Professional	0	0	2	4
Retail	0	0	3	18
Total	3	2	17	85

Table A5.22 - Marriage Records with Occupations in Sussex & Surrey, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	17	3	3	101
Artisans	17	1	1	57
Commercial	7	3	10	64
Food	10	7	2	51
Manufacturing	6	1	3	37
Other	1	2	0	18
Professional	3	0	1	7
Retail	6	2	5	34
Total	67	19	25	369

Appendix 5 – Geographical Information, continued

Table A5.23 - Marriage Records with Occupations in Lancashire, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	26	8	6	168
Artisans	24	10	19	179
Commercial	1	4	7	60
Food	1	2	0	6
Manufacturing	11	7	15	137
Other	3	1	4	30
Professional	0	0	3	13
Retail	8	5	11	72
Total	74	37	65	665

Table A5.24 - Marriage Records with Occupations in Bristol & Somerset, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	0	0	9	40
Artisans	24	8	16	186
Commercial	10	3	5	102
Food	4	7	3	68
Manufacturing	21	11	12	138
Other	2	2	1	20
Professional	2	3	0	17
Retail	11	9	8	121
Total	74	43	54	692

Appendix 5 – Geographical Information, continued

Table A5.25 - Marriage Records with Occupations in Yorkshire, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	33	13	24	243
Artisans	40	30	31	333
Commercial	11	2	4	101
Food	3	6	5	55
Manufacturing	30	26	36	345
Other	14	3	3	64
Professional	2	3	2	26
Retail	2	7	17	123
Total	135	90	122	1,290

Table A5.26 - Marriage Records with Occupations in London & Middlesex, 1691-1809

Cohort	1710	1750	1790	Total
Sector				
Agriculture	17	6	6	107
Artisans	130	49	25	862
Commercial	47	27	19	420
Food	35	13	9	230
Manufacturing	62	34	21	449
Other	24	8	6	186
Professional	8	2	5	53
Retail	78	19	27	505
Total	401	158	118	2,812

Appendix 6 – Derivation of the Analysis of the Iron Industry

1) Iron Production

The bulk of the cast-iron industry *circa* 1710 was based in the Weald of Southern England and specialised in ordnance founding. Domestic and other commercial use revolved around forged bar iron. There are various measures that can be used to illustrate the size of the iron industry, including plant numbers and location and tonnage produced. Tables A5.1 and A5.2 summarise the industry using these two approaches and allow subsequent comparison between the industry and Quaker locations, the tables being derived from the appendices to Peter King's comprehensive survey of the industry.⁶⁶⁵

From King, the size of the iron bar production industry in the early eighteenth century is approximately 18,000 tons annually, this figure being derived from estimates of forge outputs. A second estimate of the size of production is given by Philip Riden (citing George Hammersley) and is based on numbers of furnaces.⁶⁶⁶ He estimates the industry at approximately 24,000 tons annually. These figures infer around 6,000 tons of iron going towards cast products – ordnance and a minor contribution from cooking pots. From active plant numbers, Hammersley estimates that between 25% and 30% of the industry was placed on the English Weald.⁶⁶⁷ This suggests that the Weald produced in the region of 6,600 tons of iron annually of which at least 5,000 tons went into cast products – which would have been likely to have been substantially cannon and shot. Therefore, the figure of 6,000 tons per

⁶⁶⁵ King, 'The Iron Trade in England and Wales'.

⁶⁶⁶ Riden, 'Output', p.443.

⁶⁶⁷ George Hammersley, 'The Charcoal Iron Industry and Its Fuel, 1540-1750', *The Economic History Review*, 26.4 (1973), p.595.

year for castings suggested from the analysis here appears reasonable when scrap, production not paid for, undocumented producers and commercial sales are allowed for.

Table A5.1 shows the spread of the industry by region in 1710, by location of the various types of plant and works split into furnaces (blast furnaces), forges, other works (including slitting mills and wire works) and bloomeries (which produced solid iron in a process that pre-dated blast furnaces).

Again, referring to Peter King, it is possible to look at the geographical spread of the industry by the production of bar, with the caveat that the figures are only for bar produced by the finery process from charcoal-fuelled blast furnaces, the small amount from the remaining bloomeries being excluded. Table A5.2, also developed from King's appendices, shows this geographical spread of bar production, with my additional analysis by percentage. The broad pattern is similar to that seen for plants in Table A5.1, though this table connects more closely to the forge column as the production weights refer to forged bar.

Table A6.1 - The Spread of the English Iron Industry in 1710 by Region
(source – Peter King, 2003⁶⁶⁸)

Region	Furnaces	Forges	Other	Bloomeries
Black Country	6	19	21	0
Derby and the Trent Valley	5	8	2	0
Forest of Dean and the Wye Valley	8	13	5	0
North-East England	1	1	2	0
North-West England	1	0	1	1
North-West Midlands	8	11	3	0
Redmine*	0	1	0	12
Shropshire and the Cleve Hills	7	13	4	0
South Wales	5	14	3	0
Southern England	20	19	5	0
West of England	1	4	0	0
Yorkshire	4	8	6	0
	66	111	52	13

*Redmine is Peter King's term for those works on the North-West English and North Walian coasts based on red Haematite ore (redmine) sourced in the Furness region

2) Iron Consumption

At the beginning of the century, the iron industry was still essentially small scale, though key centres of production and usage were emerging. The smelting of ore and the production of iron bar form the production phase, consumption being the manufacturing of bar into product. In the early eighteenth century, cast iron was used in limited markets and consideration of it emerges from the examination of production.

⁶⁶⁸ King, 'The Iron Trade in England and Wales', pp.342-424, Appendices 9-17.

Table A6.2 - Bar Iron Production in England for 1700 and 1710 (tons)					
Source: Peter King, 2003, Appendix 13, Tables 6.1 and 6.6 ⁶⁶⁹					
	Year	1700	%age	1710	%age
Region					
Black Country		2,716	20.6%	2,681	20.2%
Derby and the Trent Valley		905	6.9%	891	6.7%
Forest of Dean and the Wye Valley		1,111	8.4%	1,111	8.4%
North-East England		120	0.9%	0	0.0%
North-West England		19	0.1%	21	0.2%
North-West Midlands		1,442	10.9%	1,418	10.7%
Redmine		356	2.7%	490	3.7%
Shropshire and the Clee Hills		1,995	15.1%	2,344	17.6%
South Wales		1,788	13.6%	1,828	13.8%
Southern England		1,116	8.5%	773	5.8%
West of England		733	5.6%	852	6.4%
Yorkshire		891	6.8%	877	6.6%
		13,192		13,286	

The production of iron is only part of the picture. The industry size measured by consumption differed from that defined by production because iron was also imported and exported. Again using Peter King's figures, the total amount of iron bar available for consumption in England was 28,021 tons in 1700 and 29,880 in 1710, including around 17,000 tons of imports in both years (of which 1000-2000 tons were re-exported).⁶⁷⁰ Domestic consumption in these years was 26,395 tons and 28,484 tons, respectively, giving product exports of the order of 1,000 tons.⁶⁷¹ The implication of these figures is that the iron trading sector (the ironmongers and merchants) was also important when considering where the industry fitted into the community. The new industry analysis in Table A5.3 includes

⁶⁶⁹ King, 'The Iron Trade in England and Wales', pp.375-86, Appendix 13, 156, Table 6.1, 168, Table 6.8.

⁶⁷⁰ King, 'Production and Consumption', p.23.

⁶⁷¹ King, 'Production and Consumption', p.23.

both production and consumption and provides the basis for the industry side of the examination of Hyde's claim.

Table A6.3 - Analysis of the English Iron Industry in 1710

Region	Pig iron produced		Bar made at 1/1.35 ratio of bar/pig	Bar made King	Bar used	
	Est. tons	% age			Est. tons	% age
Black Country	2,182	9%	1,616	2,681	12,115	40%
Derby and the Trent Valley	1,818	8%	1,347	891	1,154	4%
Forest of Dean and the Wye Valley	2,909	12%	2,155	1,111	2,885	10%
North-East England	364	2%	269	0	577	2%
North-West England	364	2%	269	21	1,154	4%
North-West Midlands	2,909	12%	2,155	1,418	1,731	6%
Redmine	0	0%	0	490	0	0%
Shropshire and the Cleve Hills	2,545	11%	1,886	2,344	2,308	8%
South Wales	1,818	8%	1,347	773	2,885	10%
Southern England ^{Note}	7,273	30%	943	1,828	1,731	6%
West of England	364	2%	269	852	0	0%
Yorkshire	1,455	6%	1,077	877	3,462	12%
	24,000		13,333	13,286	30,000	
Note - Southern England's estimate of bar production has been adjusted to allow for iron used in manufacturing cast products on the Weald						

The analysis in Table A5.3 is based on the following data and assumptions. The 24,000 tons of pig iron produced comes from Peter King's estimate of 18,000 tons needed for conversion to bar and Philip Riden's estimate of 24,000 tons, including iron used for castings and ordnance. This pig iron has been allocated across the regions using the number of furnaces as listed in Table 6.1 – clearly this assumes equal production from each furnace. This assumption contains one significant difficulty as blast furnaces did not run continuously and their production varied enormously from year to year, so actual production in 1710 could be different from the model, but over several years these differences smooth themselves out.

The factor of 1.35 tons of pig iron to make 1 ton of bar has been chosen to mirror the bar production figures from Peter King – noting that the calculation is done after adjusting the Southern England pig iron production for 6,000 tons used for castings. This figure of 1.35 is supported as fair by figures of 1.3 – 1.5 from Peter King himself, by a figure of 1.44 from Philip Riden, and figures of 1.26 – 1.4 from George Hammersley.⁶⁷² The comparison figures for bar produced totalling 13,286 tons are reproduced from Table A5.2. The figure of 30,000 tons of bar consumed is rounded from the 29,880 tons for 1710 given at the beginning of this section on Consumption and has been allocated to the regions by using the number of ‘Other’ works in Table A5.1. The geography of the industry presented here, and the recognition of the aspects of production, consumption and distribution are necessary to further analysis of Quaker activity.

⁶⁷² King, ‘The Iron Trade in England and Wales’, p.169; Riden, ‘Output’, p.446; Hammersley, ‘Charcoal Iron Industry’, p.604.

Appendix 7 – Extended List of Iron Industry Participants

This appendix is a list of identified Quakers involved with the iron industry. They have been sourced from the database in this study (Cook) extended by data from digested Quaker birth and death records from the Quarterly Meetings of Durham, Essex, London & Middlesex, Norfolk & Norwich and Suffolk, and from name-specific confirmations from Quaker birth, death and marriage records found on Ancestry.com. They are listed in order of date of activity (marriage, birth of child or death). The searching of birth, death and non-digested marriage records was constrained by Covid pandemic-related restrictions.

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Merrick	Abraham		1692		Cheshire & Staffordshire	Ironmonger	Cook	1692	Marriage certificates 1719 ironmonger, 1726, 1747 grocer
Hutson	Thomas		1693	1720	London & Middlesex	Ironmonger	Cook	1693	Ironmonger at death
Hewitt	John			1711	London & Middlesex	Ironmonger	Birth	1694	On daughter's birth record, and burial record
Levins	Roger			1695	London & Middlesex	Ironmonger	Death	1695	Burial record
Plumsted	Mathew	1669	1695	1706	London & Middlesex	Ironmonger	Cook	1695	
Lowbridge	Richard		1696	1724	Herefordshire Worcestershire & Wales	Ironmonger	Cook	1696	

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Wood	Edward				London & Middlesex	Ironmonger	Birth	1697	On son's birth record
Plumsted	Robert	1663	1698	1726	London & Middlesex	Ironmonger	Cook	1698	Ironmongers Company and draper, ditto in 1719
Haynes	John	1668	1699		Berkshire & Oxfordshire	Ironmonger	Cook	1699	
Darby	Abraham I	1678	1699	1717	Bristol & Somerset	Ironmonger	Cook	1699	
Harvey	Thomas		1699		Herefordshire				
					Worcestershire & Wales	Ironmonger	Cook	1699	Ironmonger on son's marriage certificate in 1726
Edgoose	Richard		1702		London & Middlesex	Ironmonger	Death	1702	Burial record
Tabaram	Elizabeth		1702		London & Middlesex	Ironmonger	Death	1702	Burial record
Welch	Joseph jun.		1703	1707	Buckinghamshire	Ironmonger	Cook	1703	Ironmonger at death
Carter	William		1703		London & Middlesex	Ironmonger	Cook	1703	
Gilbert	James		1703	1724	London & Middlesex	Ironmonger	Cook	1703	Ironmonger at death
House	John		1703	1725	London & Middlesex	Ironmonger	Cook	1703	Listed as Houss in Cook
Winstanley	John		1704		Lancashire	Ironmonger	Cook	1704	On daughter's birth record, also burial record, also Moseley
Mosely	Thomas			1706	London & Middlesex	Ironmonger	Birth	1704	
Haynes	Richard	1676	1707	1731	Berkshire & Oxfordshire	Ironmonger	Cook	1707	

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Hanniatt	Joseph		1707		Herefordshire Worcestershire & Wales	Ironmonger	Cook	1707	
Skiping	Joseph		1707		London & Middlesex	Ironmonger	Cook	1707	
Gerrard	Abraham		1708	1718	London & Middlesex	Ironmonger	Cook	1708	Ironmonger at death
Baker	John				London & Middlesex	Ironmonger	Birth	1710	On son's birth record
Gilbert	John		1711	1746	London & Middlesex	Ironmonger	Cook	1711	Marriage in 1722 as merchant
Pemberton	John		1713		Warwickshire Leicestershire & Rutland	Ironmonger	Cook	1713	1693 marriage noted by Raistrick
Thomas	John		1714		Herefordshire Worcestershire & Wales	Founder	Cook	1714	
Pearsall	John		1714		Bristol & Somerset	Ironmonger	Cook	1714	
Welch	Joseph sen.			1715	Buckinghamshire	Ironmonger	Death	1715	Ironmonger at death
Robinson	George		1715		London & Middlesex	Ironmonger	Cook	1715	
Howell	Samuel			1715	London & Middlesex	Ironmonger	Death	1715	
Freeth	Samuel	1692	1716		Warwickshire Leicestershire & Rutland	Ironmonger	Cook	1716	

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Ford	Richard		1718	1745	Herefordshire Worcestershire & Wales	Ironmaster	Cook	1718	
Edwards	Thomas		1718		Bristol & Somerset	Ironmonger	Cook	1718	
Salthouse	Elijah		1718		Lancashire	Ironmonger	Cook	1718	
Goad	Joseph	1690	1718	1727	London & Middlesex Warwickshire	Ironmonger	Cook	1718	Ironmonger at death
Prichard	Thomas		1718		Leicestershire & Rutland	Ironmonger	Cook	1718	
Wood	Joshua			1719	London & Middlesex	Ironmonger	Death	1719	
Hancock	William		1720	1739	Cheshire & Staffordshire	Ironmonger	Cook	1720	Possibly not in membership at death
Plumsted	Francis			1720	London & Middlesex	Ironmonger	Birth	1720	
Sims	John		1721	1741	London & Middlesex	Founder	Cook	1721	
Plumsted	Thomas				London & Middlesex	Ironmonger	Birth	1721	On daughter's birth record
Tomlinson	William	1700	1726		Cheshire & Staffordshire	Ironmonger	Cook	1726	
Harvey	Benjamin	1707	1726		Herefordshire Worcestershire & Wales	Ironmonger	Cook	1726	

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Pemberton	Thomas	1699	1727	1757	Warwickshire Leicestershire & Rutland	Ironmonger	Marriage, death and birth	1727	
Donne	William		1730	1740	Bristol & Somerset	Ironmonger	Cook	1730	Death seen in registers for 1740
Lloyd	Sampson II		1731		Warwickshire Leicestershire & Rutland	Ironmonger	Cook	1731	
Browne	William		1735		Lancashire	Ironmonger	Cook	1733	1744 marriages as ironmonger (Cook) and possibly 1741 (Ancestry)
Cutteridge	John		1734	1768	London & Middlesex	Founder	Cook	1734	also 1747 marriage as Founder
Selfe	Jacob		1734		Gloucestershire & Wiltshire	Ironmonger	Cook	1734	
Lammin	James	1712	1737		London & Middlesex	Ironmonger	Cook	1737	
Beck	William		1738		Herefordshire Worcestershire & Wales	Ironmonger	Cook	1738	
Satterthwaite	William		1740		Lancashire	Ironmonger	Cook	1740	
Hunt	John		1740		London & Middlesex	Ironmonger	Cook	1740	
Thomas	John jun	1715	1742		Herefordshire Worcestershire & Wales	Potfounder	Cook	1742	

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Crabb	Daniel				London & Middlesex	Ironmonger	Birth	1742	On son's birth record
Farmer	Thomas		1743		Bristol & Somerset	Ironmonger	Cook	1743	
Darby	Abraham II	1711	1745	1763	Herefordshire Worcestershire & Wales	Ironmaster	Cook	1745	
Evans	Thomas		1750	1783	London & Middlesex	Founder	Cook	1750	
Nelson	Joseph	1720	1750	1784	London & Middlesex	Ironmonger	Cook	1750	
Daniel	Thomas	1720	1752	1761	Bristol & Somerset	Ironmaster	Cook	1752	
Barton	Robert		1752	1765?	Cheshire & Staffordshire	Ironmonger	Cook	1752	
Kenyon	David		1752	1779	Lancashire	Ironmonger	Cook	1752	Merchant at death
Janson	Joseph		1752	1766	London & Middlesex	Ironmonger	Cook	1752	
Hack	Thomas	1716	1748	1793	Dorset & Hampshire	Ironmonger	Marriage, death and birth	1754	Described as patternmaker (1739, Cook and 1751) and apothecary (1752)
Hoskins	Josiah				London & Middlesex	Ironmonger	Birth	1754	On daughter's birth record
Reynolds	Richard	1735	1757	1816	Herefordshire Worcestershire & Wales	Ironmaster	Marriage, death and birth	1757	Cook 1763 marriage as ironmaster, and 1757 marriage to Hannah Darby, marriage records

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Walker	John		1757	1812	Warwickshire Leicestershire & Rutland	Ironmonger	Cook	1757	
Thomas	Jacob	1720	1758	1798	Berkshire & Oxfordshire	Ironmonger	Cook	1758	Ironmonger at death
Plumsted	Robert			1760	London & Middlesex	Ironmonger	Birth	1758	On daughter's birth record, also burial record
Dearman	Richard	1732	1763	1804	Cumberland & Northumberland	Ironmonger	Cook	1760	1760 marriage Cook as ironmonger, Noted by Milligan as ironmaster, moved to Birmingham in the 1770s
Salthouse	Elijah	1734	1760	1802	Lancashire	Ironmonger	Marriage, death and birth	1760	Grocer at death and on birth of son 1797
Sims	John				London & Middlesex	Founder	Birth	1760	On son's birth cert
Lloyd	Sampson	1728	1762	1807	Warwickshire Leicestershire & Rutland	Iron merchant	Marriage, death and birth	1762	1762 merchant Cook
Ellis	Humphrey	1732	1762	1793	Herefordshire Worcestershire & Wales	Ironfounder	Cook	1762	
Beesly	Thomas	1730	1762		Berkshire & Oxfordshire	Ironmonger	Cook	1762	

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Boone	George	1730	1762	1785	Warwickshire Leicestershire & Rutland	Ironmonger	Cook	1762	Also 1783 ironmonger, Cook
Warner	John		1763	1817	London & Middlesex	Founder	Cook	1763	
Collinson	Thomas	1727	1766	1803	London & Middlesex	Ironmonger	Cook	1766	Banker at death
Exton	George	1743	1767	1802	Bedfordshire & Hertfordshire	Ironmonger	Cook	1767	Cook draper (1778), Shopkeeper (1791)
Wilson	John	1732	1767		Yorkshire	Ironmonger	Cook	1767	
Wilson	Thomas				Yorkshire	Ironmonger	Marriage	1767	listed on son's marriage certificate
Boone	John		1768		London & Middlesex	Ironmonger	Cook	1768	
Greenwood	Robert		1769		Essex	Ironmonger	Cook	1769	
Greenwood	Robert jun			1817	Essex	Ironmonger	Birth	1808	On daughters birth record, also death record
Pink	William		1769	1801	London & Middlesex	Ironmonger	Cook	1769	1755 marriage as blacksmith, brightsmith at death
Fothergill	John	1743	1771	1807	Yorkshire	Ironmonger	Cook	1771	
Gray	Newman	1740	1772		London & Middlesex	Ironmonger	Cook	1772	Ironmongers Company, register 'by trade a wine merchant'
Johnson	Henry	1753	1777	1833	Buckinghamshire	Ironmonger	Cook	1773	At death ironmonger and not in membership. 1799 not in membership, ironmonger, son's birth certificate

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Lloyd	Nehemiah	1745		1801	Warwickshire Leicestershire & Rutland	Iron merchant	Marriage	1774	Activity from son's marriage, noted as banker by Milligan
Lloyd	Charles	1748	1774	1828	Warwickshire Leicestershire & Rutland	Iron merchant	Marriage, death and birth	1774	
May	Thomas	1749	1774	1820	Berkshire & Oxfordshire	Ironmonger	Cook	1774	
Darby	Abraham III	1750	1776	1789	Herefordshire Worcestershire & Wales	Ironmaster	Cook	1776	
Darby	Samuel	1755	1776	1796	London & Middlesex	Ironmaster	Cook	1776	
Seale	John	1777	1773		London & Middlesex	Founder	Cook	1777	
Hack	William	1703	1777	1780	Dorset & Hampshire	Ironmonger	Cook	1777	Ironmonger at death
Ludlow	Thomas	1755	1778	1789	Bristol & Somerset	Ironmonger	Cook	1778	Ironmonger at death
Ransome	Thomas	1752	1778	1815	Norfolk & Norwich	Ironmonger	Cook	1778	Also Cook 1784 Ironmonger, bankers clerk at death
Ransome	John		1778	1804	Norfolk & Norwich	Ironmonger	Cook	1778	Not in membership at death
Booth	Danniel		1779		Durham	Ironmonger	Cook	1779	
Gripper	John		1780		London & Middlesex	Ironmonger	Cook	1780	

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Collier	Jeremiah		1781	1811	London & Middlesex	Founder	Cook	1781	Brazier at death
Price	Peter	1739	1781	1821	Cornwall	Ironmaster	Marriage, death and birth	1781	Ironmaster at death, 1810 to Neath Abbey
Skreene	William				London & Middlesex	Ironmonger	Birth	1781	On daughter's birth record
Barrett	John		1782	1830	London & Middlesex	Founder	Cook	1782	Gentleman at death, brass founder on son's birth certificate 1808
Warner	Thomas		1782		London & Middlesex	Founder	Cook	1782	No relevant Ancestry records
Birkbeck	Wilson	1754	1782	1812	London & Middlesex	Ironfounder	Cook	1782	also 1801 marriage as ironfounder as Birbeck
Ransome	Robert	1753	1782	1830	Norfolk & Norwich	Ironmonger	Cook	1782	Also Cook 1802 Ipswich ironfounder
Sparrow	Jonathan				London & Middlesex	Ironmonger	Birth	1782	On daughter's birth record
Ball	Joseph	1759		1831	London & Middlesex	Ironfounder	Birth and death	1783	
Hurrell	Henry			1788	Essex	Ironmonger	Death	1788	Burial record
Pearsall	Thomas				Bristol & Somerset	Iron factor	Birth	1784	Also iron manufacturer 1787 from sons' birth certificates
Wilson	Arthington	1735	1784	1799	Yorkshire	Ironmonger	Cook	1784	Ironmonger on son's birth certificate 1785, not in membership at death.
Richardson	Henry				Durham	Ironmonger	Birth	1784	On son's birth record

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Fry	Edmund		1785		Bristol & Somerset	Founder	Cook	1785	Letter Founder by marriage certificate
May	Edward	1760	1785		Berkshire & Oxfordshire	Ironmonger	Cook	1785	
Berry	Richard		1785		London & Middlesex	Ironmonger	Cook	1785	Listed as 'Tower', possibly working on guns?
Prichard	Thomas	1768	1785	1843	Bristol & Somerset	Tinplate merchant	Marriage, death and birth	1785	Tinplate merchant and mercer. Cook 1785 mercer of Ross
Janes	Benjamin			1785	London & Middlesex	Founder	Death	1785	
Squire	Thomas	1742	1787	1806	Bedfordshire & Hertfordshire	Ironmonger	Cook	1787	
Fuller	Travel	1745	1787	1795	Norfolk & Norwich	Ironmonger	Cook	1787	Ironmonger at death
Wiffin	John	1761	1789	1802	Bedfordshire & Hertfordshire	Ironmonger	Cook	1789	Marriage 1785 as Wiffen noted by Milligan
Squire	Samuel	1743	1789	1806	Bedfordshire & Hertfordshire	Ironmonger	Cook	1789	
Dearman	John Petty	1761	1791		Warwickshire Leicestershire & Rutland	Ironfounder	Cook	1791	
Eaton	George	1749	1791	1828	Bristol & Somerset	Ironmonger	Cook	1791	Also Milligan as iron merchant 1791

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Batger	John		1792		London & Middlesex	Founder	Cook	1792	Register 'citizen and founder' certificate 'grocer by trade', 1798 Confectioner, son's birth certificate
Luccock	Benjamin	1707		1792	Herefordshire Worcestershire & Wales	Ironfounder	Death and birth	1792	Ironfounder at death
Harford	Richard Summers		1792		Herefordshire Worcestershire & Wales	Ironmaster	Cook	1792	Harfords of London and Bristol seen as merchants on Ancestry
Rees	Evan	1745	1776	1816	Herefordshire Worcestershire & Wales	Ironmaster	Birth and marriage	1792	Ancestry, ironmonger by son's birth and marriage certificates
Sporle	John		1792	1808	Bedfordshire & Hertfordshire	Ironmonger	Cook	1792	Death shows ironmonger and shopkeeper
Marsden	John		1792		Lancashire	Ironmonger	Cook	1792	
Bedford	Isaac		1792	1798	Warwickshire Leicestershire & Rutland	Ironmonger	Cook	1792	Glass cutter at death, age 29, and in 1794 by son's birth certificate
Reynolds	Joseph		1793		Herefordshire Worcestershire & Wales	Ironmaster	Marriage	1793	
Kitching	William	1752	1770	1819	Durham	Ironfounder	Marriage, death and birth	1795	Cook marriages 1770 weaver, 1793 hardware man

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Botham	Samual	1758	1796	1823	Cheshire & Staffordshire	Ironmaster	Cook	1796	
Haworth	Jonathan	1761	1789	1822	Lancashire	Ironmonger	Marriage, death and birth	1796	Disowned on marriage, reinstated 1797, ironmonger 1796-1804, grocer at death
Manser	William		1797	1821	Sussex & Surrey	Ironmaster	Cook	1797	
Smith	William		1797		Yorkshire	Ironmonger	Cook	1797	
Bratt	Samuel			1808	London & Middlesex	Ironmonger	Birth and death	1797	On son's birth record, also burial record
Hunniatt	Joseph		1798		Herefordshire Worcestershire & Wales	Ironmonger	Marriage	1798	
Southall	Richard		1798	1803	Herefordshire Worcestershire & Wales	Ironmonger	Cook	1798	Marriage ironmonger and nailer, ironmonger at death
Howard	Thomas		1798	1814	London & Middlesex	Ironmonger	Cook	1798	
Fuller	John				Norfolk & Norwich	Ironmonger	Birth	1798	On daughter's birth record
Fuller	Phebe				Norfolk & Norwich	Ironmonger	Birth	1798	On daughter's birth record, widow of Travel
Smith	Samuel	1769	1799	1821	Yorkshire	Ironmaster	Marriage, death and birth	1799	Ironmaster at death
May	Joseph	1759	1785	1827	Berkshire & Oxfordshire	Ironmonger	Marriage, death and birth	1800	Cook, marriage 1785, draper, ironmonger at death

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Bigg	Thomas		1800		Warwickshire Leicestershire & Rutland	Ironmonger	Cook	1800	listed as Nail Ironmonger
Hoyland	Thomas	1754	1778	1815	Yorkshire	Ironmonger	Death	1800	Cook marriage as silver cutler, noted by Milligan as ironmonger post 1800, ironmonger in death records
Darby	Edmund	1782	1803	1810	Herefordshire Worcestershire & Wales	Ironmaster	Cook	1803	
Reynolds	William	1758	1776	1803	Herefordshire Worcestershire & Wales	Ironmaster	Marriage, death and birth	1803	Not a member at death, also Renolds
Belch	William	1774	1803	1847	Herefordshire Worcestershire & Wales	Ironmonger	Marriage, death and birth	1803	Cook marriage 1803 as Belah
Kidd	John				London & Middlesex	Ironmonger	Birth	1803	On daughter's birth record
Gilpin	Mark	1744		1804	Herefordshire Worcestershire & Wales	Clerk	Birth and death	1804	Clerk to Coalbrookdale Company
Wheeler	Josiah	1771	1804	1840	Bedfordshire & Hertfordshire	Ironmonger	Cook	1804	

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Bradley	John	1777	1800		Herefordshire Worcestershire & Wales	Ironmonger	Birth and marriage	1804	Marriage, Cook as glover. Partner in the New Iron Warehouse, 1804 Ironmonger confirmed in 1826, son's birth certificate
Burlingham	Richard	1779	1810	1826	Herefordshire Worcestershire & Wales	Ironmonger	Marriage, death and birth	1804	Partner in the New Iron Warehouse 1804
Backhouse Pryer	George Nathaniel	1760	1804 1805	1830	Westmorland Yorkshire	Ironmonger Ironfounder	Cook Cook	1804 1805	Stamp distributor at death Also Cook 1793 as silversmith
Dickinson	Barnard	1781	1805	1852	Herefordshire Worcestershire & Wales	Ironmaster	Marriage, death and birth	1805	
Ransome	James	1782	1805	1849	Norfolk & Norwich	Ironmaster	Marriage, death and birth	1805	
Frank	Arnee	1766	1805		Bristol & Somerset	Ironmonger	Cook	1805	Also 'Adam Frank', cutler, Bristol 1793 (Cook)
Peirson	John		1805		London & Middlesex	Ironmonger	Marriage	1805	1805 smith and ironmonger, 1809 whitesmith, son's birth certificate
Trimmer	William	1782	1805	1808	Sussex & Surrey	Ironmonger	Cook	1805	Ironmonger at death
Hoyland	William	1751		1805	Yorkshire	Ironmonger	Birth and death	1805	Ironmonger at death
Bolton	Edward	1783	1808		Cheshire & Staffordshire	Ironmonger	Cook	1808	Also 1823 ironmonger, son's birth certificate

Appendix 7 – Extended List of Iron Industry Participants, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Darby	Samuel	1779		1808	Herefordshire Worcestershire & Wales	Ironmaster	Birth and death	1808	
Darby	Francis	1783	1808	1850	Herefordshire Worcestershire & Wales	Ironmaster	Cook	1808	
Motley	Thomas		1808	1816	Bristol & Somerset	Ironmonger	Cook	1808	Not a member at death
Perry	Thomas		1809		Dorset & Hampshire	Ironfounder	Cook	1809	
Swiman	Joseph		1809		Bristol & Somerset	Ironmonger	Cook	1809	
Thompson	Joseph	1778	1807	1855	Bristol & Somerset	Ironmonger	Marriage, death and birth	1809	Active and location from son's birth certificate
Kirkham	James				London & Middlesex	Ironmonger	Birth	1809	On daughter's birth record

Appendix 8 – List of Possible Iron Industry Participants not Identified in Quaker Records

These people are named by Raistrick, but their Quaker identity has not been supported by other records. The exception is John Fothergill listed in Cook as an ironmonger on marriage in 1771 but noted by Milligan as moving to York in the 1770s and working as a combmaker.

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Andrew	John				Bristol & Somerset		Raistrick	1698	No relevant indication outside Raistrick
Bayliss	Thomas				Herefordshire Worcestershire & Wales		Raistrick	1714	Raistrick Coalbrookdale lease signer, Ancestry, Thos Baylies born 1714 son of Thos
Braithwaite	William						Raistrick		
Burley	N				Cheshire & Staffordshire		Raistrick	1702	No records as Quaker
Champion	Nehemiah				Bristol & Somerset		Raistrick	1703	Champions were seen as merchants, not listed in Milligan
Cool	Benjamin		1715		Bristol & Somerset		Raistrick	1715	Cook, Coole, merchant 1715
Cotton	Daniel				Cheshire & Staffordshire		Raistrick	1711	Cunsey 1711-1750. No Quaker records
Cowles	William	1727	1764	1778	Bristol & Somerset		Raistrick	1764	Cook, merchant 1764
Cranege	Thomas				Herefordshire Worcestershire & Wales		Raistrick	1766	No Quaker records

Appendix 8 – List of possible Iron Industry Participants not Identified in Quaker Records, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Cranege	George				Herefordshire Worcestershire & Wales		Raistrick	1766	No Quaker records
Crossfield	Stephen				Lancashire		Raistrick		Backbarrow 1711
Crossfield	William				Lancashire		Raistrick		Lowood 1746
Dickin	Thomas		1692	1701	Yorkshire		Raistrick	1692	No records, Spencer partner in S. Yorks
Drinkall	George				Lancashire		Raistrick		No records as Quaker. Lowood 1746-8
Elmsall	Ralph			1767	Yorkshire		Raistrick		Marriage connection only in Raistrick. No Quaker records
Fell	John			1724	Yorkshire		Raistrick		Probably Attercliffe Forge. No Yorkshire Quaker records
Fell	John			1792	Yorkshire		Raistrick	1727	1727 share in South Yorkshire forge group. No Yorkshire Quaker records
Fidoe	John		1716	1793	Cheshire & Staffordshire		Raistrick	1716	Ancestry, no occupation at death
Ford	Richard				Lancashire		Raistrick		Newlands, Cunsey, Nibthwaite, 1722-66, different from Coalbrookdale Richard Ford
Fothergill	John	1743	1771	1807	Yorkshire		Cook	1771	Marriage in London as ironmonger, Milligan 2nd marriage 1802 after 1770s move to York as combmaker. Cook John York 1803 merchant.

Appendix 8 – List of possible Iron Industry Participants not Identified in Quaker Records, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Garlick	Edward				Bristol & Somerset		Raistrick	1765	No Quaker records
Getley	James				Bristol & Somerset		Raistrick	1765	No Quaker records
Goldney	Thomas III	1696		1768	Bristol & Somerset		Raistrick	1726	No indication of Thomas records, Goldney as merchant
Hall	Edward				Cheshire & Staffordshire		Raistrick	1711	Cunsey 1711-1750. No Quaker records
Hanbury	John	1700		1758	Herefordshire		Raistrick	1718	Ancestry merchant and ironmaster
Harford	James	1734	1756?	1817	Worcestershire & Wales		Raistrick	1765	Ancestry merchant at death
Hawkins	John				Bristol & Somerset		Raistrick	1731	No relevant indication outside Raistrick
Jordan	Richard				Herefordshire		Raistrick	1750	No Quaker records
Jordan	Thomas	1679			Worcestershire & Wales		Raistrick	1765	No Quaker records
Jordan	Walter				Bristol & Somerset		Raistrick	1765	No Quaker records
Kelsall	John	1683	1711		Bristol & Somerset		Raistrick	1711	No Quaker records
					Herefordshire				1710 marriage by Labouchere in her biography of Abiah Darby ⁶⁷³
					Worcestershire & Wales				

⁶⁷³ Labouchere, *Abiah Darby*, p.282.

Appendix 8 – List of possible Iron Industry Participants not Identified in Quaker Records, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Kendall	Edward				Herefordshire Worcestershire & Wales		Raistrick		Partner in Cunsey. No Quaker records
Kent	Ralph				Cheshire & Staffordshire		Raistick		Partner in Cunsey. No Quaker records
Lloyd	Edward	1725?	1751	1765?	Bristol & Somerset		Raistrick	1751	Cook, merchant 1751
Lloyd	Charles III	1662	1693	1747	Herefordshire Worcestershire & Wales		Raistrick		
Lloyd	Charles IV	1697			Herefordshire Worcestershire & Wales		Raistrick		
Lloyd	Sampson	1664	1695	1724	Herefordshire Worcestershire & Wales		Raistrick		
Machel	John				Lancashire		Raistrick		No Quaker records. Backbarrow 1711
Mackworth	Humphrey				Herefordshire Worcestershire & Wales		Raistrick		No Quaker records
Milner	Sam			1731	Herefordshire Worcestershire & Wales		Raistrick		Death from Ancestry relates to Devonshire
Milner	John		1702		Herefordshire Worcestershire & Wales		Raistrick		Cook listed as blacksmith

Appendix 8 – List of possible Iron Industry Participants not Identified in Quaker Records, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Milner	Thomas				Warwickshire Leicestershire & Rutland		Raistrick		Customer of Dolgelly in 1720s. James, son of Thos of Bewdley married 1709, no occupation
Milner	William			1762	Yorkshire		Raistrick		Ancestry possible death 1762
Milner	Gamaliel	1668			Yorkshire		Raistrick		Last Gamaliel, born 1668. Nothing relevant on Ancestry
Olivant	John				Lancashire		Raistrick		No Quaker records. Backbarrow 1711
Partridge	John				Herefordshire Worcestershire & Wales		Raistrick		Partner in S Wales with Richard Reynolds from 1762. Ancestry all before 1720 and London/Essex
Partridge	John jun				Herefordshire Worcestershire & Wales		Raistrick		Partner in S Wales with richard reynolds from 1762. Ancestry all before 1720 and London/Essex
Payne	John				Herefordshire Worcestershire & Wales		Raistrick		No relevant matches on Ancestry, Raistrick not clear if Quaker or not
Payton	Henry				Herefordshire Worcestershire & Wales		Raistrick		Ancestry, possible death and marriage, no occupations
Payton	John		1711		Herefordshire Worcestershire & Wales		Raistrick		Ancestry, no occupation but marriage to Mary Fidoie is indicative of iron
Peters	James				Bristol & Somerset		Raistrick	1693	No Quaker records

Appendix 8 – List of possible Iron Industry Participants not Identified in Quaker Records, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Prankard	Griffin			1756	Bristol & Somerset		Raistrick	1708	Ancestry, burial is only record seen
Rawlinson	William				Lancashire		Raistrick		Backbarrow 1711, possible entries on Ancestry
Rawlinson	Job	1697/8	1736	1760	Lancashire		Raistrick		Lowood 1746-84, then Backbarrow, Cook Gentleman 1736
Rea	William				Herefordshire Worcestershire & Wales		Raistrick	1711	Cunsey 1711-1750. No relevant Quaker records
Reynolds	Richard sen	1709		1769	Bristol & Somerset		Raistrick	1750	Merchant from marriage cert of Rich junior, 1757
Rigg	Thomas				Lancashire		Raistrick		Nibthwaite 1735-51 then into Backbarrow, possible entries on Ancestry
Spencer	J			1790	Yorkshire		Raistrick		Spencer in 18th cent South Yorkshire partnerships, not clear if actually Q. No geographically relevant Spencers until 1790s on Ancestry
Summers	Richard				Bristol & Somerset		Raistrick	1765	No Bristol records except 1712 marriage of soap boiler
Sunderland	Thomas				Lancashire		Raistrick		No Quaker records. Lowood Co. 1748-84
Swallow	Richard				Yorkshire		Raistrick		Raistrick, Swallow as heir to Spencer but not Quaker.

Appendix 8 – List of possible Iron Industry Participants not Identified in Quaker Records, continued

Surname	Forename	Birth	Marriage	Death	Quarterly Meeting	Occupation	Source	Active	Comment
Thomas	Arthur		1688	1720	Bristol & Somerset		Raistrick	1702	Cook, pewterer at marriage
Westby	William	1689		1749	Yorkshire		Raistrick		Shown on family tree but not in text and no mention of iron interest. No Quaker records.
Wilkinson	Isaac						Raistrick		Not Quaker
Wilkinson	John						Raistrick		Not Quaker
Wilkinson	Isaac				Lancashire		Raistrick		Lowood 1746-8, IW in North Wales not Quaker. Wilkinsons in Lancs but not connected to iron
Wilson	Matthew				Gloucestershire & Wiltshire		Raistrick		Indirect connection with Barnage and South Yorkshire roughly 1722. No Quaker record except death of M Wilson Sheffield 1752
Wilson	John				Lancashire		Raistrick		Lowood 1748-84. No relevant Quaker records
Wood	Richard				Cheshire & Staffordshire		Raistrick		No Quaker records, active around 1715
Wood	William				Cheshire & Staffordshire		Raistrick		No Quaker records, active around 1715
Woodhead	Matthew						Raistrick		Quaker connections with iron in South Yorkshire and Gloucestershire. No Ancestry matches.