

The male occupational geography of Middlesex in the nineteenth century

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Totteridge

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Declaration

I declare that this dissertation is my own original work and does not include any examples of plagiarism. The dissertation does not exceed the word limit.

Chapter One: Introduction

In 1965, Middlesex ceased to exist as a county. Subsequent reforms in the twentieth century completed its political annexation to London, thus creating one of the nine regions of England. However, the economic development of Middlesex had long been tied to that of the city. It is true that a great deal of social and economic change occurred in Middlesex in the twentieth century with the growth of factories and industrial districts.¹ But, due to the focus on growth in manufacturing areas during the Industrial Revolution, important nineteenth-century developments have been neglected. The following analysis of adult male occupations across a seventy-year period in the nineteenth century will in particular illustrate the importance of the contribution of Middlesex to the growth of the metropolis, where the term metropolis denotes the conjectural size of the city as opposed to the census definition of London. It will be argued that the changing male occupational structure of Middlesex was inextricably linked to that of the city. As a result, London itself was larger and more influential in this period than many historians have accepted.

Using Dyos' definition of the suburb as the "decentralized part of a city with which it is inseparably linked by certain economic and social ties", this investigation will show that nine Middlesex parishes shared demographic and occupational characteristics with those of London, while the occupational structure of a number of others increasingly resembled that of the capital.² These nine parishes constituted the new suburban districts of the metropolis and will therefore be denoted by the term metropolitan. Dyos'

¹ J. E. Martin, *Greater London: an industrial geography* (London: G. Bell and Sons, 1966), 39; Ranald C. Michie, "London and the Process of Economic Growth since 1750", *London Journal* 22, no. 1 (1997): 79.

² H. J. Dyos, *Victorian suburb: a study of the growth of Camberwell* (Leicester: Leicester University Press, 1961), 22.

definition suggests that geographical proximity need not be a prerequisite for regarding a parish as suburban. Indeed, Lee has written of a “metropolitan region”, which encompassed London and the Home Counties in the nineteenth century, and which went on to envelop the southeast region.³ Any parish that began to so closely resemble the demographic and occupational features of London so early on is deserving of identification with this region.

But why has the metropolitan region as a whole not been given much consideration in the past?⁴ In the nineteenth century, the Post Office and the Metropolitan Police Force adjusted their working definitions of the county in recognition of demographic change, but political reform of the boundaries of Middlesex lagged behind. The effects of this have filtered through into the historiography. According to Garside,

[w]hile there are important pointers from the new, quantitative economic history, and from old-fashioned political and administrative history, the sheer scale and diversity of the expanding metropolis appears to have daunted, and even defeated, social historians. London history remains a thing of shreds and patches, lacking overall form. As the London giant grew, neither his own clothes nor those fabricated by historians have been quite able to grow with him.⁵

Five years later, Schwarz commented that

the capital’s tentacles stretched so widely that it is difficult to know where London ended and the rest of the country began. This deters study of the metropolis as an entity.⁶

³ C. H. Lee, “Regional Growth and Structural Change in Victorian Britain”, *The Economic History Review* 34, no. 3 (1981): 443.

⁴ As indicated above, Lee is a notable exception. See C. H. Lee, *The British economy since 1700: a macroeconomic perspective* (Cambridge: Cambridge University Press, 1986).

⁵ P. L. Garside, “London and the Home Counties”, in *The Cambridge social history of Britain 1750-1950*, ed. F. M. L. Thompson, 3 vols (Cambridge: Cambridge University Press, 1990), 1: 471-2.

⁶ Leonard Schwarz, “London, 1700-1850”, *London Journal* 20, no. 2 (1995): 49.

New material has since dressed the London giant, but there remains uncertainty surrounding the timing and extent of metropolitan growth. White's description of the built-up area of London expanding perhaps twenty-fold over the nineteenth century is helpful, but it does not attempt to set apart parishes that were or became, for whatever reason, definitively a part of the metropolis.⁷ Dyos perhaps expounded the most significant reason for this difficulty much earlier. When he wrote his seminal study of the London suburb of Camberwell, he believed that "it is not possible to trace the suburban development of the large towns realistically in the census data once the tide of expansion had spilled over purely administrative boundaries".⁸ Recently, nineteenth-century census data on occupations have been made available in electronic form. This makes it easier to extract and marshal voluminous data at parish level, transcending the difficulties historians such as Dyos would have faced in the past. Furthermore, GIS data permit a far more accurate representation of parish boundaries than those used in the census. When combined with Anglican parish baptism register sources, which contain data on the occupations of adult males, the expansion of population and occupation can be charted much more comprehensively than before.

The wider implication of the argument outlined here is that the contribution of London to the Industrial Revolution ought to be reassessed. It is not possible to fully understand the development of the capital and consequently a large chunk of nineteenth-century British economic history without a satisfactory definition of it and an appreciation of the extent to which London obtruded into its hinterland. The data presented below will show that, within the nine metropolitan Middlesex parishes alluded

⁷ Jerry White, *London in the twentieth century: a city and its people* (London: Viking, 2001), 4.

⁸ Dyos, *Victorian suburb*, 20.

to above, as their populations exploded, secondary and service sector employment occupied the vast majority (over 90 percent in total) of adult males. By 1881, agriculture had become marginalised as a source of employment in these nine parishes and was diminishing even in some of the outlying parishes of the county. The new suburbs of the metropolis, located in Middlesex, variously housed some of its labour force (as dormitory suburbs), accommodated its industry (as industrial suburbs), and supplemented its wealth creation (as service suburbs). Even though they were situated outside of the traditionally recognised nineteenth-century boundary of the city, these parishes must be included alongside the more conventional London districts of Clerkenwell, Shoreditch, and Bethnal Green in the continuing debate on the economic history of the metropolis in this period.

Following Chapter Two, which defines the area under investigation, Chapter Three explores the advantages and drawbacks of occupational analysis. Chapters Four and Five tackle the sources from which data have been mined. Chapters Six, Seven, and Eight take each economic sector in turn and contextualise occupational change within the county, the city, and the southeast region as a whole. Chapter Nine concludes that the boundaries of the metropolis must be redrawn to account for significant economic and social change on its Middlesex fringes. Finally, the Appendix contains a reference map of the railways, waterways, and turnpiked roads of late-nineteenth century Middlesex.

Chapter Two: Definitions

In the censuses of the nineteenth century, tables on population and occupation were arranged according to the Registrar General's definitions of each county. County boundaries were defined following the introduction of civil registration in 1837, when the country was divided into registration districts. In Middlesex and London these were generally coterminous with the Poor Law Unions, established in 1834, which encompassed multiple parishes. For this reason, registration districts, from which registration counties were formed, sometimes extended across historic county boundaries. As a result of this, a discrepancy exists between the area within the historic county of Middlesex, covering six ancient Hundreds, and the nineteenth-century classification of the registration county of Middlesex, based on its six registration districts. To avoid confusion, all subsequent references to Middlesex will relate to the registration county, and Figure 2.1 illustrates the extent of this area. All 57 Middlesex parishes whose baptism registers have been scrutinised, and for which census data have been abstracted, are contained within the area demarcated in Figure 2.1. Figure 2.2 labels each of these.

As argued in Chapter One, the metropolis has evaded clear definition. In this investigation, the terms capital and city are intended to relate to the census definition of London, which will occasionally be referred to as Census London for clarity. Figure 2.3 depicts this area, which included 36 registration districts and the parishes therein. Although London was not created as a separate registration county until 1889, these 36 registration districts were regarded as a part of London in 1851 and beyond.⁹ It is a vast undertaking to calculate population totals and to collect occupational data for all 36

⁹ David R. Green, *From artisans to paupers: economic change and poverty in London, 1790-1870* (Aldershot: Scolar Press, 1995), 3.

registration districts. Instead, data for the city north of the River Thames – which once used to be part of the historic county of Middlesex – have been consulted. Figure 2.4 illustrates these 25 registration districts, which will be referred to collectively as Census London North. This term distinguishes this area from the 11 registration districts that were situated south of the River Thames (Census London South), as seen in Figure 2.3.

However, as argued earlier, the boundary of the metropolis shifted in this period, out of line with political and census definitions. As mentioned in Chapter One, there were nine Middlesex parishes that were metropolitan yet were outside of the boundary of Census London in 1881. Figure 2.5 identifies these nine parishes, which will be referred to collectively as metropolitan Middlesex. The red line on this and every other map indicates the boundary between Census London North and Middlesex.

Figure 2.1: The Registration Districts of Middlesex and Census London North in the nineteenth century

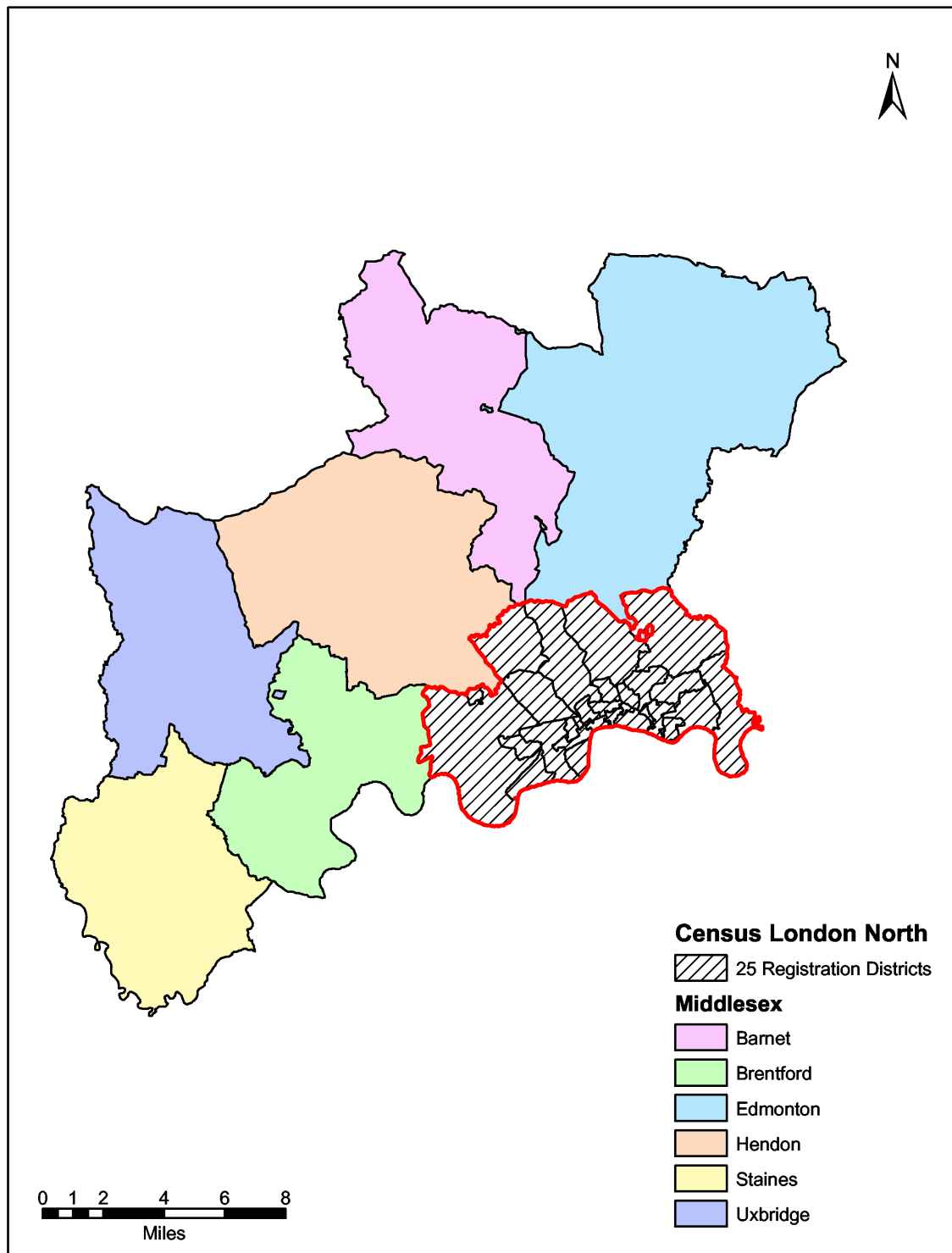


Figure 2.2: The 57 parishes of Middlesex in the nineteenth century

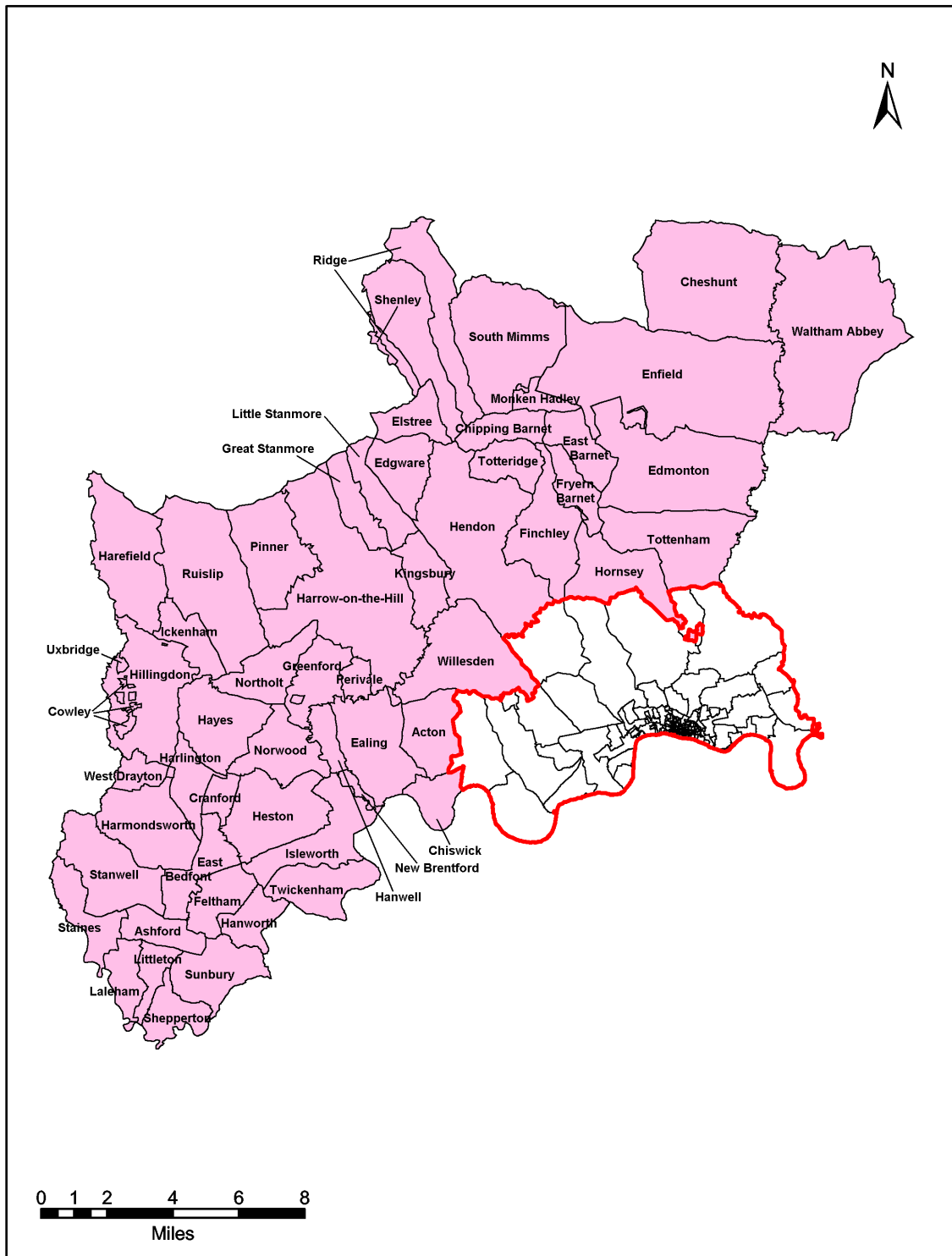


Figure 2.3: Census London in the nineteenth century

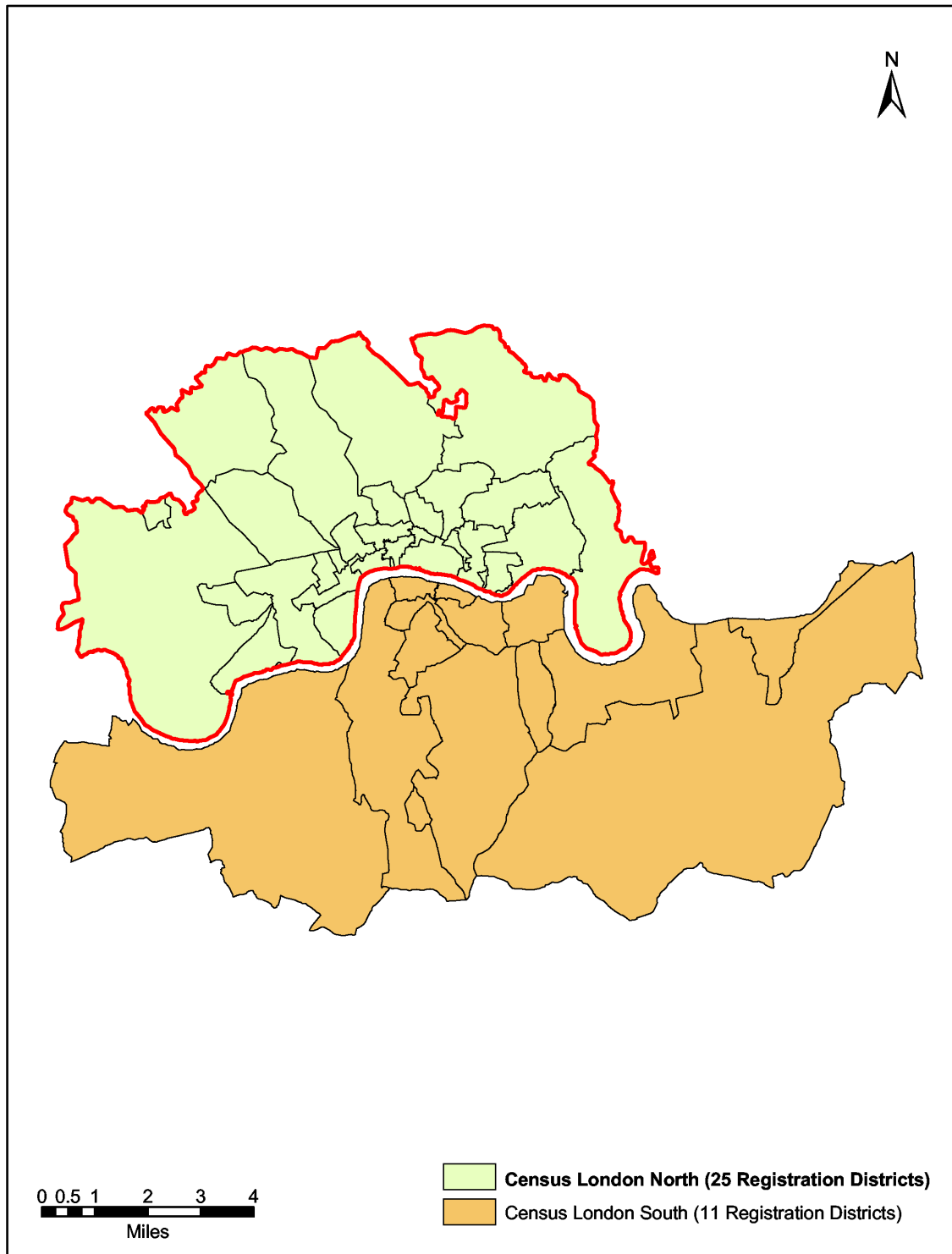
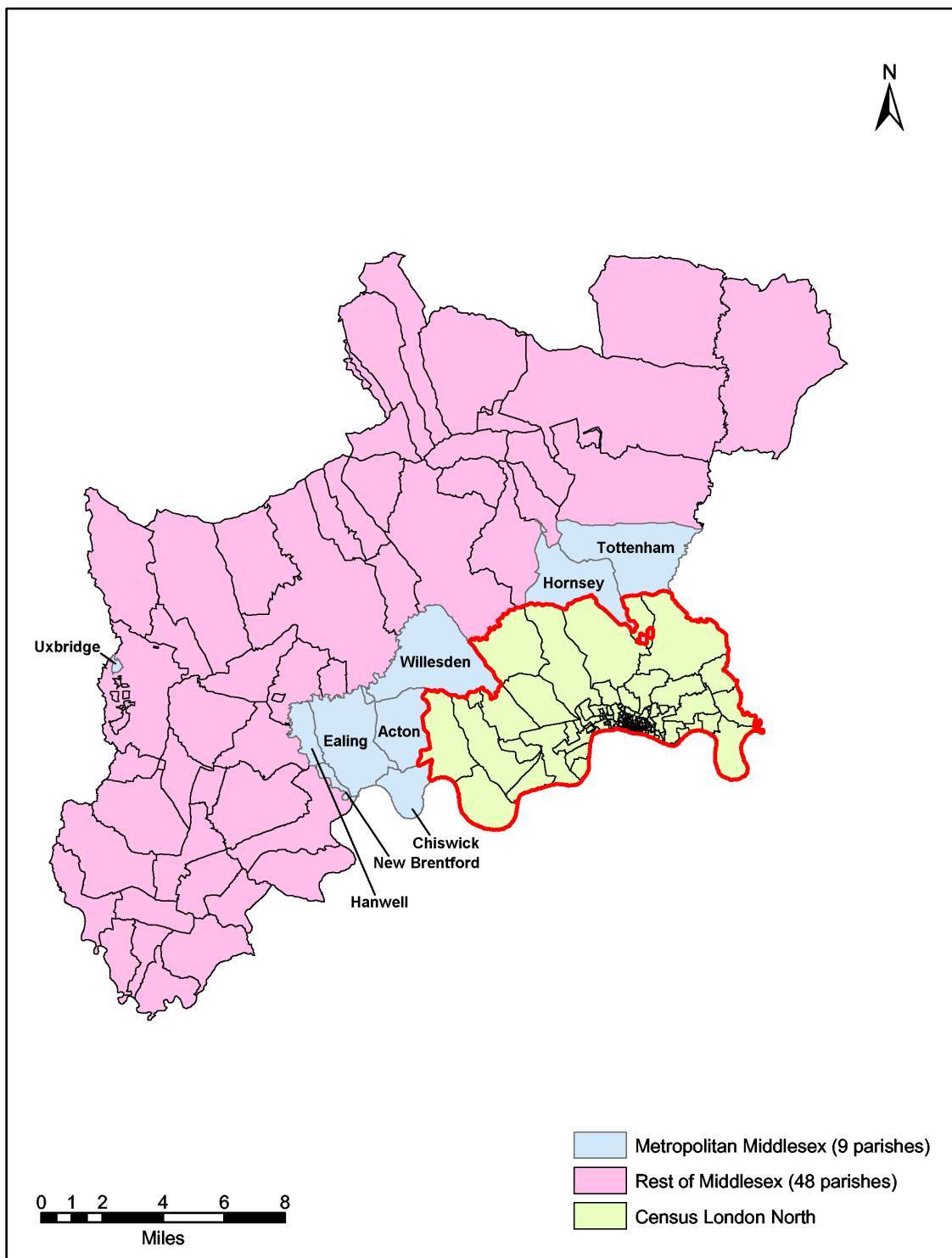


Figure 2.4: The Registration Districts of Census London North in the nineteenth century



Figure 2.5: The nine parishes of metropolitan Middlesex in 1881



Chapter Three: PST, population, and occupational structure

Occupation is a useful indication of economic activity in a region. However, the number of different ways in which people stated their occupations in the nineteenth century means that any attempt to compare *raw* baptism register entries with census returns on a regional scale is futile. Even after standardising spelling and reconciling occupations that are expressed in multiple formats, one is still left with hundreds of distinct occupations. One could arrange these into bipolar categories, such as agricultural and non-agricultural, or industrial and non-industrial, but this would negate the extent of variation. It would also fail to bring out the colourful range of occupations recorded.

The PST system developed by Wrigley categorises occupational descriptors, and despite its shortcomings, it facilitates a structured, detailed analysis of occupational data from baptism registers and the nineteenth-century censuses. PST refers to the primary, secondary, and tertiary sectors of an economy. In this scheme, the primary sector of an economy represents the extraction of natural resources such as agricultural products.¹⁰ The manipulation of these materials into finished articles is denoted by the secondary sector, while the trading of these goods, together with the selling of services, constitutes the tertiary sector.¹¹ This model incorporates a central paradigm of modern economic growth: with rising real incomes, the demand for higher-value goods and services results in the contraction over time of the primary sector and the rise of the secondary and tertiary sectors. This is the theory. In practical terms, growing demand from an expanding population crowds out the primary sector as land is turned over to industrial and service sector uses. Thus, PST is less an alien imposition of economic jargon than it is an

¹⁰ Middlesex did not possess the extractive industries of copper ore and coal mining, so the terms agriculture and primary sector are interchangeable in the context of this investigation.

¹¹ The terms tertiary sector and service sector are also used interchangeably throughout.

effective heuristic device. By using PST change as a proxy for economic development, it is possible to map the male occupational structure of the county and the encroachment of the capital into Middlesex throughout this period.

PST does have its limitations. The simplification of the nineteenth-century economy into three such broad categories, into which given occupations do not always seamlessly fit, ignores factors such as the casual and flexible nature of work in the nineteenth century. Schwarz has highlighted how the slack season signified a dearth of opportunities for tailors and servants in nineteenth-century London, some of whom were forced to find alternative employment for a full six months of the year.¹² PST analysis does not pick up these seasonal shifts, which guaranteed considerable movement between occupations. However, the failing lies in the recording rather than the occupational coding, since the sources do not give each male's employment history. Another possible criticism is that since this investigation makes use of 1881 data for Census London North, unemployment caused by the decline of London shipbuilding, which Pollard has written "turned the East End into a by-word for poverty", does not show up in the data.¹³ On the other hand, it is the structure of demand within the economy that is in question. Because these males did not contribute to economic production, the enumeration of the unemployed is not of direct concern to this investigation. Furthermore, the number of known occupations in the data dwarfs the total frequency of unknown and uncertain occupations, thereby reducing conclusively the margin of error.

¹² L. D. Schwarz, *London in the age of industrialisation: entrepreneurs, labour force and living conditions, 1700-1850* (Cambridge: Cambridge University Press, 1992), 103-4.

¹³ S. Pollard, "The Decline of Shipbuilding on the Thames", *The Economic History Review* (New Series) 3, no. 1 (1950): 72-89.

Having established the basis for PST as an analytical tool, it remains to be shown how effective it is as an evaluative device. It is in this realm that the PST coding system is most powerful. In their disaggregated form, data across almost seventy years can be compared with reference to PST sector and sub-grouping. Whereas PST has little to say about the incidence of poverty, class structure, or social status, it nevertheless supersedes the classifications invented by the Registrar General in 1851 and Booth in the 1880s. The former sought to maximise numbers in employment while the latter scheme, modified by Armstrong, concentrated on placing people firmly within an industry, rather than rooting their occupation in the framework of demand within the economy.¹⁴ The PST system facilitates the identification, with some certainty, of *intra*-sectoral developments, which can then be placed within the wider context of economic change. This is crucial in the case of Middlesex, where on the surface *inter*-sectoral fluctuations might have been modest, but the rise of market gardening, construction, and transport-related occupations accentuated metropolitan characteristics in the expanding dormitory, industrial, and service suburbs of London.

Without data on population, however, the phrase occupational structure lacks context. For Middlesex in c.1817, 100 percent of occupations in Perivale have been coded as primary. Yet, this emphatic statistic is somewhat misleading, since there were only seven occupations in total in Perivale. This small parish therefore contributed hardly at all to Middlesex agriculture. Absolute numbers are important in providing perspective, especially since population was soaring in many areas of Middlesex while only increasing moderately in others. In the expanding parishes, growth exceeded that within

¹⁴ E. A. Wrigley, *Poverty, progress, and population* (Cambridge: Cambridge University Press, 2004), 133-5.

Census London North by the end of the nineteenth century. In fact, some parishes in this county were by that time more densely populated than anywhere else in England except Lancashire and London.¹⁵ This presents sufficient grounds for further investigation.

¹⁵ J. B. Harley, "England circa 1850", in *A new historical geography of England*, ed. H. C. Darby (Cambridge: Cambridge University Press, 1973), 528.

Figure 3.1: Population density in Middlesex and Census London North in the nineteenth century

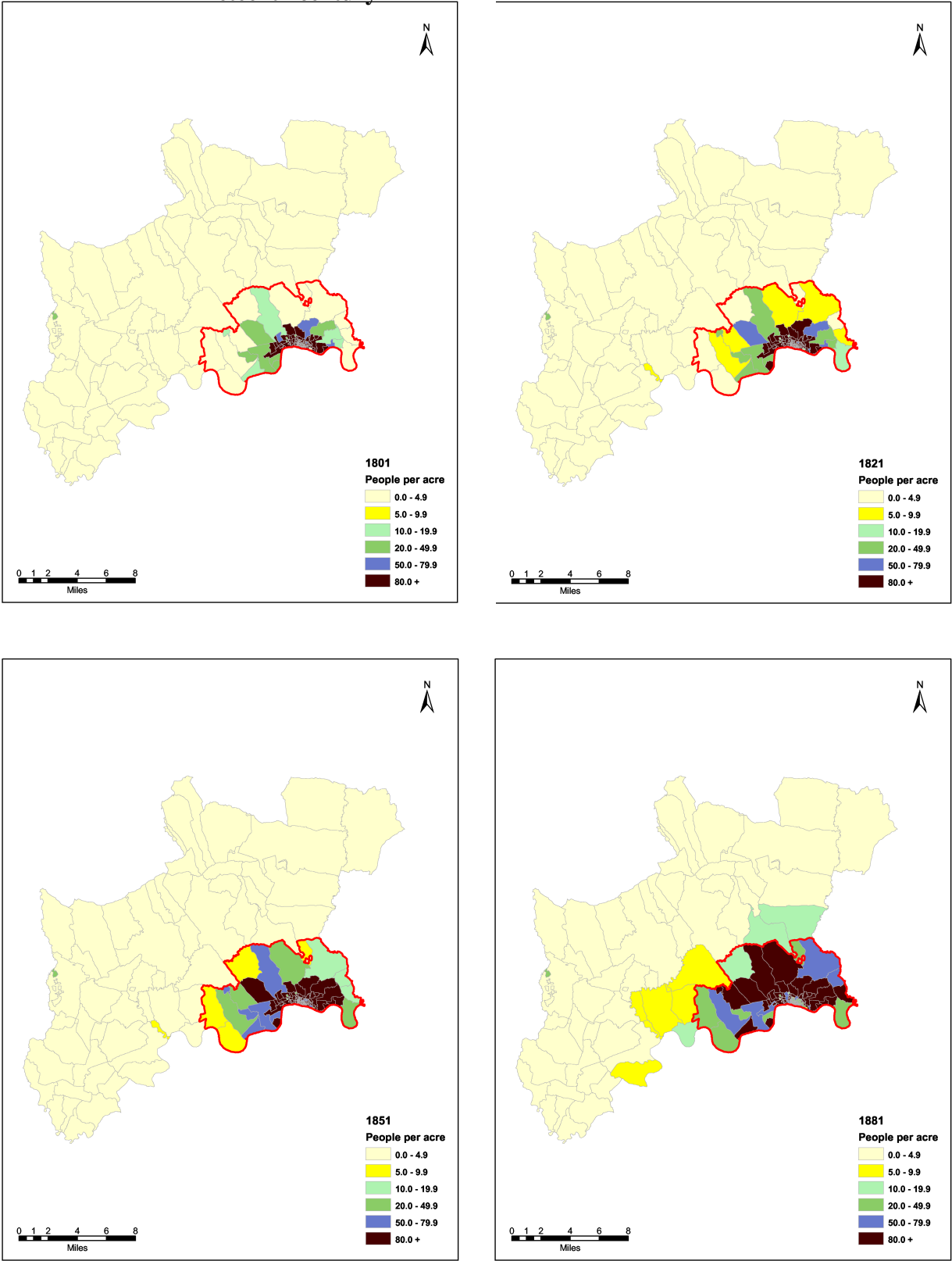
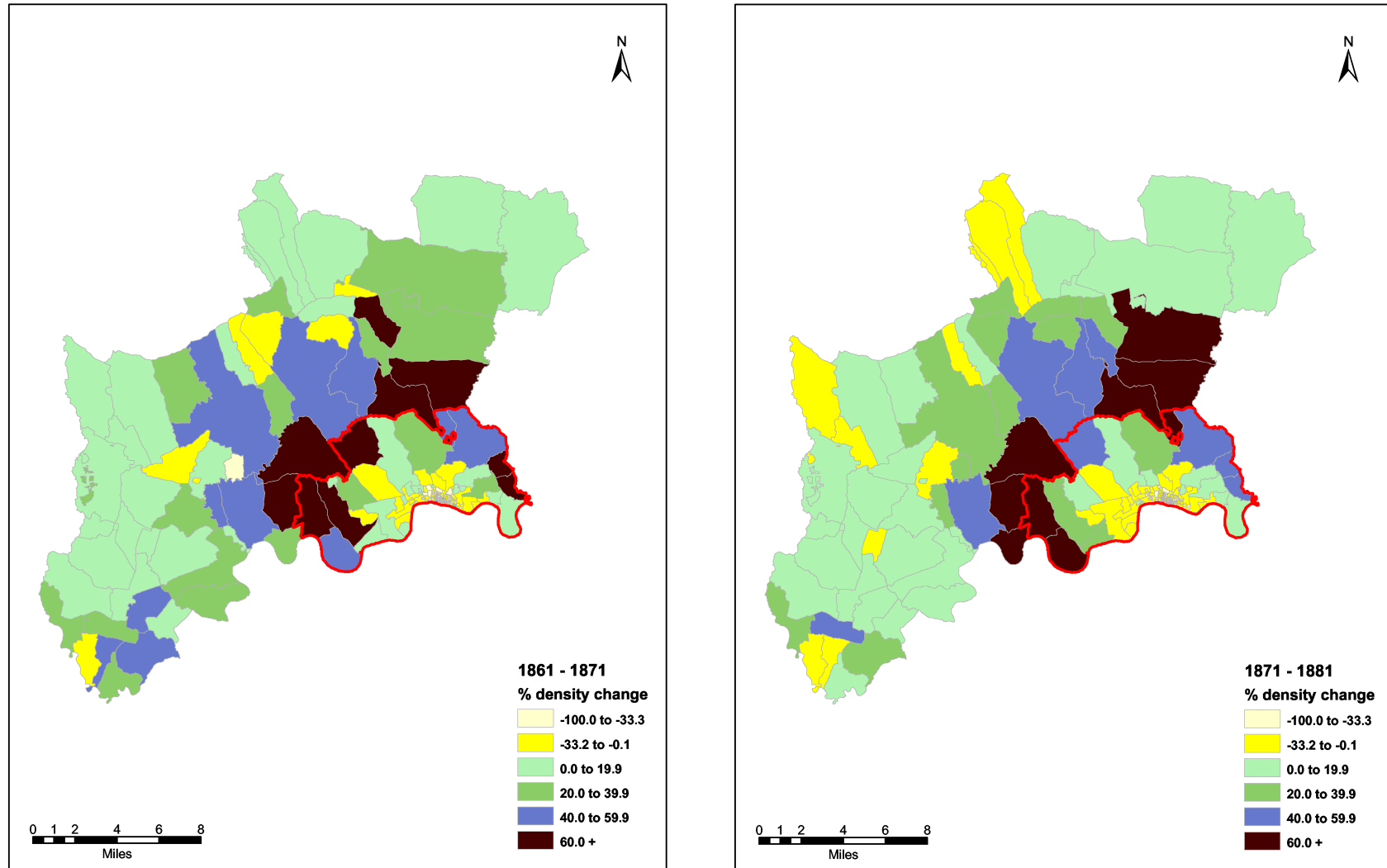


Figure 3.1 above supports the argument for labelling certain Middlesex parishes as metropolitan. In 1801, there was a stark difference between the population densities of most parishes within Census London North and those in Middlesex. There were two significant exceptions. From 1801 in Uxbridge and from 1821 in New Brentford, these parishes had denser populations than the rest of Middlesex until 1881. The towns of Uxbridge and New Brentford had developed some important characteristics of the economy of London, namely high, increasingly urban population densities. These were greater than even the densities of the Census London North parishes of Hampstead and Hammersmith in 1851. Even though Uxbridge and New Brentford were not adjacent to Census London North, they were thus becoming attuned to its development. As Figure 10.1 will show, both were sites at which an important waterway and a major turnpike road, supplying the city, converged.

By 1881, the overall picture of Middlesex population density had changed significantly. Most parts of Middlesex exhibited the same low-density characteristics, but Figure 3.1 shows that, alongside Uxbridge and New Brentford, there were eight other Middlesex parishes whose population densities had risen noticeably in the second half of the nineteenth century. It is true that they were still not nearly as densely populated as most districts within the city. A distinction must, therefore, be drawn between the urban population densities of the centre and the suburban densities on the edges of the metropolis. Even so, Ball and Sunderland have shown that, from the 1860s, Census London was growing at a slower rate than areas “on the fringes of the capital”.¹⁶

¹⁶ M. Ball and D. Sunderland, *An economic history of London, 1800-1914* (London: Routledge, 2001), 42.

Figure 3.2: Population density change in Middlesex and Census London North in the decades 1861-1871 and 1871-1881



Population density *change* is perhaps the best visual indicator of this, and Figure 3.2 above shows how the decades 1861-1871 and 1871-1881 witnessed falling populations for many central Census London North parishes. As the next chapters will argue, improved transport and the stimulation of development on the peripheries of the metropolis facilitated migration from the capital, helping to boost population densities within Middlesex. This strengthened both the economic and social ties that certain Middlesex parishes had with the city, drawing them into the orbit of the metropolis.

Dynamic population growth on the peripheries of the city, both in the Census London North parishes of Hampstead and Hackney, and more spectacularly in the areas of Middlesex that have traditionally not been considered as part of London, contributed tremendously to occupational change. Town economies were created out of villages and new settlements housed both the wealthy and less well-off migrants from the city and beyond. Population and occupation are thus inseparable and intrinsic to the following analysis of the male occupational geography of Middlesex.

Chapter Four: Nineteenth-century censuses

Despite the wealth of information within the censuses, this source is not without its complications. The 1851 Census is undoubtedly the most convenient source of population data because it lists decadal figures from the 1801 to 1841 censuses alongside data for 1851. The censuses of 1861, 1871, and 1881 list figures for that decade and the preceding census only. However, the summary tables do not *always* give information at parish level, and consequently a continuous data series for the population of every Census London North parish does not exist for the period 1801 to 1881. Instead, it has been necessary to create a data series for the population of a consistent set of spatial units at the lowest level of disaggregation. This has necessitated the amalgamation of some parishes and sub-parochial places, for which there are intermittent data, into somewhat artificial units that resemble as closely as possible the parishes, sub-districts, and districts that existed in this period. This solves the problems involved in trying to reconstruct the population totals for parishes and other places that were reconstituted, abolished, or created anew in the eighty-year period from 1801 to 1881. The resultant units will still be termed parishes, even though in actual fact they might encompass two, three, or possibly more parishes or sub-parochial places. This method of aggregating and disaggregating data bridges the gap between early- and late-nineteenth century census and ecclesiastical classifications of essentially the same physical areas. It is the most satisfactory way of dealing with the limitations on the comparability of nineteenth-century census data, since it means that there is no need to discard any population data and trends can be easily mapped.

The census occupational data for 1851 and 1881 derive from electronic databases. The former database provides information at registration district level while the latter

contains parish level data from census enumerators' books. The polished, computerised format of this source does not betray the numerous conceivable amendments, deletions, and insertions made by the census enumerator or his superiors at the Census Office. Original household schedules, which were filled in by respondents and collected by enumerators, do not exist for these parishes, so it is not possible to check the extent of editing. However, even though, as Mills and Schürer point out, the enumerators' books were "transcription[s] of an original document", they were nevertheless created contemporaneously and based directly on the returns of those collecting the data.¹⁷ Arguably, the occupational coding process described in Chapter Three is yet another stage in the kneading of the data, since decisions must be made concerning, for example, to which PST sub-sector a certain occupational title must be assigned. Nonetheless, these issues need not devalue the status of the censuses as primary source material. Firstly, without coding the occupations it would not be possible to deal with all of them. Secondly, in the census itself, mistakes were almost inevitable in such a large national operation, and there were bound to be illegible occupations and missing returns. Yet, there is no reason to doubt the integrity of the census clerks who were responsible for checking and standardising information. They were paid for their work, which was cross-checked, and they were required to be suitably educated, allaying worries that data may have been fabricated.¹⁸ Thirdly, while incomplete entries, misunderstood words, and fatigue are all factors of human error that are introduced when data from the enumerators' books are converted into electronic format, the impact of these ought to be minimised by

¹⁷ D. R. Mills and K. Schürer, "Communities in the Victorian censuses: an introduction", in *Local communities in the Victorian census enumerators' books*, eds. Dennis Mills and Kevin Schürer (Oxford: Leopard's Head Press, 1996), 5.

¹⁸ *Ibid.*, 2.

the fact that random error would tend to balance itself out between each occupation, sub-sector, and sector.

Finally, a fundamental advantage of using nineteenth-century censuses over other sources for information on occupation is their inclusiveness. The scope of the census was far greater than that of any local trade directory. The latter listed people according to business rather than occupation and consequently omitted a large part of the workforce. Trade directories may be of use, especially if one would like to investigate the nature of business activity in an area, but nineteenth-century censuses, which included the entire population, are far more comprehensive. Furthermore, one would expect that the recurring decennial process, directed by the same Registrar General for every census between 1841 and 1871 inclusive, led to a general improvement of census-taking techniques. Therefore, the reliability, scope, and specificity of the census give it a strong advantage over other sources.

Chapter Five: Nineteenth-century baptism registers

Following the passage of Rose's Act, parish clerks were required to record the occupation of the father of every baptised child.¹⁹ Many listed other details such as the date of birth, while not all clerks complied with the original requirements. The clerk in the Middlesex parish of Greenford failed to consistently record the occupations of fathers for the years 1813 to 1820, so for this particular parish, baptism data for the nearest eight-year period for which there are occupations (1821 to 1828) have been substituted in its place. This will not distort the entire dataset because it is a minor adjustment (amounting to one-half of one percent of all Middlesex coded occupations for this period), and it is preferable to excluding the parish from analysis altogether.

For the other Middlesex parishes, it was important that records across a relatively long period of eight years were collected, in order that the data would cover a representative range of the fertile adult male population. As a result, short-term price fluctuations that were not reflective of the general occupational structure, and which might have impacted on employment, do not have an appreciable effect on the data. This may sound like a trivial matter, but Schwarz's point about the debilitating weather in London in 1813 to 1814, which was "the worst winter of the nineteenth century", suggests that it is a justifiable concern.²⁰ This eight-year parish register period (1813 to 1820) will be signposted by the term c.1817.

They may contain occupational data, but how suitable are these baptism registers for the analysis attempted here? The main criticisms levelled by historians on the subject

¹⁹ 1812 Parochial Registers Act (52 Geo. III, cap. 146). The term parish clerk is used here throughout for convenience and includes any person charged with maintaining the registers.

²⁰ Schwarz, *London industrialisation*, 111.

of baptism register sources have centred on problems of under-registration.²¹ On its own, this is perhaps not a critical issue, since it is the occupational information that is of use, rather than the precise frequency of recorded baptisms or potentially discrepant details such as names and ages. As outlined earlier, population data from nineteenth-century censuses will be used to provide a sense of the demographic infrastructure upon which the occupational data may be laid, so under-registration does not appear to pose a problem.

However, the Middlesex and Census London North parish registers only recorded *Anglican* baptisms. Hence, male fathers of other denominations customarily do not feature in the data. It is difficult to measure with any degree of certainty how many Irish Catholic males laboured in different occupations until the 1851 census, but there is a case for arguing that there is a significant under-representation of Irish migrants in the data. The census recorded as many as 109,000 Irish-born in London in 1851, which amounted to 4.6 percent of the total population of the city.²² Then again, it is reasonable to assume that a large number of these immigrants arrived in the 1840s, at the time of the potato famine. The figure of 109,000 excludes second-generation Irish, but only around one-quarter would have been male and aged over 20, so the impact of under-registration in the c.1817 period in Census London North and Middlesex is likely to be small. Moreover, it is by no means self-evident that religious preference had a strong bearing on occupational structure. Current research on the surviving nonconformist baptism registers of Durham,

²¹ See for example J. T. Krause, "The changing adequacy of English registration, 1690-1837", in *Population in history: essays in historical demography*, eds. D. V. Glass and D. E. C. Eversley (London: Edward Arnold, 1965), 379-393.

²² Ball and Sunderland, *Economic history*, 52.

which had begun to note occupations at the end of the eighteenth century, may help to identify whether partiality is an issue.²³

There are, however, potentially compelling reasons why infant mortality could have contributed to under-registration. This would be a problem if under-registration had been disproportionately manifested in certain households over others. Higher infant mortality in urban areas in the nineteenth century has in the past been equated with the “disamenities” of urban living, and nowhere else in England was more urban than the metropolis.²⁴ Especially if, as Krause has argued, the time lag between birth and baptism increased in this period, infant deaths to fathers working in low-paid occupations could have resulted in the differential under-recording of these occupations over better-paid ones.²⁵ The rationale behind this is that, if one could afford to live in more salubrious surroundings, the chances of one’s offspring avoiding morbidity, surviving infancy, and living to be baptised would be higher. However, baptising newborn infants, even if they died within days of birth, was a legal requirement, so in theory this type of under-registration should not be a concern. Moreover, the Stamp Act, which placed a 3d. duty on every entry in each parish register, was repealed in 1794.²⁶ This removed the only existing tax on registration, so there was no obvious disincentive for those who could not afford to register the baptisms of their children. For these reasons, under-registration presents a much less serious problem than might have been expected.

²³ See S. Basten, “A Tale of Two Dioceses: Shute Barrington and Parish Register Reform in Sarum and Durham” (forthcoming); S. Basten “Non-Conformist and Corporation Registers and Historical Demographic Analysis: From Hindrance to Help”, paper presented in September 2005 at the Geography Department Graduate Workshop, University of Cambridge; S. Basten, “‘Feeble and puny as are the infants of the poor’: Using Barrington and Dade Registers to measure infant health in Northern England, 1777-1812”, paper presented in May 2004 at the Cambridge University Heraldic and Genealogical Society.

²⁴ Jeffrey G. Williamson, “Urban Disamenities, Dark Satanic Mills, and the British Standard of Living Debate”, *The Journal of Economic History* 41, no. 1 (1981): 79.

²⁵ Krause, “The changing adequacy”, 391.

²⁶ J. Charles Cox, *The parish registers of England* (London: Methuen, 1910), 11.

While this is the case, the authenticity of parish registers is generally taken for granted. Each baptism required the recorder's signature, and comparing the clerk's script in other places within the same register helps to authenticate entries. It is purely speculative but nonetheless justifiable to suggest that a person could desire to alter a baptism register. Then again, the provision to each parish church of an iron chest specifically for the purpose of storing the Rose's Act registers from 1813 impairs this hypothesis. Public access to baptism registers over a period of almost two centuries has exposed this source to the possibility of modern forgery, while the census data have been protected from this because of the 100-year rule on non-disclosure. Yet, it must be emphasised that there are very few instances of corrections on the baptism registers. Only an excessively high degree of cynicism would afford further contemplation about authenticity of the source along these lines. After all, ensuring not to take a cavalier attitude with regards to statistical data, the contrived recording of even a handful of occupations loses its significance in the wider context of the tens of thousands of genuine entries.

A more substantial criticism of baptism registers is that they under-represent domestic servants. In order to have one's occupation recorded, one needed to have a baptised child. Since this overwhelmingly involved married men, young male servants seldom appear in the data. The force of this criticism, however, is modulated by three factors. Firstly, the appearance of some male servants, noted variously as house steward, butler, and so on, implies that a not insignificant number of servants were recorded in the registers. Secondly, Schwarz's study has found that service was already fading as a male

occupation at the beginning of the nineteenth century.²⁷ Finally, the nature of baptism registers necessarily precludes the analysis of female and child employment, and it is these groups that were more likely to work as young servants.²⁸ To be sure, there are a number of other sources from which data on the occupations of women and children can be extracted and fruitful analysis attempted, but exploration of these falls outside the bounds of this investigation. The data taken from the censuses of 1851 and 1881 only relate to males aged over twenty. Combined with the baptism register sources, concerned as they are with fertile adult males, these sources remain comparable. All allusions to the collected data will only ever refer to these adult males.

Multiple occupations, where these appear in the baptism registers, have been omitted from the data altogether, and only the first stated occupation in each entry has been taken. While bi-employment is a topic worthy of continued investigation, the incidence of multiple recording of occupations throughout the registers is too infrequent to be of value.²⁹ In total, there are only 75 cases of multiple occupations recorded in the Middlesex baptism register data in c.1817. This represents less than one-third of one percent of all baptism entries. A similarly insignificant number, amounting to less than two-fifths of one percent of all entries, occurs in the Census London North database for c.1817. Most of these are accounted for by the entry of painter and glazier, which are anyway aggregated into the same sub-sector of construction. Therefore, although part-time work, underemployment, and the incidence of cross-sectoral employment are

²⁷ Leonard Schwarz, "English servants and their employers during the eighteenth and nineteenth centuries", *The Economic History Review* 52, no. 2 (1999): 252.

²⁸ Ibid.

²⁹ L. Shaw-Taylor, "Regions and structural change: a new view of the industrial revolution in England, 1750-1880", paper presented in November 2005 at Trinity Hall, University of Cambridge.

demonstrably noteworthy issues that relate to the timing of structural change within the economy, baptism registers are inadequate for this particular purpose.

A final deficiency within the baptism register data is their ambiguity over labourers. Nineteenth-century labourers may have worked in the agricultural sector or within other industry, and it is likely that some worked in both, depending on the season or the vicissitudes of the economic cycle. Occasionally, entries specified that a labourer worked on the farm, in the powder mills, or at the copper fields. However, not all parish clerks were sufficiently fastidious, and it is uncommon to find such detailed recording. This is reasonable, since clerks were not concerned with the structure of local and national demand in the economy in the same way as are historians writing nearly 200 years later. Consequently, another method must be employed in order to correct the data in view of this defect. In “An Occupational Census of the Seventeenth Century”, the Tawneys encountered a similar problem, with which by their own admission they dealt “somewhat arbitrarily”.³⁰ Dispersing all labourers outside of the three largest towns of Gloucestershire to the category of agricultural employment was an artificial division, albeit perhaps necessary due to the limitations of their data.

A more nuanced solution is required for the baptism register data. The 1831 census, although it lacked in its interrogation the more systematic nature of censuses from 1841 onwards, nevertheless provides basic data on male employment. Crucially, it lists this information at parish rather than district level as in the 1851 census. Hence, in the absence of other sources that hint at the agricultural/non-agricultural mix within the labourer population in c.1817 at parish level, the ratios between labourers in different

³⁰ A. J. Tawney and R. H. Tawney, “An Occupational Census of the Seventeenth Century”, *The Economic History Review* 5, no. 1 (1934): 32.

sectors in 1831 can be projected backwards onto the c.1817 period. Formerly anonymous labourers can thus be assigned a PST sector. Since Middlesex did not possess a mining industry, and only one specified coal labourer appears in the Middlesex register data out of a total of 22,310 coded entries, a Middlesex labourer identified in 1831 as non-agricultural may be considered a de facto secondary sector worker, thus circumventing a potential difficulty.

There is, of course, every reason to believe that the 1831 ratio between agricultural and non-agricultural labourers did not remain static over as long a period as c.1817 to 1831. But this ratio does not pretend to be precise. The method above is a demonstration of a corrective, used to improve the utility of imperfect data. It may well over-compensate the primary sector or exaggerate the number of industrial labourers, but the technique chosen at least ensures that data are adjusted on a consistent, parish level basis. In fact, after this method is applied, the results are what one would expect, given the arguments in Chapter Three. The proportion of agricultural labourers declined continuously from c.1817, along with farming occupations, while the relative number of industrial labourers increased at each data point from a low level in c.1817.

This account of the methodological process has demonstrated that, by identifying problems and lacunae within the sources, and by tackling these without dismissing the data, one can greatly enhance the effectiveness of baptism register data. Beginning with an analysis of the primary sector, the following chapters of this investigation will examine the sources in conjunction with each other, in order to explore the dynamics of Middlesex occupational change.

Chapter Six: The Middlesex primary sector and the rise of market gardening

In the early nineteenth century, agriculture was the predominant source of employment across a whole swathe of parishes, cutting across from west to northwest Middlesex. The first map of Figure 6.1 below illustrates the size and geographical spread of the primary sector in c.1817. In total, agricultural employment accounted for more than half of all occupations in 24 of the 57 Middlesex parishes. On top of this, agriculture occupied more than 40 percent of males in 13 further parishes. Despite its uneven concentration, agriculture was a major employer in c.1817. In contrast, the first map of Figure 6.2 below presents the occupational structure of Middlesex and Census London North at the end of the nineteenth century. In 1881, agriculture occupied a majority of males in only seven out of 57 Middlesex parishes, while in ten parishes agriculture appeared to retain only a vestigial presence. This process of transformation is the subject of this chapter.

Figure 6.1: The primary sector of Middlesex and Census London North in c.1817 (left); The population density of Middlesex and Census London North in 1821 (right)

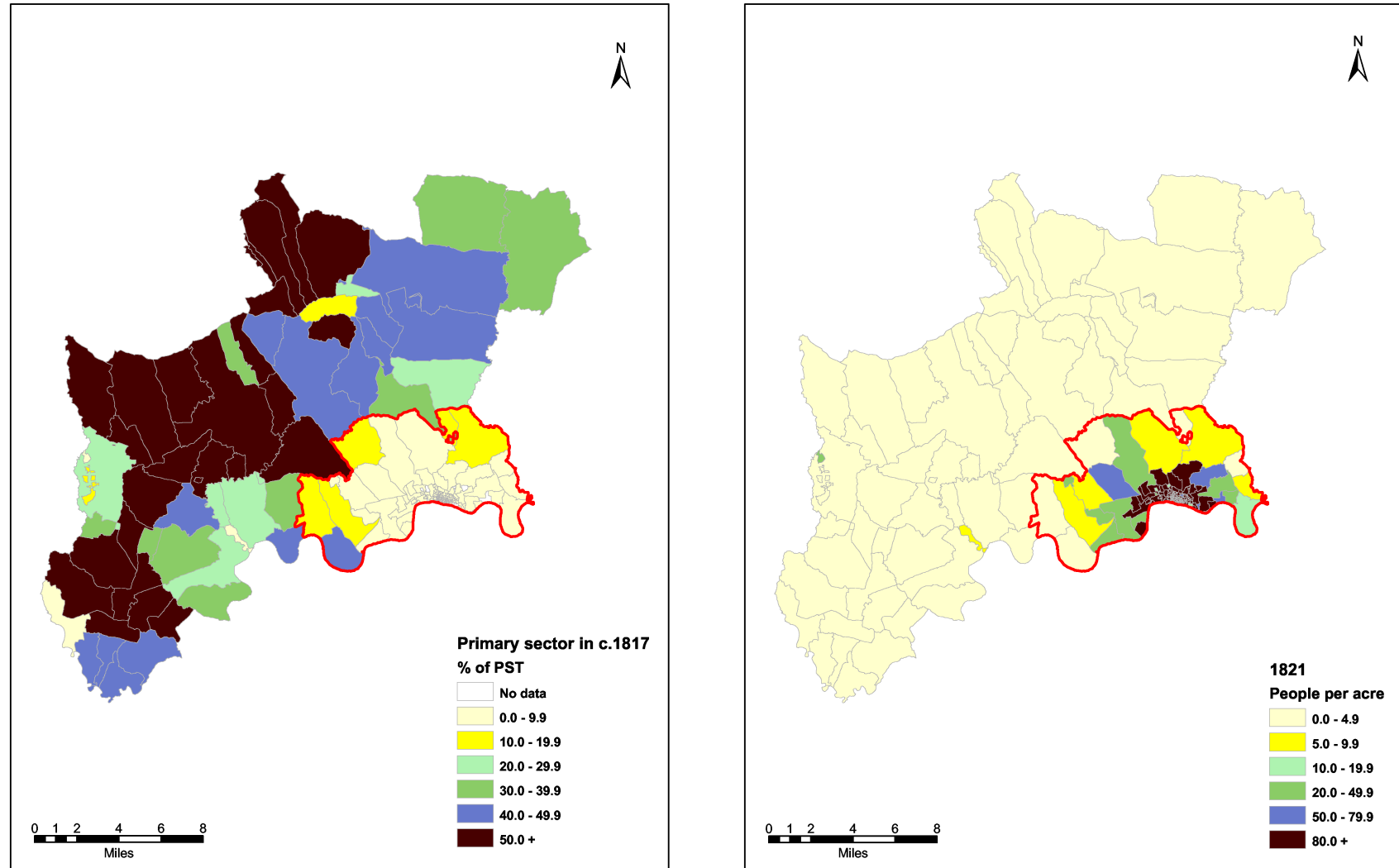
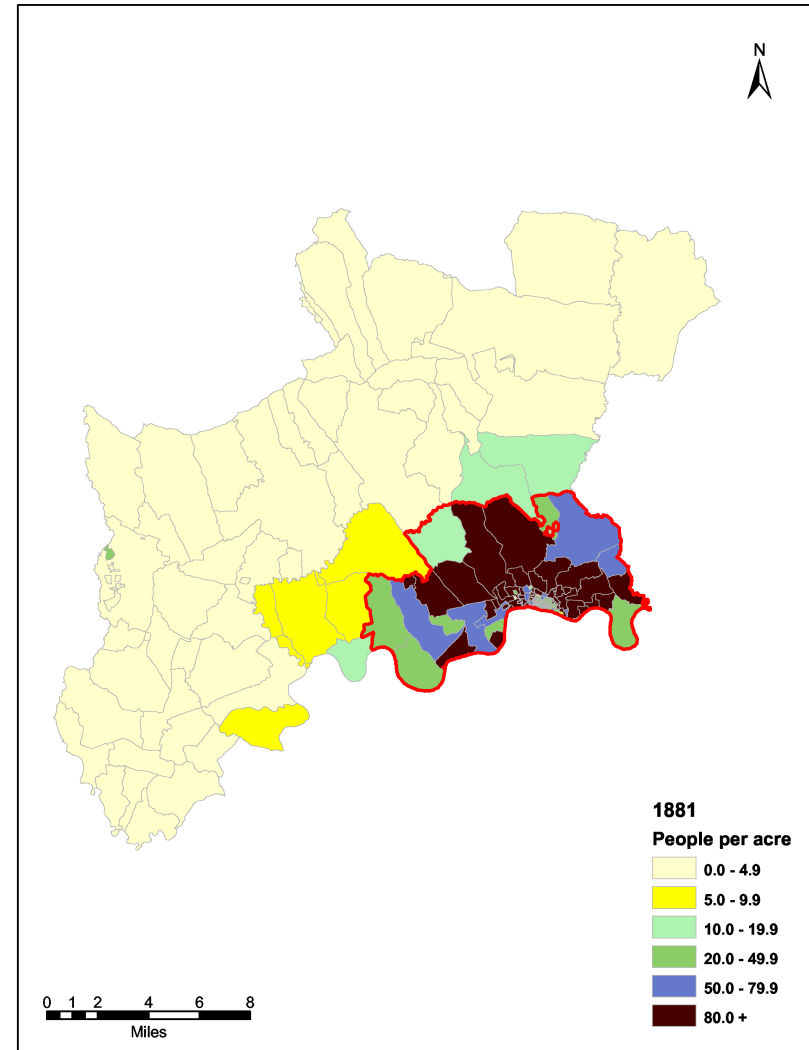
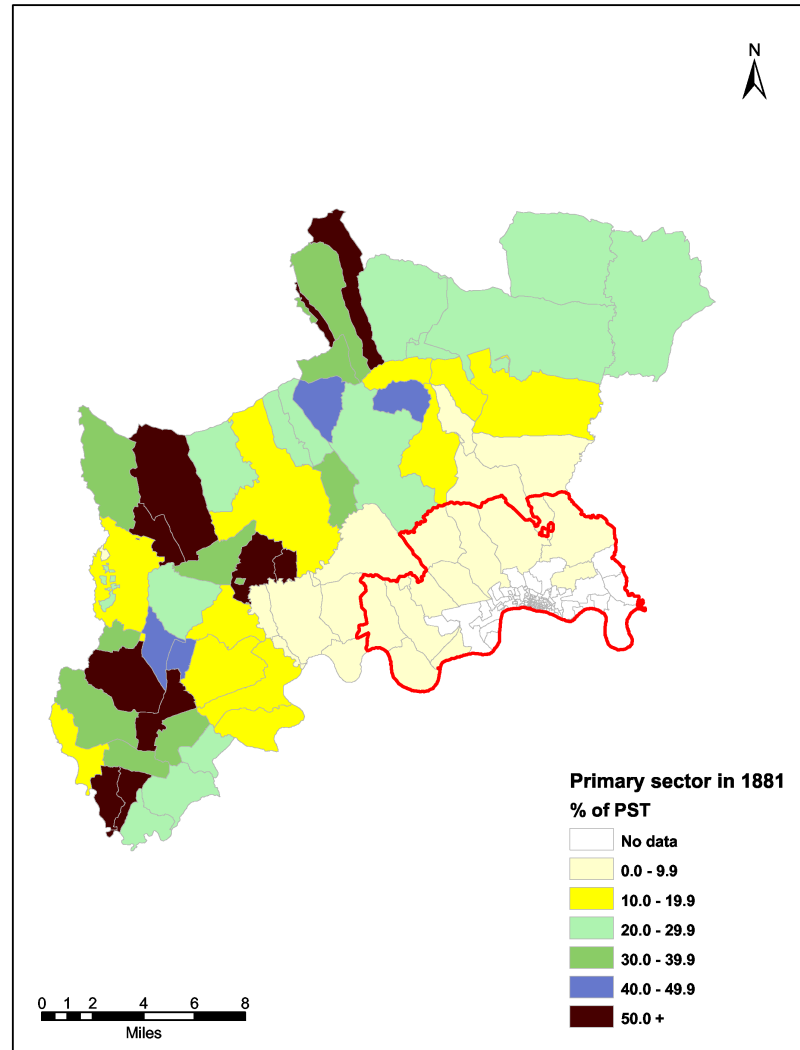
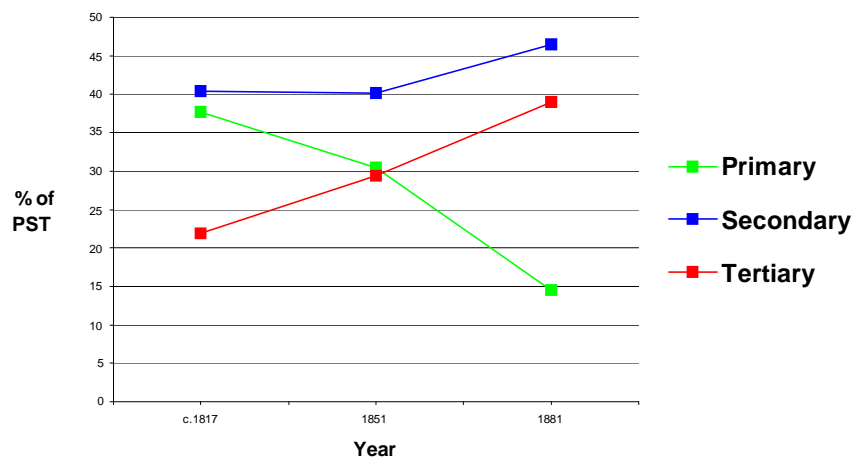


Figure 6.2: The primary sector of Middlesex and Census London North in 1881 (left); The population density of Middlesex and Census London North in 1881 (right)



Wrigley has estimated that, in 1821, 35.3 percent of the English adult male population aged between 20 and 69 were employed in agriculture.³¹ In this investigation, of the 22,310 identifiable occupations recorded in Middlesex for c.1817, 8,421 have been coded as agricultural. This figure would suggest that 37.7 percent of occupied males were making a living within agriculture, and it is in line with Wrigley's average. Middlesex did not have the same reputation as the agricultural county of Hertfordshire, which was “the best corn county in England”.³² But with more than one-third of all males engaged in farming, gardening, and similar occupations, it is apparent that much of the county was at the beginning of the century heavily rural. Not only was this the case, but also this rural population of Middlesex was expanding in absolute terms.

Figure 6.3: Adult males in each Middlesex PST sector in the nineteenth century



³¹ Wrigley, *Poverty*, 124.

³² Michael Robbins, *Middlesex* (London: Collins, 1953), 36.

Figure 6.3 above summarises the occupational structure of Middlesex in the nineteenth century. Insofar as it is relevant to the Middlesex primary sector, it characterises a continuous fall in agricultural employment across the nineteenth century. However, it only displays the occupational *structure* and not the total composition of the male workforce. As such, it does not depict the expansion in agriculture. While the relative number of males employed in the primary sector fell by 7.3 percent between c.1817 and 1851, the absolute number of all males in Middlesex increased by approximately one-third between 1821 and 1851. It is clear, then, that the number of males in agriculture rose in absolute terms between c.1817 and 1851, in spite of the relative decline of the primary sector. This absolute growth provides evidence for the argument that agriculture was still developing in the first half of the nineteenth century rather than receding, and this would surely be attributable in great part to the demand issuing from the tremendous growth of population in both Middlesex and London.

If agriculture persisted as a significant occupier of labour, could these data lend credibility to the view that the environs of London contributed little to British industrialisation in this period? After all, the continued existence of agriculture meant that farmers and labourers, who could have been contributing to industrial growth, were instead still working on the land. Did London in the nineteenth century inhibit the development of its hinterland by playing an active role in perpetuating and even encouraging the continued existence of the Middlesex primary sector? In fact, this was not at the expense of the development of secondary and tertiary sectors, since these did expand in many parishes; this will be investigated in the following two chapters. Without doubt, the agriculture that remained would need to have been highly productive and

specialised in order to compete with other sources of primary produce in satisfying the demands of the swelling metropolitan population. Fisher's pithy understatement referring to the early modern period, that "London had to be fed", clearly held true for the nineteenth century, as the level of migration to the metropolis continued to spiral upwards.³³

The trend of increasing numbers employed within agriculture continued between 1851 and 1881, but this rise was far more modest. Despite more than halving as a total proportion of PST, the agricultural sector witnessed an absolute increase of 1,366 occupations. The parishes of Ruislip, Harmondsworth, Laleham, Littleton, and Shenley remained as agricultural enclaves, yet their occupational structures were now exceptional in their rarity. According to Robbins, "the age of high farming in Middlesex lasted well after the 1870s, which marked the beginning of its decline in most of England".³⁴ This interpretation is debatable on the evidence of sectoral analysis alone, so in order to more fully investigate primary sector developments, it is necessary to distil data from individual sub-sectors.

³³ F. J. Fisher, "The Development of the London Food Market 1540-1640", *The Economic History Review* 5, no. 2 (1935): 64.

³⁴ Robbins, *Middlesex*, 40.

Figure 6.4: Selected adult male primary sector occupations in Middlesex in the nineteenth century

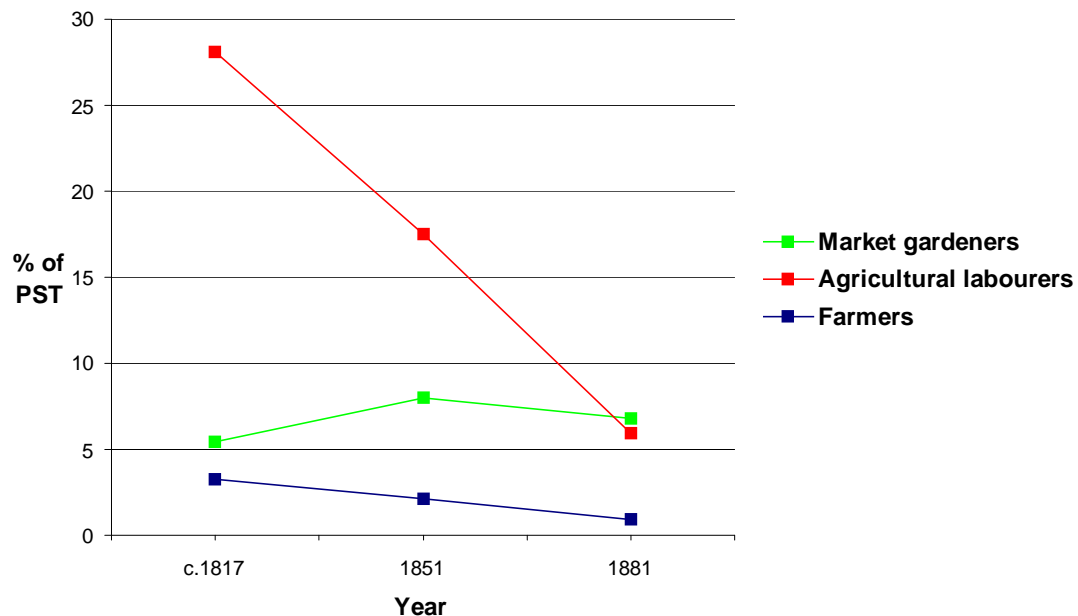


Figure 6.4 above shows a graph with three of the commonest agricultural occupations in nineteenth-century Middlesex. At each of the data points, the selected categories together accounted for at least nine-tenths of total primary sector employment and are therefore representative of the primary sector. When displayed graphically, it is not difficult to locate the most conspicuous change. Employment of agricultural labour declined steeply and continuously throughout the nineteenth century. The labourer problem has been identified in Chapter Five, but contributing to this was the fact that the censuses of 1851 and 1881 were specifically held in late March and early April respectively. This was in order to avoid the time of year when part-time labourers were likely to be absent from home, since they would have shifted occupations for the harvest season. They are consequently missing from the data; nonetheless, coupled with the decline in the relatively immobile occupation of farmers, without whom agricultural

labourers logically could not have found employment, the magnitude of the decline in agricultural labour is great enough to indicate enduring change within the occupational structure of Middlesex.

Only one sub-sector, market gardening, showed any signs of relative growth, despite a fall from 1851 to 1881. This form of employment produced top quality fruits and vegetables for sale at the market. While the overall percentage increase between c.1817 and 1881 may seem trifling, market gardening had come to represent almost one-half (46.6 percent) of Middlesex agriculture in 1881, compared with one-seventh (14.4 percent) in c.1817. Figure 6.4 therefore underscores the importance of investigating further the growth in this sub-sector.

The increased employment in market gardening between c.1817 and 1881, significant when measured against other waning agricultural jobs, represented a fundamental activity that propelled the dynamism of Middlesex agriculture and held up its drastic decline, illustrated in Figure 6.3, in the face of the accelerated development of secondary and tertiary employment. Market gardening easily surpassed haymaking, for which Middlesex had earlier been famed, and although Garrett has drawn attention to cow-keeping, the main point of interest as evidenced by PST analysis is Middlesex horticulture.³⁵ This is because even if one supposes that *all* agricultural labourers had been haymakers, market gardening would still have been statistically more significant in 1881. According to Wrigley's published PST tables for the 1851 census, market gardening accounted for 5.8 percent of adult male primary sector occupations (excluding mining) in England.³⁶ In Middlesex in 1851, there were 2,993 market gardeners, who

³⁵ A. J. Garrett, "Geographical Development in North-West London", *Geography* 24, no. 1 (1939): 41.

³⁶ Wrigley, *Poverty*, 166.

together represented more than one-quarter (26.3 percent) of the primary sector. Market gardening was therefore several times more highly concentrated as a proportion of agriculture in Middlesex in 1851 than it was throughout the rest of England. The growth of the city had prompted increased specialisation here, and this underlines the symbiosis between the county and the metropolis, as production in the former was geared towards the needs of the latter. London was developing its hinterland.

This phenomenon is apparent in Figures 6.1 and 6.2. Figure 6.1 as a whole demonstrates without the need for further statistical analysis the negative correlation between population density and the incidence of agricultural employment. In almost all parishes where there was any agricultural employment above 10 percent in c.1817, there was a corresponding low population density in 1821.³⁷ Conversely, and this applies to all of Census London North, in parishes where agriculture was negligible (below 10 percent), population density was above 4.9 people per acre. This link between primary sector employment and population density, which is consistent with the principles behind PST identified in Chapter Three, is the most convincing measure of the size of the metropolis.

Figure 6.2, which shows the Middlesex and Census London North primary sector in 1881 alongside population density in 1881, corroborates this link. There were ten *Middlesex* parishes that contained less than 10 percent of males in the primary sector. The secondary and tertiary sectors of these parishes are also important in occupational analysis, but it is important to note their paltry agriculture. Market gardening, which was

³⁷ In c.1817, the two exceptions to this observation (Kensington and Hackney, both in Census London North) had low primary sector percentages of 14.1 percent and 14.7 percent respectively, so whilst they are anomalous, their PST proportions are broadly in line with the argument above.

attuned to the changing nature of demand for primary products, accounted for most of what few agricultural occupations were left.

Table 6.1: Adult male market gardeners in Middlesex in 1881

Parish	Market gardeners	Market gardeners as a percentage of all Middlesex market gardeners
Tottenham	494	8.2
Edmonton	453	7.5
Ealing	391	6.5
Isleworth	362	6.0
Enfield	341	5.6
Twickenham	301	5.0
Hornsey	300	5.0
Finchley	272	4.5
<i>Rest of Middlesex (49 parishes)</i>	<i>3,147</i>	<i>51.9</i>
<i>Middlesex total</i>	<i>6,061</i>	<i>100.0</i>

Table 6.1 above takes the top eight parishes in terms of their contribution to market gardening in 1881; together, they contained virtually one-half of all market gardeners in Middlesex. These parishes were not rural: none was singled out earlier in this chapter as one of the 24 most agricultural parishes in c.1817, and none was highly agricultural in 1881. Tottenham features prominently and so do two other parishes which this investigation argues were metropolitan, Ealing and Hornsey. Figure 6.2 suggests that parishes such as Edmonton and Isleworth were on the cusp of being enveloped by the metropolis in 1881, since the former had a compact agricultural sector (but still not a high enough population density) and the latter boasted a high population density (but not a small enough agricultural sector). The first six named parishes in Table 6.1 had navigable waterways running through or alongside their boundaries, and Finchley was well served by a road of the same name, built in the early nineteenth century. Garden produce had to

be distributed, and these parishes were all strategically located near to the capital and its communications routes. The theme of transport will be discussed later in this investigation, but this point highlights the interdependence not just of Middlesex and its overgrowing neighbour (the city), but also of different sub-sectors within the economy.

The implications of this analysis are telling. The metropolitan Middlesex parishes of Tottenham, Ealing, and Hornsey possessed some of the most specialised agriculture that was left in Middlesex. Yet, they were not underdeveloped in the process. Their populations had expanded (eightfold in the case of Tottenham, from 1821 to 1881), and as subsequent chapters will argue, these metropolitan parishes had become the dormitory, industrial, and service suburbs of the metropolis. The rest of Middlesex was not all rural and under-developed, since the primary sector remained strong only in those few Middlesex parishes which had not experienced impressive population increases, and which represented relatively small pockets of general agriculture.

This discussion of primary sector occupations, based on the adjusted baptism register and reliable census data, has demonstrated the influence of the city on the foundations of suburban growth. The occupational structure of one area need not have been replicated in a contiguous part of the county for it to be tied inextricably to its development, especially if regional communications developments were already so much improved by the middle of the nineteenth century. Retailers and farmers from outside of Middlesex increasingly met London's dairy needs, and horse power, with its demand for hay, had begun to give way to trains.³⁸ In this way, the production of fruits and vegetables helped to service the increased demand of the population of Census London as well as the increased numbers who were migrating to its suburban quarters. The city did

³⁸ Ball and Sunderland, *Economic history*, 125.

not otherwise hamper the development of these suburbs, since some concomitantly housed market gardeners, professionals, and industrial workers, the latter of whom contribute to the discussion in the next chapter.

Chapter Seven: The Middlesex secondary sector and the Industrial Revolution

This chapter will deal with changes in secondary sector occupations in the county. Industrial development in nineteenth-century Middlesex has been a neglected subject of historical study; instead, the focus has been on the twentieth century.³⁹ This is to some degree understandable. Firstly, the writing of economic geography has been better served by the detailed industrial statistics of the post-1918 period, while the nineteenth-century census data at parish level have until now been largely indigestible. Secondly, the sprawling nature of the development of the metropolis and the acute post-1945 problems of housing and local government, combined with anxieties about the decline of manufacturing, have drawn attention towards more recent changes in the landscape of London and the Home Counties. What is more, those writing histories of the nineteenth-century Industrial Revolution have been preoccupied with a certain type of industrial change in the North and the Midlands.⁴⁰ This has been to the detriment of the investigation of the continued expansion of London, which in 1851 was still

the largest manufacturing town in Europe, where the number of men and women involved in manufacturing was almost equal to the entire population of Liverpool, the second largest city in Britain at the time...⁴¹

³⁹ See for example Douglas H. Smith, *The industries of Greater London: being a survey of the recent industrialisation of the northern and western sectors of Greater London* (London: P. S. King, 1933).

⁴⁰ See for example Steven King and Geoffrey Timmins, *Making sense of the Industrial Revolution: English economy and society, 1700-1850* (Manchester: Manchester University Press, 2001).

⁴¹ Leonard Schwarz, "London 1700-1840", in *The Cambridge urban history of Britain*, ed. Peter Clark, 3 vols (Cambridge: Cambridge University Press, 2000), 2: 670.

Recently, historians have begun to rehabilitate the role of London during the Industrial Revolution period.⁴² In what follows, an attempt will be made to address the neglect of Middlesex and the metropolitan parts of this county.

It is important first to clarify what the terms industrial occupation or industrial parish mean. In the PST classification, the secondary sector encompasses all manufacturing and processing industries. Grouped together with what may be termed light industries, such as printing and clothing, are heavy industries such as metal manufacture and engineering. Some of these industries were more suited than others to factory-based organisation and comprised larger firms, but all involved working raw materials into semi-finished or finished products, so their categorisation as industries is consistent with the principles behind PST. A parish will be considered industrial if more than half of its population was recorded as being occupied in secondary sector occupations.

Figures 7.1 and 7.2 below present the distribution of the secondary sector across Middlesex and Census London North in c.1817 and 1881. Alongside each of these is the corresponding map of the population density in 1821 and 1881.

⁴² Leigh Shaw-Taylor, "A hidden contribution to industrialization? The male occupational structure of London c.1817-1871", <<http://www.geog.cam.ac.uk/research/projects/occupations/abstracts/paper3.pdf>> (last accessed 21 April, 2006), 2.

Figure 7.1: The secondary sector of Middlesex and Census London North in c.1817 (left); The population density of Middlesex and Census London North in 1821 (right)

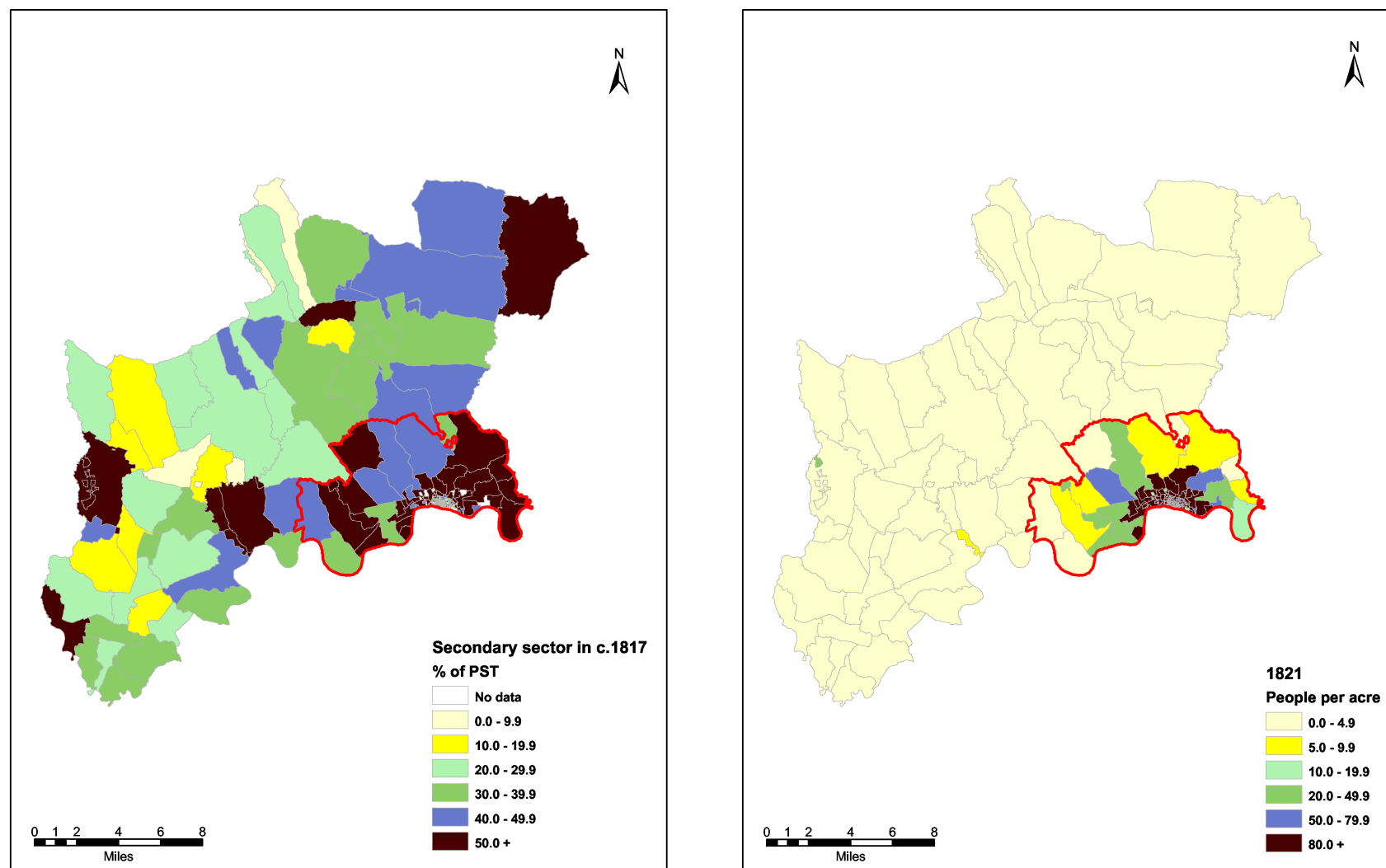
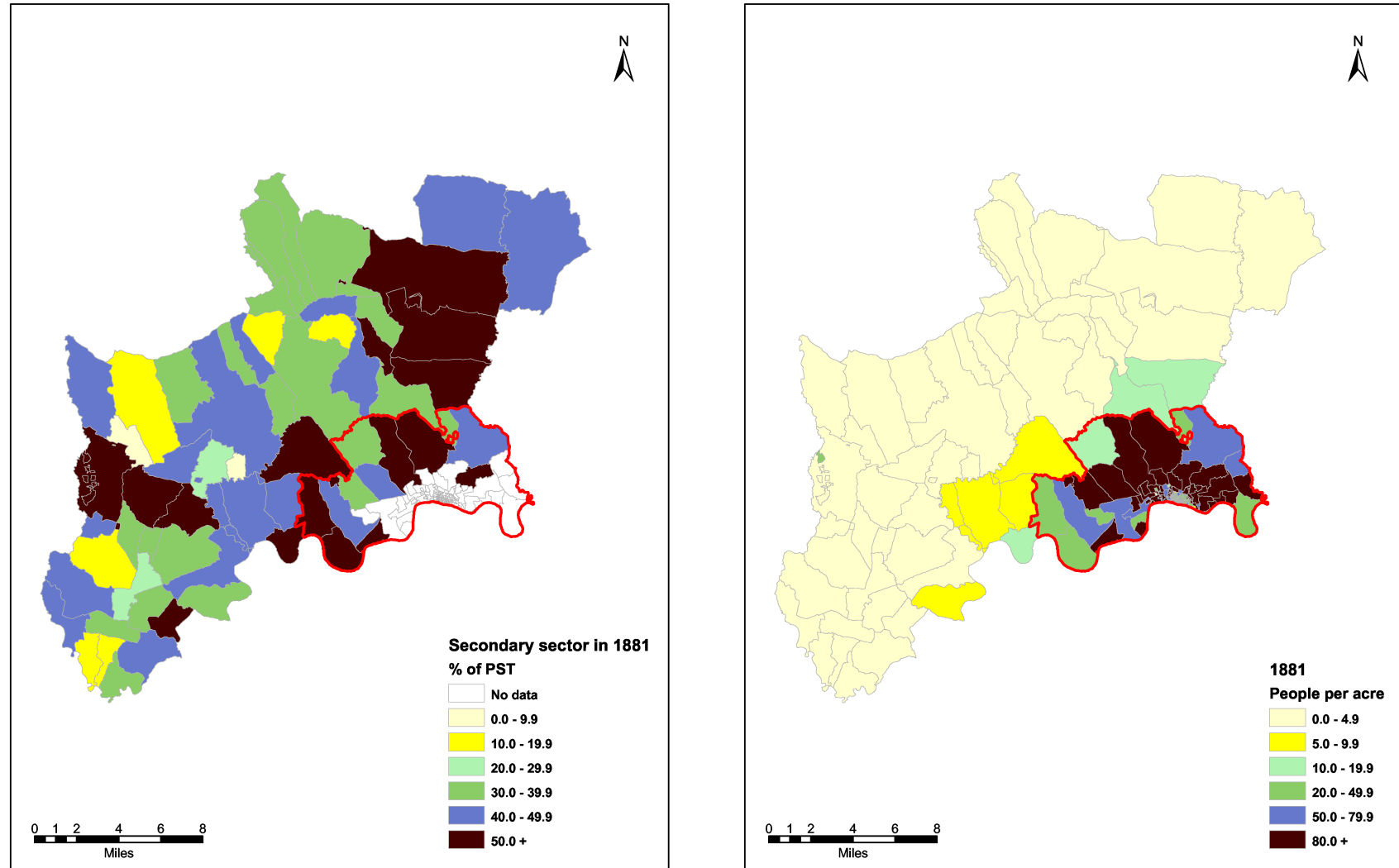


Figure 7.2: The secondary sector of Middlesex and Census London North in 1881 (left); The population density of Middlesex and Census London North in 1881 (right)



A comparison of these maps elicits the transformation of north and west Middlesex from a low to a higher level of secondary industry. The PST maps illustrate how 34 out of 57 parishes saw rises in the proportion of their secondary sectors in the nineteenth century, and of these, twelve were clearly industrial parishes in 1881. Significantly, by 1881, very few parishes were characterised by village-type economies with very small secondary sectors, unlike in c.1817.

But in Figure 7.1, some west and northeast Middlesex parishes already had high proportions of males in the secondary sector. Yet, their population densities still had not exceeded 4.9 people per acre. This suggests that the secondary sector could flourish where population density was still relatively low. Enfield and Edmonton in the northeast, and Hayes, Hillingdon, and Cowley in the west, were sparsely populated in comparison with the metropolitan Middlesex parishes of Willesden and Chiswick. It is possible that there were dense pockets of population in these parishes, which, in the data, have been masked by rural parts within the same parish. It could prove useful (though laborious and perhaps ultimately unproductive) to investigate occupations at street level, using census enumerators' books. But on the basis of these findings at parish level, the correlation between population density and secondary sector employment appears weaker than it did for the primary sector in Chapter Six. This is partly due to the fact that, as the primary sector receded, the secondary sector tended to compete with tertiary sector employment. The graph in Figure 6.3 shows that, although the secondary sector rose at a similar pace to the tertiary sector between 1851 and 1881, *services* took off in the first half of the nineteenth century. The defining aspect of the Middlesex secondary sector in the first half of the nineteenth century was its relative stability. As Wrigley has pointed out, this type

of development is in contrast to the standard account of rising employment in industrial occupations during the Industrial Revolution period.⁴³ Could it be that the Industrial Revolution bypassed Middlesex, as Hammond argued it did London?

Figure 7.3 below gives a graphical overview of the Middlesex secondary sector. Intra-sectoral change was muted until after 1851. Only the seven largest industrial occupations in 1881 have been selected, but the most striking feature of the secondary sector between 1851 and 1881 was the rise in the building and construction industry (hereafter referred to as construction), represented at half of its actual level.

⁴³ E. A. Wrigley, "English county population totals in the later eighteenth century", paper presented in October 2005 at a HPSS seminar, Department of Geography, University of Cambridge.

Figure 7.3: Selected adult male secondary sector occupations in Middlesex in the nineteenth century

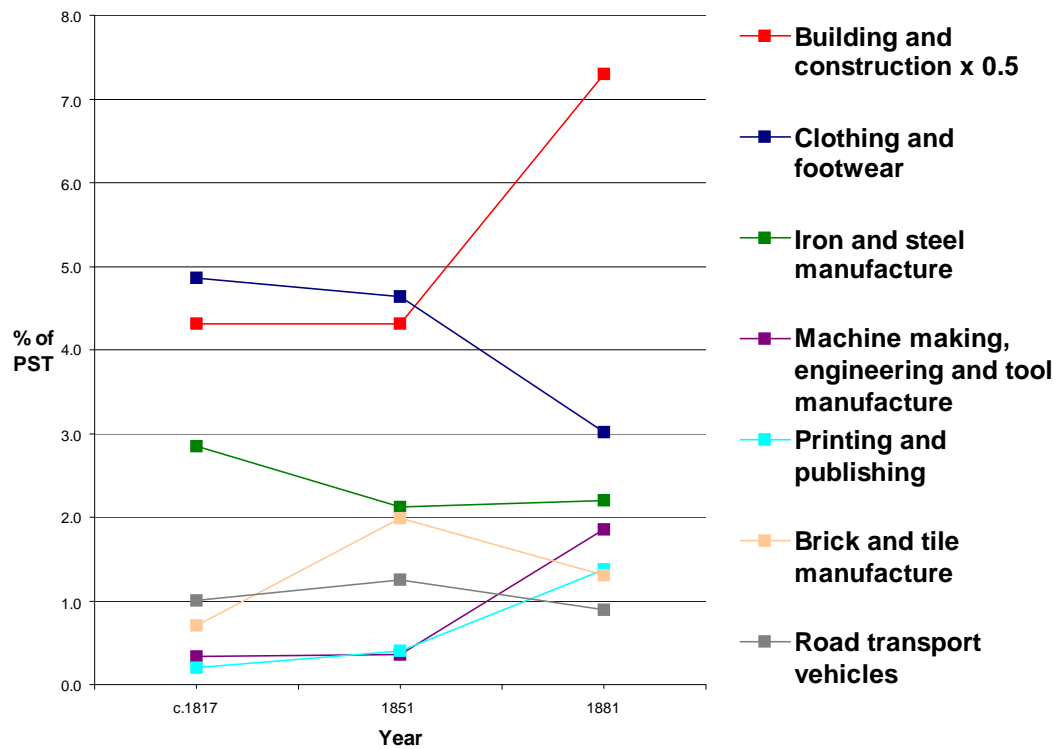


Figure 7.3 shows how construction occupations spiralled upwards after 1851. In Figure 6.3, the secondary sector in Middlesex rose by 6.3 percent between 1851 and 1881. The rise in construction alone contributed to almost two-fifths (37.2 percent) of overall secondary sector growth between these two dates, excluding spin-off benefits for the stimulation of other industry and trade. No other industry came close to having such an effect, so construction requires more focussed analysis.

Table 7.1: The concentration of adult males in Middlesex construction in the nineteenth century

Parish	Males in construction in c.1817 as a percentage of all Middlesex construction	Males in construction in 1881 as a percentage of all Middlesex construction
Tottenham	6.2	18.0
Willesden	0.8	10.6
Edmonton	6.9	7.0
Ealing	9.7	6.6
Acton	1.2	5.6
Chiswick	3.3	5.5
Finchley	1.9	3.0
<i>Rest of Middlesex (50 parishes)</i>	<i>70.0</i>	<i>43.7</i>
<i>Middlesex total</i>	<i>100.0</i>	<i>100.0</i>

Table 7.1 above highlights how construction jobs came to be concentrated in some of the fastest growing parishes in Middlesex. In c.1817, no single parish stood out above the others, and 70 percent of all construction occupations were scattered throughout another 50 Middlesex parishes. But by 1881, more than half of all Middlesex construction was clustered in the seven parishes named in this table. The very location of these parishes (all but Edmonton and Ealing were adjacent to Census London North) contributed to the growth of construction, as the population of the city filled outwards and Middlesex attracted migrants. Indeed, it ought to be noted that Tottenham and Willesden were two of the four fastest growing parishes in all of England and Wales in the 1880s.⁴⁴ The removal of taxes on bricks (1850), glass (1860) and timber (1866) no doubt gave the construction industry a nation-wide impetus, and this was strongly pronounced in the increasingly metropolitan parts of Middlesex.⁴⁵ Expanding populations

⁴⁴ Anthony S. Wohl, *The eternal slum* (London: Edward Arnold, 1977), 285.

⁴⁵ Ball and Sunderland, *Economic history*, 169.

demanded increased housing, and land outside of London was both plentiful and cheaper than within. The impact of population change therefore attracted more extensive construction development as well as thousands of workers' families to these areas.

However, in any of its different guises, namely carpentry, plastering, and other trades, construction was very much a traditional industry in that it did not stand out as one of those characterised by technical innovation. It is missing altogether from the otherwise comprehensive *Atlas of industrializing Britain 1780-1914*, which nevertheless explores the spatial distribution of much smaller and less significant industries such as leather footwear and brewing.⁴⁶ But without construction, much of the modern building that accompanied ribbon development in Middlesex (and elsewhere in the country) could not have taken place. This included not only the construction of cheap housing for the workers' families mentioned above, but also the building of many hospitals and schools on the fringes of the metropolis. Construction in the Industrial Revolution period does not have the same status as textiles or engineering, but like high-value horticulture, it represented another industry that made an appreciable contribution towards the growth of the metropolis in the second half of the nineteenth century. Change was located in specific parishes which contributed disproportionately more to this industry and which represented the growing peripheries of the metropolis.

While construction continued to lead the Middlesex secondary sector, brick and tile manufacture (hereafter brick-making) appears to have subsided from mid-century. Robbins has pointed out that the brick-earth of Middlesex was a natural catalyst for the

⁴⁶ John Langton and R. J. Morris, eds., *Atlas of industrializing Britain 1780-1914* (London: Methuen, 1986).

growth of this industry, and this was certainly true for the early nineteenth century.⁴⁷ Cowley, Ealing, Hillingdon, and Uxbridge housed between them more than four-fifths (84.5 percent) of all brickmakers in Middlesex in c.1817, and there was growth in these industrial occupations between c.1817 and 1851 from the evidence of Figure 7.3. By 1881, the four parishes named above, along with the neighbouring industrial parishes of Norwood and Hayes, also within the registration district of Uxbridge, maintained their advantages in brick-making. But the industry was contracting as a proportion of PST. Unlike construction, which was a mobile industry that could expand wherever demand permitted, brick-making remained fixed in west and southwest Middlesex.

This remained the case because of specific locational advantages. Figure 10.1 sets out the transport networks of Middlesex in the nineteenth century. Brick-making was the chief industry of the small parish of Norwood. Significantly, this was the place at which the Grand Junction Canal branched into two, with one offshoot serving west Middlesex and Census London North and the other snaking its way southwards into the Thames. Norwood was therefore well positioned to cater for demand for bricks. On top of this, a major turnpike (the London-Oxford Road) ran through the middle of the parish. A similar convergence of transport connections is evident in the parishes of Cowley and Hillingdon, which were strong brick-making areas. Such communications lines, even before the railways, reinforced the advantages these Middlesex parishes shared, enabling them to maintain their industry. Parishes such as Norwood, Cowley, and Hillingdon still possessed not inconsiderable primary sectors and were too lightly populated to be considered metropolitan, but at the same time they were clearly not the stagnant backwaters of the metropolis.

⁴⁷ Robbins, *Middlesex*, 48-9.

The PST maps offer no direct link between nineteenth-century brick manufacturing in west Middlesex and the construction industry in emergent suburbs such as Tottenham and Hornsey. However, it is plausible that, before the railways made transportation of producer goods between north and west Middlesex easier, materials used by the construction industry were transported from west Middlesex through London and into the booming parishes of near west and near north Middlesex. Ultimately, Dauntton's argument of brick production moving out from Middlesex and into Bedfordshire cannot be fully tested without collecting data from Bedfordshire.⁴⁸ However, the burgeoning construction industry did require bricks and tiles, and brick manufacturing appeared to be subsiding as a whole in Middlesex. Unless one assumes prodigious productivity increases that would have enabled a much smaller absolute number of males to be employed in the industry whilst producing at the same or a higher level, it seems likely that the Middlesex construction industry was beginning to import its raw materials from elsewhere in the country. This argument has important implications, for it would suggest that Middlesex was *losing* industry. But it also implies that greater Middlesex demand for bricks, itself deriving from the need to house a growing metropolitan population, was generating production in counties that were even further out from the metropolis.

Figure 7.3 also hints at a large increase in the number of machine making, engineering, and tool manufacture occupations (hereafter collectively referred to as machinery) recorded in Middlesex. Machinery included a variety of occupation titles, and many of these were traditional. In c.1817, for example, millwrights dominated this category, and there were only eight engineers recorded out of 74 machinery occupations

⁴⁸ M. J. Dauntton, "Industry in London: Revisions and Reflections", *London Journal* 21, no. 1 (1996): 3.

for Middlesex. By 1851, there were twice as many engine makers in Middlesex as millwrights, but the real change occurred between 1851 and 1881. Distinctive new occupations cropped up in the census, such as machine worker and fitter, alongside older occupations, and the sub-sector expanded in relative terms.

Using these data, it is possible to draw conclusions based on spatial analysis, especially since occupations within certain industries sprouted where that industry had not existed before. In c.1817, half of all males in machinery occupations in Middlesex were located in the four parishes of Uxbridge, Waltham Abbey, Cowley, and Isleworth. Apart from Isleworth, these parishes were located at a distance from London. But by 1881, more than 60 percent of the machinery workers of Middlesex were based in seven parishes, four of which were contiguous to Census London North, and none of which had led the way for these trades in c.1817. The seven parishes were, in rank order, Enfield, Tottenham, Willesden, Chiswick, Ealing, Edmonton, and Hornsey. These parishes, five of which were argued to have been metropolitan in 1881 in Chapter One, invariably housed engineers and mechanics rather than the millwrights and agricultural machinery makers of the earlier nineteenth-century period.

This development has repercussions for the appreciation of the London machinery industry in the mid- to late-nineteenth century. If there were already considerable numbers of machine workers commuting from parishes outside of Census London, this definition is too restrictive. Jones has outlined how factory-suitable industries “tended to leave London either for the provinces or for the new industrial districts that grew up around the circumference [of Census London]”.⁴⁹ Yet, it is critical that these “new

⁴⁹ Gareth Stedman Jones, *Outcast London: a study in the relationship between classes in Victorian society* (Oxford: Clarendon Press, 1971), 29.

industrial districts” were in fact the contiguous Middlesex parishes of the emergent metropolis. Since these exhibited intensifying population densities and metropolitan occupational structures, it is misleading to suggest that industry was lost by London to the provinces or to argue that these parishes were somehow removed from the metropolis.

However, were these dormitory or industrial parishes? The censuses contain occupational data based on residence rather than workplace. Trade directories from this period could be used to establish more precisely whether the jump in machinery occupations was caused mainly by the expansion of industry in these areas or by the influx of commuters from the inner districts of London. Smith’s questionnaires of firms in the post-1918 period give some clue as to the history of industrial relocation to the Lea Valley in north Middlesex, but they almost totally ignore industries that moved outwards from London in the late nineteenth century.⁵⁰ Railway development could provide some evidence, but it is hard to discern whether industry followed the railways into the suburbs, or whether the railways led the way in reinforcing the suburban role of parishes within Middlesex. The 1883 Cheap Trains Act forced railway companies to run workmen’s trains at affordable fares, but even before the 1881 census, the Great Eastern had been providing such a service for 10 years.⁵¹ These issues nonetheless confirm the importance of exploring economic activity on the Middlesex fringes of the metropolis.

Enfield and Edmonton still contained substantial agriculture and low population densities, so in 1881 they were not yet suburban, but increases in machinery occupations between 1851 and 1881 provide indications of their subsequent development over the last decades of the nineteenth century. On the other hand, Tottenham, Chiswick, and

⁵⁰ Smith, *Industries*, passim.

⁵¹ Martin, *Greater London*, 21.

Willesden were clearly industrial parishes in 1881. They had probably experienced both an influx of machinery workers and the stimulation of industry within their parishes. It would be useful to investigate which was more significant, but in some ways, it does not matter that there may not have been factories or substantial workshops in the new industrial suburbs. The suburb could be inextricably linked to the metropolis without the need for the physical relocation of capital, since if it had begun to house Census London labour, it was already fulfilling the requirements of Dyos' definition of a suburb.⁵² Thus, even if the three suburbs mentioned above were dormitory, rather than possessing their own significant industry outright, the act of commuting made the peripheral parts of the metropolis crucial to its core. For a more comprehensive analysis of the social differentiation of residential relocation, the PST coding system could be adapted in future. It is currently an economic classification that does not categorise according to upper, middle, or lower class, but it could contribute to the work of economic historians such as Leunig. His argument, that railway travel became a mass market commodity from 1870 onward, could be further substantiated by evidence of the relocation of less well-off working classes, for example, to the dormitory suburbs of London.⁵³

The last chapter showed how market gardening helped to feed the metropolis. This chapter has argued how certain Middlesex parishes came to contribute to its industrial growth. The nineteenth-century census is a good sign of changes in where respondents resided rather than changes in the location of their workplaces. While the two were not necessarily mutually exclusive, they were increasingly different from one another in the context of nineteenth-century communications developments and growing

⁵² See Chapter One.

⁵³ T. Leunig, "Time is Money: A Re-assessment of the Passenger Social Savings From Victorian British Railways", *Journal of Economic History* (forthcoming).

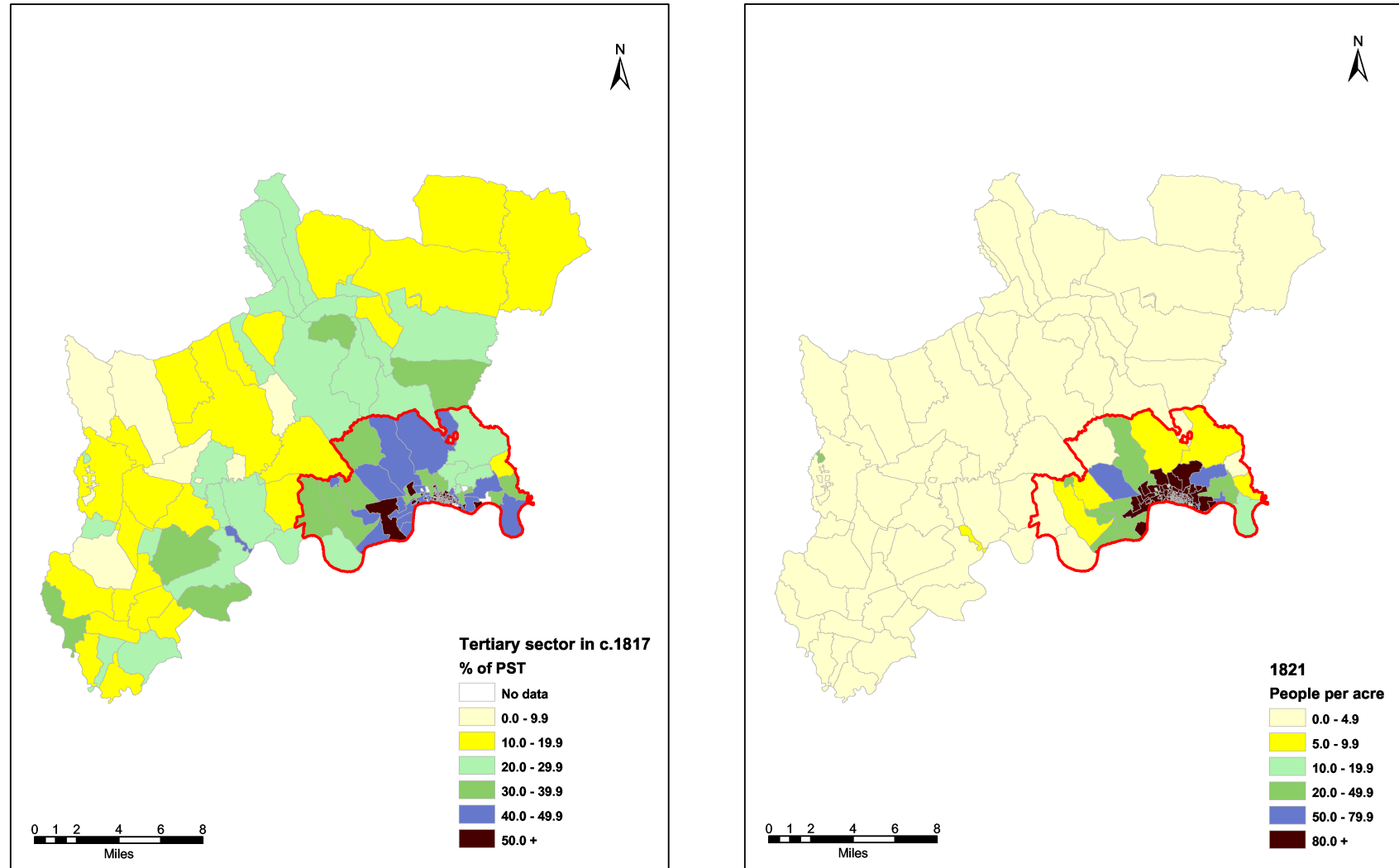
wealth. Most likely, there was a mixture of better-off workmen relocating to suburbs such as Chiswick and Willesden and new firms and factories sprouting up before 1881 in places like Tottenham. Whichever predominated, industry in the metropolis was larger than is thought to be the case, because London itself was larger than its nineteenth-century census definition, which has been adopted by historians for ease. By 1881, the city had evidently extended beyond its political boundaries in terms of population density and occupational structure into the dormitory/industrial suburbs of Tottenham, Willesden and Chiswick. A sui generis Industrial Revolution, involving the passing of workers and industry from Census London into the metropolitan peripheries, had occurred in Middlesex in the second half of the nineteenth century.

Chapter Eight: The Middlesex tertiary sector and the metropolitan region

While it is well known that industry in London was an assorted range of heavy, light, craft, and machine-led, the “wide variety of service trades” has caught the attention of some historians writing on the rise of the commercial and financial centre of the world.⁵⁴ The resulting prosperity of Britain was a product of both provincial and metropolitan impulses, but what impact did tertiary sector growth have on the immediate environs of the capital? The tertiary sector of Middlesex was substantial in a national context even in c.1817, but why has this received scant attention? This chapter will address these issues, giving prominence to communications and financial developments. Previous chapters have argued the case for including Middlesex parishes that were suburban but outside of Census London within the definition of the metropolis. Here, it will be argued that parishes in central Middlesex, although generally not housing a majority of service sector workers, came within the metropolitan fold by 1881.

⁵⁴ H. J. Dyos, “Greater and greater London: metropolis and provinces in the nineteenth and twentieth centuries”, in *Exploring the urban past: essays in urban history*, eds. David Cannadine and David Reeder (Cambridge: Cambridge University Press, 1982), 43.

Figure 8.1: The tertiary sector of Middlesex and Census London North in c.1817 (left); The population density of Middlesex and Census London North in 1821 (right)



When compared with the primary and secondary sectors in Figures 6.1 and 7.1, Figure 8.1 above shows that the tertiary sector in c.1817 was the smallest. Northeast and most of west Middlesex were least dense with tertiary sector occupations, and only six of the 57 Middlesex parishes contained more than 30 percent of males occupied in tertiary sector jobs. Brentford was effectively the county town, so the exceptionally high tertiary sector population of the parish of New Brentford is to some extent expected. However, should an absolute majority of tertiary sector occupations be considered as a prerequisite for classifying a parish or a region as suburban or metropolitan? This would be too restrictive. Census London North itself had a mixture of industrial and predominantly service sector parishes, and often the tertiary sector occupied as many males as the secondary sector. Moreover, Figure 8.1 shows that Fulham, Bethnal Green, Spitalfields, Hackney, and Shoreditch, all in Census London North, each housed less than 30 percent of tertiary sector males in c.1817. Critically, parishes like Bethnal Green and Shoreditch provided few *agricultural* occupations in c.1817, and low agricultural employment is the most compelling indication of modern economic development.

It is revealing to place the Middlesex tertiary sector in a national perspective. For 1851, Wrigley has coded 3,828,649 occupations for males over the age of 20 in England.⁵⁵ Of these, 897,672 have been coded as tertiary sector occupations.⁵⁶ This means that 23.4 percent of males in England worked in the tertiary sector in 1851. If one were to exclude London and Middlesex, this figure would be considerably reduced, and it would certainly fall well below 20 percent. This is because, even as early as c.1817, a majority of the parishes within highly populated Middlesex contained over 20 percent of

⁵⁵ Wrigley, *Poverty*, 164.

⁵⁶ *Ibid.*, 168.

tertiary sector males. The Middlesex tertiary sector was already greater than that of many other regions in England.

Figure 8.2: The tertiary sector of Middlesex and Census London North in 1881 (left); The population density of Middlesex and Census London North in 1881 (right)

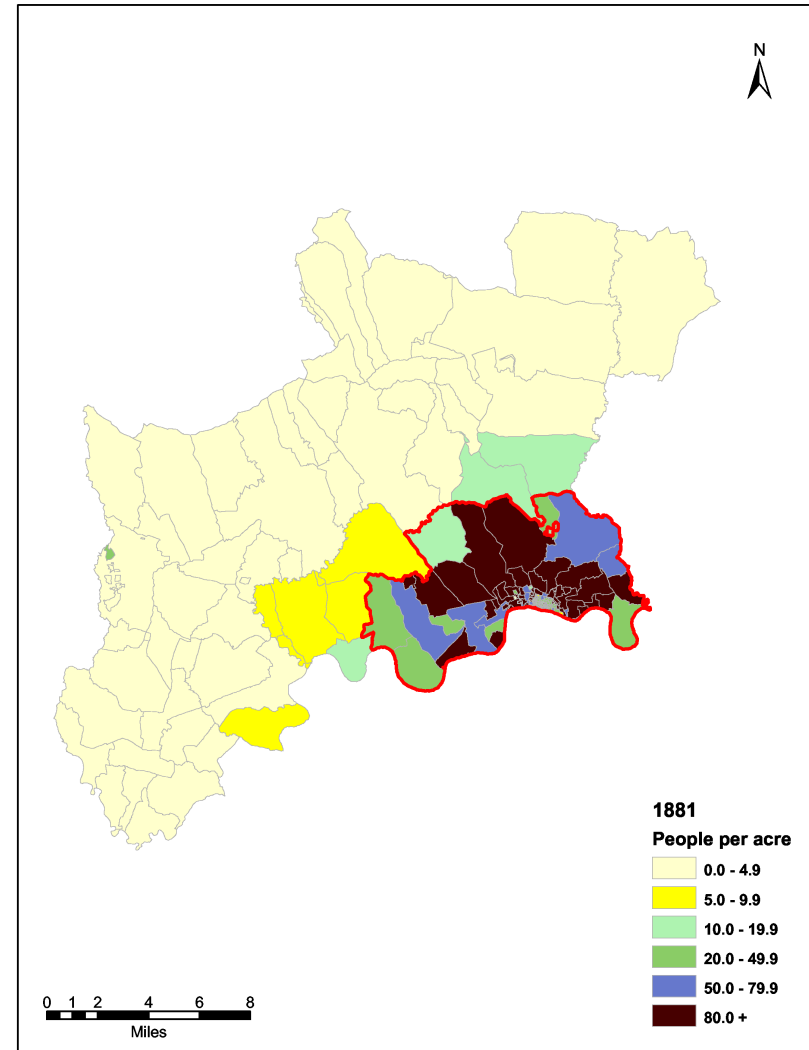
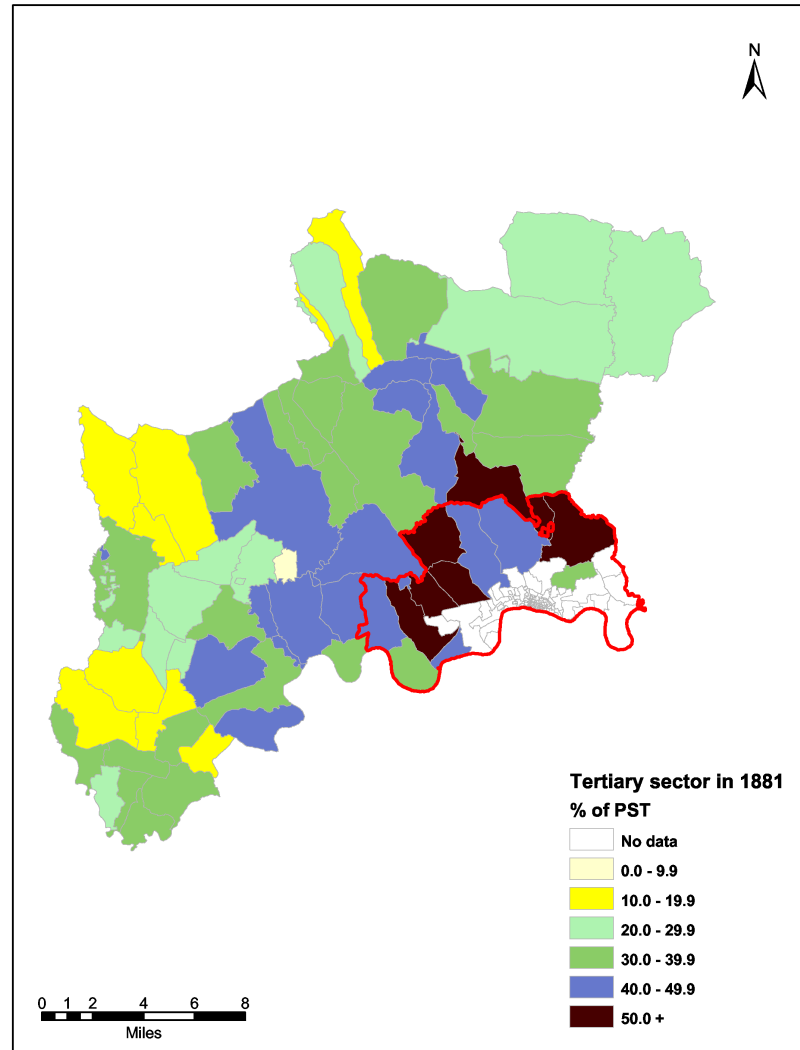


Figure 8.2 above tells that, by 1881, tertiary sector occupations were even more widespread across the county of Middlesex and more prevalent within individual parishes. Northeast and most of west Middlesex remained relatively light; nonetheless, in 52 out of 57 Middlesex parishes the tertiary sector had expanded as a proportion of PST, and in 36 Middlesex parishes tertiary sector growth outpaced that of the secondary sector. Hornsey, with 55.7 percent, was the only Middlesex parish with a majority of its workers in service occupations, but a number of other parishes that adjoined Census London North or were dissected by important roads and railways also boasted high tertiary sector populations.

There is a much clearer positive correlation between population density and tertiary sector employment than there is between population density and the secondary sector. This reflects the fact that, while both sectors expanded in absolute terms, the growth of tertiary sector in the nineteenth century was more substantial. In fact, during the nineteenth century, the Middlesex tertiary sector grew more than five times as rapidly as the secondary sector. Turning once again to the nine Middlesex parishes posited in Chapter One, Figure 8.2 helps to confirm their classification as metropolitan. In 1881, all nine had tertiary sectors that occupied at least if not substantially more than 30 percent of males. Tottenham and Chiswick had slightly smaller tertiary sectors than the other seven parishes, but this is because their developed economies were more evenly split between secondary and tertiary sector employment. They nevertheless qualify, since all nine, of course, housed the fewest agricultural workers in all of Middlesex and had the highest population densities within the county. The combination of these factors of population

density and occupational structure proves that it is rational to talk of metropolitan Middlesex in reference to these parishes.

Figure 8.3: Selected adult male tertiary sector occupations in Middlesex in the nineteenth century

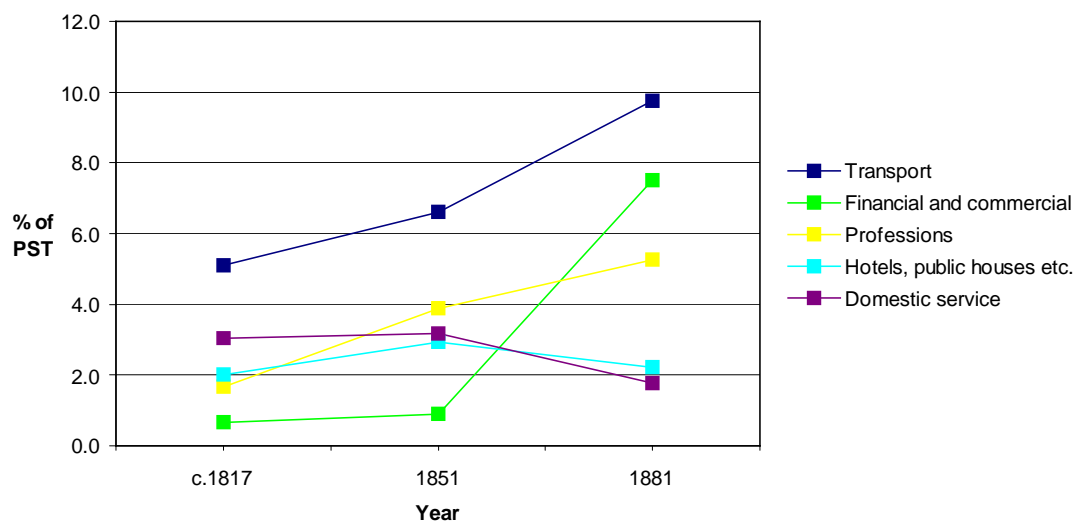


Figure 8.3 presents a summary of sub-groups within the tertiary sector. Between c.1817 and 1851 the rise in entries for professional occupations is most conspicuous, while from mid-century, the eight-fold rise in financial and commercial occupations (henceforward finance) is the most remarkable feature of occupational change within the sector. This ballooning of financial employment deserves detailed analysis, but the largest sub-sector helped enormously to stimulate other employment, and it maintained its position throughout the period. Accordingly, it is instructive to first investigate change within transport.

Table 8.1: Adult males in the Middlesex tertiary sub-sector of transport in the nineteenth century

Transport sub-sector	Occupations in c.1817	% of PST	Occupations in 1851	% of PST	Occupations in 1881	% of PST
Road	754	3.4	1,384	3.7	3,593	4.1
Rail	0	0.0	449	1.2	2,819	3.2
Porters and messengers	8	0.0	60	0.2	737	0.8
Docks	9	0.0	116	0.3	643	0.7
Canal and river	328	1.5	417	1.1	535	0.6
Sea	40	0.2	53	0.1	237	0.3
<i>Total</i>	<i>1,139</i>	<i>5.1</i>	<i>2,479</i>	<i>6.6</i>	<i>8,564</i>	<i>9.8</i>

The PST figure for the transport sub-sector as a whole conceals pivotal developments within it, displayed in Table 8.1 above. Particularly noticeable is the gradual increase in road transport occupations and the growing prominence of rail transport jobs. The railways drove transport growth, while canal and river employment contributed much less in relative terms, as the nineteenth century went on. Rail transport growth triggered increased employment in occupations associated with the transit of passengers, such as porters, and enhanced communications between and within businesses, such as messengers, further accelerating tertiary sector growth.

But Table 8.1 clearly demonstrates the value of navigable waterways in Middlesex, such as the Rivers Thames and Lea and the Grand Junction Canal, before the railways. This is intriguing, because Langton and Morris have contrasted the waterways of the commercial, provincial cities with those of London, arguing that it was only with the coming of the railways that London's central place in the industrial economy was reasserted.⁵⁷ However, as Middleton augured in 1813, at the time the Grand Junction

⁵⁷ John Langton and R. J. Morris, "Introduction", in Langton and Morris, *Atlas*, xxix.

“promise[d] to become the most important inland navigation in the British nation”.⁵⁸ This was undoubtedly based on the fact that, before the London to Birmingham railway (1838), this canal was the mainline linking the manufacturing towns of Warwickshire, Staffordshire, and Lancashire to the city.⁵⁹ Turnpike and parish roads (upon which two-thirds of Middlesex transport depended in c.1817) were prevalent elsewhere in the country too, so with almost 30 percent of all transport employment, canals and rivers ought not to be underestimated. Access to London and by extension the international markets for manufactures provided the outlet for many industrial goods produced in the regions mentioned above. The Grand Junction also stimulated industrial development on the banks of its Paddington extension through the construction of warehouses and the expansion of related jobs, so the evidence assembled here would suggest that Middlesex did not by any means forego the benefits of dynamic waterway developments in the early nineteenth century.⁶⁰

Langton is, however, right to point out the vital role of railways in the second half of the nineteenth century.⁶¹ Figure 10.1 features, amongst other things, the tangle of railway lines to the north and west of Census London. By 1881, the railways had already encircled Census London North and branched off into the suburbs, in a similar way that the M25 motorway and its connecting arteries enfolded the metropolis at a distance further out in the twentieth century. When these criss-crossed communications lines are compared with the PST map in Figure 8.2, the pattern is striking. Figure 8.2 no longer

⁵⁸ John Middleton, *General view of the agriculture of Middlesex: with observations of the means of its improvement, and several essays on agriculture in general*, 2nd ed. (London: Sherwood, Neely, and Jones, 1813), 529.

⁵⁹ Ibid.

⁶⁰ Ibid., 532-3.

⁶¹ John Langton, “The Industrial Revolution and the Regional Geography of England”, *Transactions of the Institute of British Geographers* 9, no. 2 (1984): 163.

appears as a patchwork of parishes. Instead, parishes that were situated along the major railway lines emanating from the centre of the metropolis exhibit high tertiary sector male employment. Population increases initially favoured those parishes closest to London, and this is where communications developments occurred earliest. The railways provided jobs for vast numbers of labourers, drivers, and other staff, so they boosted tertiary sector employment independently. However, it is the multiplier effect of railways that is of most interest, for it also facilitated the explosion in finance occupations. The railways enabled the creation of dormitory suburbs to which clerks, bankers, and brokers, for example, migrated. By 1881, these workers were concentrated in the parishes in Table 8.2 below.

Table 8.2: Adult males in Middlesex finance in 1881

Parish	Males in finance	Males in finance as a percentage of all Middlesex finance
Hornsey	1,654	25.1
Tottenham	1,210	18.3
Willesden	474	7.2
Edmonton	370	5.6
Ealing	362	5.5
Acton	298	4.5
Chiswick	288	4.4
<i>Rest of Middlesex (50 parishes)</i>	<i>1,939</i>	<i>29.4</i>
<i>Middlesex total</i>	<i>6,595</i>	<i>100.0</i>

In 1881, around 70 percent of Middlesex financial occupations were to be found in these seven parishes. This bunching of financial jobs was a recent development, since in c.1817, roughly two-thirds (66.9 percent) of financial occupations had been spread across

22 different parishes. Thus, there was significant change within this sector at parish level, and railway development was a critical factor.

Hornsey stands out as the Middlesex parish with the densest concentration of financial occupations (and tertiary employment generally). According to Daunton, in respect of the Census London North parish of Islington, “[b]y the late nineteenth century, respectable city clerks had moved out to the newer suburbs, and the houses were subdivided with small workshops and factories inserted”.⁶² Some of these clerks were most likely moving into Hornsey, which was adjacent to Islington. By 1881, Hornsey had joined the likes of Kensington, Marylebone, Hampstead, and Hackney, all in Census London North, as the parish of residence for such city workers. It is perhaps no coincidence that the Great Northern railway line bisected this parish on its way into Census London North. This railway was one of the earliest built in Middlesex; coupled with the fact that Hornsey was so close to London, this would have further contributed to its appeal to the commuting clerks in Daunton’s assessment. Data on railway schedules would be useful for establishing the frequency of travel on the railways, but it is sufficient here to note that the other parishes in Table 8.2 also contained some of the first railway lines and stations built in Middlesex. The impact of new station building would not have been immediate, since before any exodus of relatively wealthy city workers could begin, houses needed to be built and other amenities such as water and gas had to be provided. Even so, it should be kept in mind that population growth was creating local centres of demand out of what were once rural patches on the metropolitan peripheries. Railways transported goods as well as city commuters, and there is every reason to

⁶² Martin Daunton, “Epilogue”, in *The Cambridge urban history of Britain*, ed. Martin Daunton, 3 vols (Cambridge: Cambridge University Press, 2001), 3: 837.

believe that the consumer goods were transported from the city to the new towns and districts of the metropolis, some of which were adjacent to London Town. Of course, many Hertfordshire and Buckinghamshire parishes remained untouched by the railway and only entered into the orbit of the metropolis in the twentieth century. Housing there, in the suburbs recited in Betjeman's *Metro-land*, was advertised and sold to the wealthiest city workers in order to justify the expense of building railway deep into the countryside.⁶³ In 1881, the relative paucity of financial occupations recorded in parishes that shared borders with the two counties named above demonstrates how the leafiest suburbs were penetrated last of all, after districts closer to London and within easiest railway commuting distance had been settled by the first waves of suburbanites.

Finally, the professions in Figure 8.3 grew markedly over the nineteenth century. Reader has pointed out that the professional class was in flux, with the ancient learned professions standing apart from the newer professions such as teaching, medicine, acting, and architecture, which were only admitted to the professional class in the second half of the nineteenth century.⁶⁴ This was not just a quirk of the classification process, since as Cole has found, it reflected ideas on the "social estimation" of a person.⁶⁵ PST assumes continuity in the definition of the professions, and it therefore does not consider changing social attitudes. However, this need not pose a problem. In contradistinction to those working in financial occupations, teaching and medicine were relatively immobile professions that grew from mid-century. Along with other tertiary sector employees such as police officers, they needed to live near to the local populations they served. This

⁶³ John Betjeman, *Souvenir of Metro-land* (London: Warren Editions, 1977).

⁶⁴ W. J. Reader, *Professional men: the rise of the professional classes in nineteenth-century England* (London: Weidenfeld and Nicolson, 1966), 146-166.

⁶⁵ G. D. H. Cole, *Studies in class structure* (London: Routledge and Kegan Paul, 1955), 85.

suggests that new centres of local demand, not just Census London, were contributing to the rise of the tertiary sector in Middlesex. Uxbridge and Brentford represented the two clearest examples of thriving local towns that were developing along similar lines to the capital. This is partly due to the fact that the metropolis drew population towards its edges as much as towards its centre in the late nineteenth century, contributing to the increasing employment and wealth of the southeast region generally. Harrow-on-the-Hill was not yet a suburb in 1881, since it had a lingering primary sector, signifying its incomplete development. Its population lagged behind that of Tottenham or Willesden, but it nevertheless grew five-fold during the nineteenth century. It had a relatively high service sector proportion of males, many of whom were engaged in railway service but also in professions such as school teaching and policing. Demand originating from centres removed from the metropolitan core therefore helped to create the predominantly tertiary sector “metropolitan region” about which Lee has written.⁶⁶

It must be said that some professionals, for instance those working in legal vocations, were in fact more concentrated in the key parishes adjacent to Census London North, in particular in Hornsey and Willesden. The same was true for the artistic professions, with five parishes (Acton, Chiswick, Hornsey, Tottenham and Willesden) making up one-half of all Middlesex jobs in this sub-category. If “‘the fashionable and the intellectual’ retreated ‘up the hill’” into the affluent neighbourhood of Hampstead in the 1930s, musicians, artists, and sculptors were already settling outside the borders of Census London North well before then.⁶⁷ This movement into the suburbs, namely into Hornsey and Tottenham and to a lesser extent into Willesden, Acton, Chiswick, Ealing,

⁶⁶ Lee, “Regional Growth”, 443.

⁶⁷ White, *Twentieth-century London*, 22.

Hanwell, and New Brentford was primarily enabled by improved transport. The railways took into the new suburbs those who could afford the daily commute into city. In Census London, land was being cleared for railway and station development, and Dyos has calculated that over 76,000 Londoners were displaced in the years 1853 to 1901.⁶⁸ Transport could therefore provide both the cause and the remedy for decreasing living space in the city. Most journeys within the city were still made by foot in the late nineteenth century, but the railways took Londoners beyond the political boundaries of the capital and into the expanding towns outside its official limits.⁶⁹

⁶⁸ H. J. Dyos, "Railways and Housing in Victorian London (I)", *The Journal of Transport History* 2, no. 1 (1955): 14.

⁶⁹ Ball and Sunderland, *Economic history*, 229.

Chapter Nine: Conclusion

The outstanding characteristic of the occupational geography of Middlesex in the nineteenth century was its increasingly large and in many ways leading tertiary sector. In time, this feature swept the southeast of England, the United Kingdom, and gradually all modern economies, such that in 2000, more than three-quarters of all employees in the United Kingdom worked in the service sector.⁷⁰ But in order to paint a fuller picture, one cannot ignore the rest of the economy. As Figure 6.3 shows, industrial occupations predominated in Middlesex even in 1881, despite the growth of the service sector. Furthermore, the criterion of population density is important, because without intense population growth, which provided the framework for occupational change, the city could not have expanded as it did. An attempt has been made here to associate demographic and occupational change and to demonstrate, using statistical methods based on census and baptism register occupational data, that secondary and tertiary sector expansion overflowed the boundaries of Census London North and had a considerable impact on Middlesex. Perhaps the use of the parish is nowadays unfashionable, but it is thoroughly justified here. Parish registers (before the advent of civil registration in 1837) and censuses recorded the vast majority of the vital records we have today on Londoners in the nineteenth century.

The nine parishes designated as metropolitan shared in common with each other similar occupational characteristics to the populations of Census London North parishes in 1881. In particular, they retained small, highly specialised agricultural sectors and were the sites of outstanding, sustained population increase during the nineteenth

⁷⁰ Office for National Statistics, “The UK Service Sector”, <http://www.statistics.gov.uk/downloads/theme_commerce/UK_Service_Sector.pdf> (last accessed 21 April, 2006), 29.

century.⁷¹ Parishes such as Edmonton, which showed signs of enormous population change and a high proportion of secondary sector jobs within its population, or Harrow-on-the-Hill, with its developing services, still housed a number of agricultural occupations, so they present a less convincing case for inclusion within the bounds of the metropolis. Certainly, one would expect Edmonton to have developed into a dormitory/industrial suburb by the time of the 1901 census. But, even if it fulfilled other criteria, it is not accurate to label it as such in 1881. The very fact that there are a number of such borderline parishes demonstrates how much of Middlesex thrived in the nineteenth century.

Transport was crucial in this process. It independently increased its share of tertiary employment with the building of railways and road improvements, but more than anything else, it was significant for the impact it generated on other sub-sectors such as finance and the professions. Cain and Hopkins have pointed out that, before the 1980s, studies in modern British history barely acknowledged the significance of the service sector.⁷² Yet, its nineteenth-century rise in the metropolis, even if it may conflict with the idea of an Industrial Revolution in this period, cannot be ignored. It is undeniable that, despite the historiographical prominence of industry in the Industrial Revolution period, professional services and finance, rather than industrial capitalism, have been the legacies of nineteenth-century economic change in Britain. It is not teleological to seek the roots of this development in the century in which most significant growth occurred. Indeed, it appears strange to ignore the metropolitan region in the Industrial Revolution period and in turn relegate the importance of the tertiary sector in the historical debate. As it has

⁷¹ See Figure 2.5.

⁷² P. J. Cain and A. G. Hopkins, *British imperialism: 1688-2000*, 2nd ed. (Harlow: Longman, 2001), 9.

been shown above, this is doubly so, given that the city's contribution to tertiary (and secondary) sector growth extended well beyond the census boundaries of London and into increasingly indispensable areas of Middlesex.

The evidence of occupational change presented in this investigation therefore supports Lee's critique of the industry-based approach to the Industrial Revolution. He has argued that the two major regions on which most attention has traditionally been focussed have been the nineteenth-century textile/manufacturing and mining zones. However, it was the service economy, represented by the "metropolitan region, based on London but expanding into contiguous counties with increasing effect in the course of the period", that subsequently brought "continued growth and low unemployment" to southeast England in the twentieth century.⁷³ The evidence produced in this investigation demonstrates the transplantation of the high-tertiary sector occupational structure of Census London North into the Middlesex parishes of the metropolis. Further investigation would help to determine the position held by Middlesex in the regional hierarchy, for example through the comparison of parishes in Surrey and Kent that were contiguous to Census London South. The comparisons made within this investigation indicate that, before the model of tertiary sector growth was exported across the country, Middlesex was the first "suburban county".⁷⁴

Undoubtedly, occupational change ought to be placed within the wider context of social and cultural developments. Affluence signalled inequality, since economic opportunities were just as inequitably distributed between social groups as they were between regions. Furthermore, contemporaries did not conceive of the metropolis in

⁷³ Lee, "Regional Growth", 443, 452.

⁷⁴ The phrase is Robbins'. See Robbins, *Middlesex*, 201.

solely economic terms, so the ways in which it was depicted in art and literature and perceived by inhabitants and outsiders is also significant. For example, the Portuguese Oliveira Martins' journey from Southampton to London in the late nineteenth century made him wonder whether the places he passed were not all suburbs of London.⁷⁵ Such an abstract definition of the impact of the city debatably downplays excessively the role of the provinces and other great towns within England, reflecting the preconceptions of this particular visitor. More importantly, as a historical and geographical definition of the city and its suburbs, it is inadequate. In contrast, this quantitative study has sought to identify the expanding frontiers of the metropolis and the practical role that Middlesex played in the process. Using census, baptism register, and GIS data, this investigation has attempted to reconcile the historical and geographical limits of the metropolis during this period of intense economic and social change.

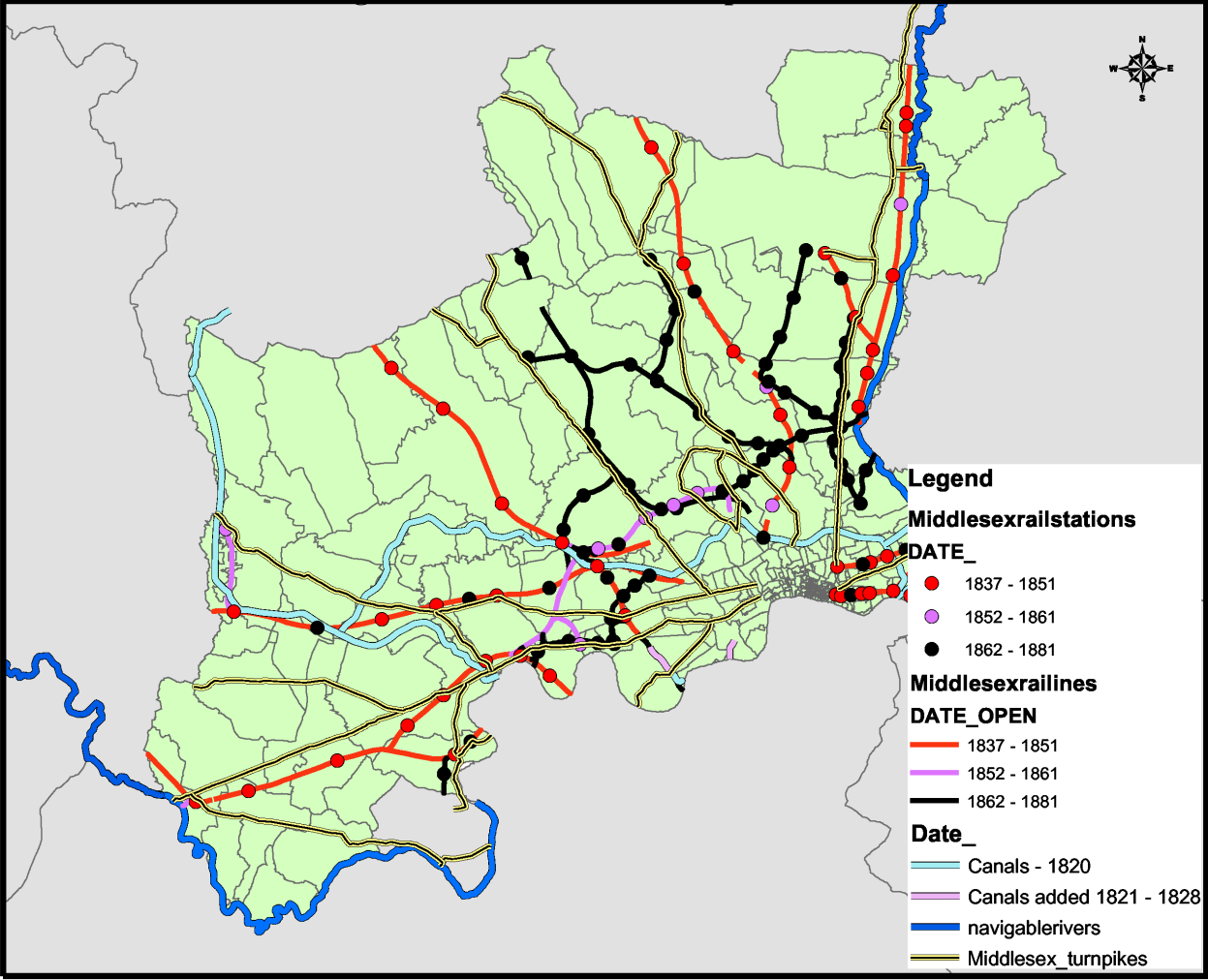
Robbins wrote of the 1950s county that “[i]f there were no such place as Middlesex, it would be necessary to create something very much like it merely to keep London going”.⁷⁶ This was equally true of the nineteenth century, but Middlesex was more than just an adjunct to the capital. Population growth in the county was the motor of change, leading not to under-development but the specialisation of agriculture, the housing of industry and its labour, and the stimulation of demand for local services. This enhanced the metropolitan characteristics of the county's economy. Interdependence between the diverse sectors of the economy and between Middlesex and the city is therefore crucial in understanding the economic history of modern London, by which Middlesex was subsumed and its essential contribution to some extent forgotten.

⁷⁵ Dyos, “Greater and greater”, 38-9.

⁷⁶ Robbins, *Middlesex*, 27.

Appendix: Middlesex Transport in 1881

Figure 10.1: Middlesex Transport in 1881



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The following four databases were kindly provided to me by Leigh Shaw-Taylor of the Cambridge Group:

Parish register database of occupations in London in c.1817.
Database of 1831 Census of occupations in Middlesex and London.
Database of 1851 Census of occupations in Middlesex and London.
Database of 1881 Census Enumerators' Books of occupations in Middlesex and London.

Leigh Shaw-Taylor also kindly granted me permission to use occupational data collected on behalf of the Cambridge Group for eight Middlesex parishes in c.1817. I collected data for the other 49 parishes from registers in Greenford and Farringdon.

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