

# Wealth Making in the Nineteenth and Early Twentieth Century: The Rubinstein Hypothesis Revisited

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In my earlier paper on wealth making in nineteenth- and early twentieth-century Britain, I used data taken from the *Dictionary of Business Biography* (DBB) and probate records to test the hypothesis put forward by W.D. Rubinstein that the centre of wealth earning in this period was London, a city dominated by commerce and finance. I grouped 790 businessmen into regional and occupational categories, and subjected their wealth (measured by probate at death) to a battery of quantitative tests. I found no evidence of inferior provincial to London wealth, or industrial to commercial and financial wealth, and concluded that the Rubinstein hypothesis should be rejected in view of the diverse pattern of wealth holding discovered.<sup>1</sup>

In his comment Rubinstein suggests there are two main flaws in my method of analysis. First, I use a data set based solely on businessmen who appear in the *DBB*, a source that he claims does not accurately represent the distribution of British business leadership. Second, he alleges that my paper misrepresents his views on wealth making in this period. According to Rubinstein, he has never understated the wealth earning of the northern manufacturing elite; rather he has emphasised that Londoners – the commercial and financial elite – should be singled out because of their prevalence at the very top of the British wealth structure. As discussed below, I find nothing in Rubinstein's comment that modifies the conclusion of my earlier paper. I maintain that the *DBB* is a useful source for drawing inferences about the characteristics of businessmen active in nineteenth- and early twentieth-century Britain. Moreover, I show in line with my earlier findings that the empirical evidence does not support a division between London and commercial and financial wealth on the one hand, and provincial and industrial wealth on the other.

Rubinstein's main criticism of my analysis involves the use of the *DBB*, a biographical database of businessmen active in Britain since the middle of the

nineteenth century. The five volumes of the *DBB* contain a variety of information on the family background, career patterns and wealth of the entrants and provide a solid foundation for historically analysing aspects of Britain's business leadership. Notwithstanding inevitable overlaps into the political elite or the aristocracy, the *DBB* mainly covers individuals who were prominent because of their business achievements. There is a relatively balanced and comprehensive coverage of the broad spectrum of business activity, from individuals who started new enterprises or entered family firms to those who made a distinctive contribution through their managerial practices.

Rubinstein is correct to point out that the *DBB* does not include all businessmen who were active in Britain. It is, after all, a sample taken from the population of business leaders. But his assertion that the biographies do not accurately represent the underlying population is grossly misleading. Given that there was no wealth threshold imposed on the entries that appear in the *DBB*, Rubinstein's data on those leaving £100,000 or more at death (his Table 1) is skewed by comparison. As can be seen from my Table 1 below, around 40 per cent of the businessmen used in my earlier paper left estates valued at under £100,000 on their death. The usefulness of the *DBB* lies in its broad representation of Britain's business leadership over a long time period. Although only around four per cent of businessmen listed in the *DBB* leaving estates between 1880 and 1899 appear in Rubinstein's population of businessmen with estates equal to, or above, £100,000, his collection of individuals has *zero* representation at lower levels of wealth. Rubinstein is wrong to make inferences about the general structure of the British economy from the occupational and regional distribution of the super-rich (a point to which I will return in the discussion below). An alternative pattern of wealth

TABLE 1  
THE PERCENTAGE OF ESTATES AT DIFFERENT WEALTH THRESHOLDS

Probate Wealth in £'000s	Businessmen Born 1800–1840 Probate Wealth (in 1900 £'s)	Businessmen Born 1841–80 Probate Wealth (in 1938 £'s)
Under 50	23%	26%
50–100	17%	17%
100–250	25%	22%
250–1,000	25%	25%
1,000+	10%	10%

holding emerges when analysing businessmen in the *DBB* across the breadth of the wealth distribution.

It is well known, and acknowledged in my earlier paper, that the *DBB* over-represents businessmen in manufacturing and mineral extraction industries and under-represents those active in commerce and finance.<sup>2</sup> But it is erroneous to state, as Rubinstein does, that the chances of a businessmen being included in the *DBB* and active in heavy industry and related fields are 'literally hundreds of times greater' than a businessman being included and active in commerce or finance.<sup>3</sup> S.N. Broadberry's sectoral shares of employment in the economy are approximately comparable with the occupational categories I used in my earlier paper.<sup>4</sup> Broadberry's figures, adjusted to exclude agriculture and government because those sectors are also excluded from the *DBB*, show that manufacturing and mineral extraction industries over the three benchmark years of 1871, 1911 and 1930 accounted for an average of 46 per cent of the labour force, while finance and services accounted for 25 per cent. Thus, if the *DBB* were stripped of any bias we would expect to find approximately a ratio of around 1.8 businessmen active in heavy industry and related fields to every one engaged in commerce and finance.<sup>5</sup> What we actually observe for those businessmen in the *DBB* born between 1800 and 1880 (the full sample for my earlier paper) is a ratio of 3.9 to one given that the share of individuals occupied in comparable sectors is 62 per cent and 16 per cent respectively. Although there is a bias in the *DBB* in favour of heavy industry and related fields, the bias is nowhere near as large as that envisaged by Rubinstein in his comment.

Nonetheless, the presence of sample selection bias does pose important implications for the kind of hypothesis tests that I conducted in my earlier paper. A statistic computed from a random sample will rarely be equivalent to its population parameter, but there are reliable prescriptions for determining the size of the possible error. Sample data selected in a non-random fashion will over-represent or under-represent some part of the population, and may produce errors in testing that cannot be confined to customary confidence intervals. The key issue with regard to commerce and finance (and London) in the *DBB* is whether the range of wealth is represented. If a large enough set of observations is considered, and those observations approximate the underlying distribution, then the hypothesis tests that I conducted in my earlier paper remain valid.

To highlight the distribution of commercial and financial and London wealth in my sample, Figures 1 and 2 plot the estimated kernel densities of the natural logarithm of probate wealth for these categories. For the non-

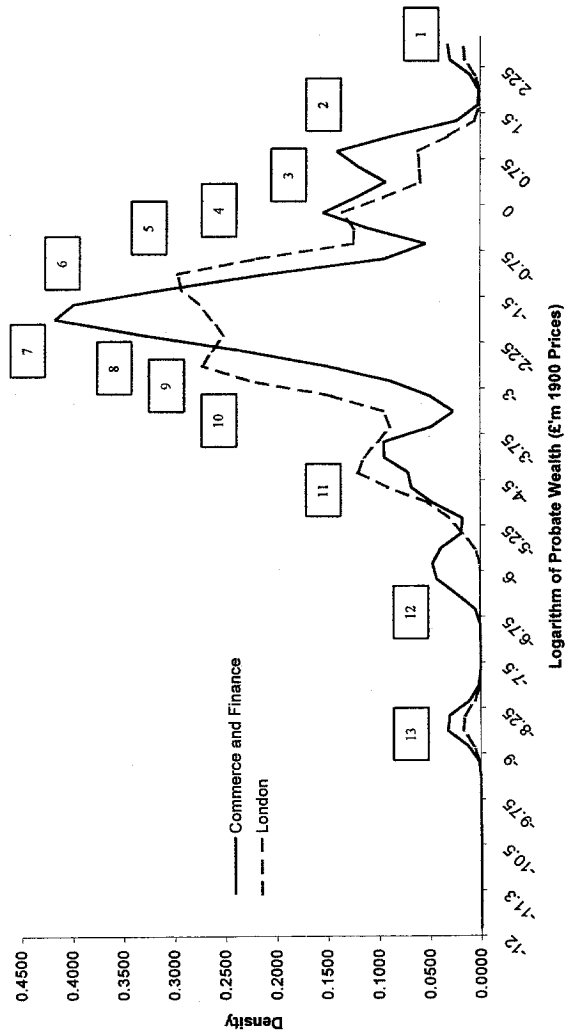
technical reader, kernel densities can be thought of as smoothed histograms where the shape of the density is determined by a mathematical function with a specified (or 'optimal') bandwidth analogous to the bin-width of a histogram. In this case, kernel density estimation is preferred because it facilitates the presentation of both variables in a single figure and makes it easier to compare the distribution of observations. It can be seen from the estimated densities in Figures 1 and 2 that the representation of the *DBB* for commercial and financial and London wealth is broad. A few examples are given next to the density estimates to highlight this aspect of the data. At the upper end of the wealth spectrum are the leading wealth holders in each cohort, including Charles Morrison, Sir John Ellerman, and members of the renowned banking dynasties like the Hambros, Barings and Rothschilds. There is a variety of London-based wealth, including Richard Twining III, the tea wholesaler and retailer, and Alfred Harmsworth, the newspaper proprietor. At lower levels of wealth there are individuals who also made a significant contribution to their field, such as Swinton Boulton, founder of the Liverpool & London Fire and Life Insurance Co., and Owen Philipps, the shipowner who built up what became known as the 'Royal Mail Group'. Also included are less scrupulous business personalities like Henry Lawson, who liaised with the infamous Ernest Terah Hooley in company promotions. The sample data obtained from the *DBB* represents all aspects of business wealth in commerce and finance and in London. There are a sufficiently large number of observations in my sample to make reliable inferences about the general structure of wealth holding among business leaders.

It is useful to consider at this point Rubinstein's views on British social and economic development, given that my earlier paper referenced a number of instances where he has stressed the importance of commerce and finance in the wealth structure, and underplayed the position of manufacturing and industry. In his comment, Rubinstein is adamant that I have misrepresented his views, claiming he does not consider the northern manufacturing elite to be insignificant. Yet if, as Rubinstein declares, the activities of northern industrialists produced no more than a 'brief interruption of factory capitalism' during the nineteenth century, we should envisage an economy and society in which the influence of industry and industrialists was limited.<sup>6</sup> A corollary of this view is that the northern elite was subservient in terms of power, status and wealth to the gentleman capitalists of London commerce and finance. From the regional and occupational distribution of the super-rich, Rubinstein has advanced the more general notion that industrial and commercial capitalism were divided.<sup>7</sup>

The crux of my earlier paper was that this kind of generalisation involves making a huge conceptual leap from the character of the very wealthy to the complexion of Britain's economy and society. Others have taken issue with Rubinstein over the accuracy of his broader inferences,<sup>8</sup> so the purpose of my paper was to focus specifically on the quantitative significance of wealth. Based on a variety of statistical tests, I rejected the hypothesis that the distributions of wealth for businessmen in occupational and regional categories were different. Contrary to what Rubinstein has previously asserted, there was no general subordination of provincial to London wealth, or industrial and manufacturing to commercial and financial wealth. To reiterate this central finding, Figures 3 and 4 plot kernel density estimates of regional and occupational wealth for the two cohorts of businessmen sampled from the DBB. If commerce and finance and London did predominate over all else, there would be a relative shift to the right in the estimated density for these categories. Figures 3 and 4 identify only a slight shift in the upper tail of the distribution in the case of commercial and financial wealth; the density estimates of provincial categories and London compared do not support the view that there was a fundamental dichotomy in the regional distribution of wealth. In the nineteenth and early twentieth centuries, business wealth was not disproportionately found in commerce and finance or in London. Industrialists, manufacturers and those who were active in provincial districts played an equally important role in the wealth-making process.

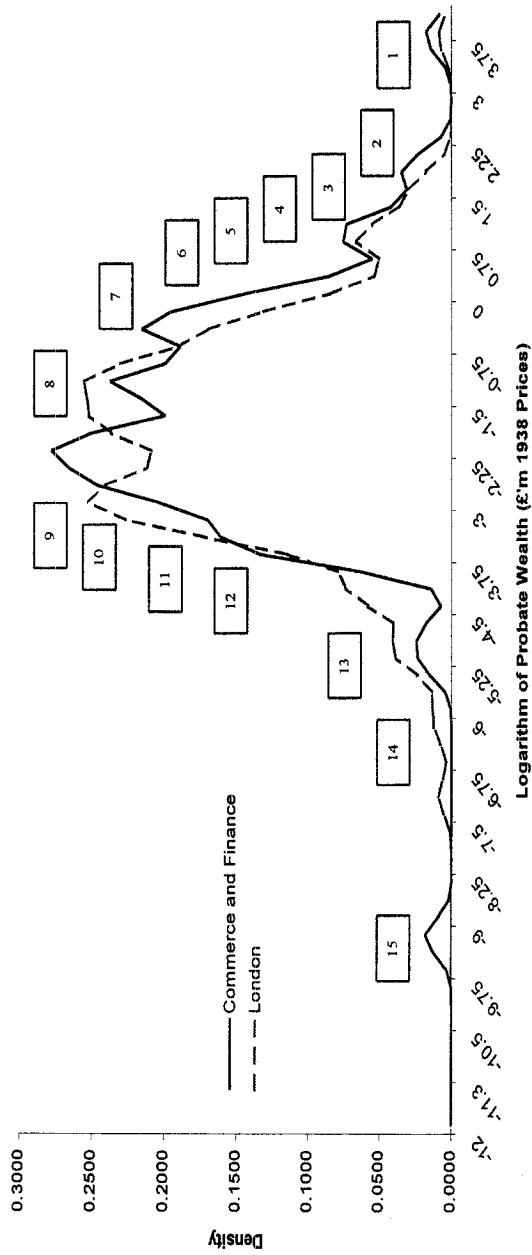
What then can be said of the super-rich? Rubinstein's original research was based on a group of 'top' wealth leavers bequeathing £500,000 or more between 1809 and 1939, and identified an apparent clustering of wealth in the City of London where the most lucrative commercial and financial trades were to be found.<sup>9</sup> His preliminary analysis of a group of 'lesser' wealth leavers bequeathing £100,000 or more between 1809 and 1839 supported this previous research showing that 'the largest single occupational category ... [was] commerce and finance, amounting to over forty per cent of the whole group', and that the 'near-complete dominance of London is fully consistent with what else is known of the geographical distribution of wealth in Britain at this time'.<sup>10</sup> Yet according to Rubinstein's Table 2, which provides data on this group of wealth holders over the entire period 1809 to 1899, a very different story emerges. Rubinstein shows us that on average just 46 per cent of wealth holders leaving £100,000 or more could be geographically assigned to London during these years. From a peak of 84 per cent in the period 1809 to 1814, the share assigned to London falls below half by the mid-1860s, casting considerable doubt, even at upper levels of wealth, that London was a

FIGURE 1  
 KERNEL DENSITY ESTIMATES OF COMMERCIAL AND FINANCIAL AND LONDON WEALTH BUSINESSMEN BORN 1800-1840



Notes: The Kernel function is specified as being Gaussian with a bandwidth of 0.25. The examples given are: **1** Charles Morrisson (1817-1909) merchant banker and warehouseman; **2** Nathan Rothschild (1840-1915) merchant banker; **3** William Whiteley (1831-1907) department store owner; **4** Samuel Montagu (1832-1911) merchant banker; **5** Henry Gibbs (1819-1907) merchant banker; **6** Sir Richard Martin (1838-1916) banker; **7** Richard Twining III (1807-1906) tea wholesaler and retailer; **8** Thomas Nickalls (1828-99) stockbroker; **9** John Bunting (1839-1923) stockbroker; **10** Howard Lloyd (1837-1920) banker; **11** William Lidderdale (1832-1902) banker and merchant; **12** Swinton Boulton (1808-76) insurance company executive; **13** Richard Starr (1813-92) building society promoter.

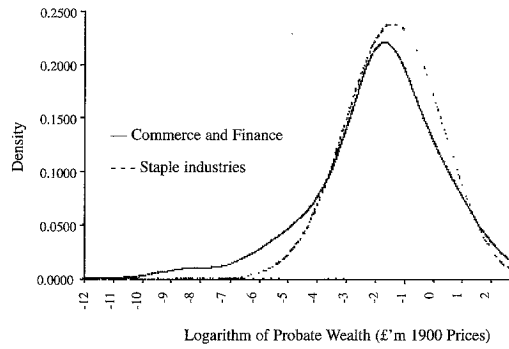
FIGURE 2  
 KERNEL DENSITY ESTIMATES OF COMMERCIAL AND FINANCIAL AND LONDON WEALTH BUSINESSMEN BORN 1841-80



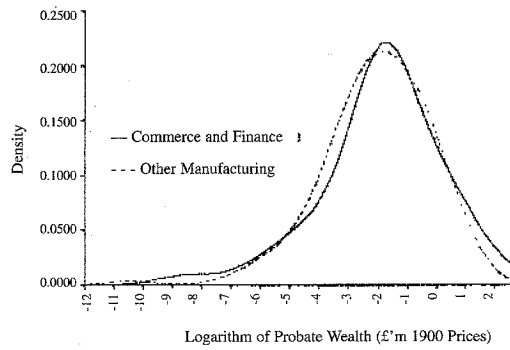
Notes: The kernel function is specified as being Gaussian with a bandwidth of 0.25. The examples given are: **1** Sir John Ellerman (1862-1933) shipowner and financier; **2** Alfred Harmsworth (1865-1922) newspaper proprietor; **3** Marcus Samuel (1853-1927) oil executive; **4** Philip Hill (1873-1944) property developer; **5** John Baring (1863-1929) merchant banker; **6** Sir Everard Hambro (1842-1925) merchant banker; **7** John Sainsbury (1844-1928) retailer; **8** Ernest Cooper (1848-1926) accountant; **9** Owen Philipps (1863-1937) shipowner; **10** Sir Edwin Lutyens (1869-1944) architect; **11** Joseph Braithwaite (1855-1934) stockbroker and financier; **12** Albert Gamage (1855-1930) retailer; **13** John Fells (1858-1925) accountant; **14** Joseph Duveen (1869-1939) art dealer; **15** Henry Lawson (1852-1925) company promoter.

FIGURE 3  
 KERNEL DENSITY ESTIMATES OF REGIONAL AND OCCUPATIONAL WEALTH  
 BUSINESSMEN BORN 1800-1840

a)



b)



c)

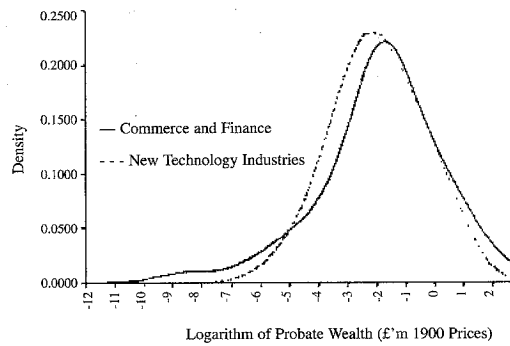
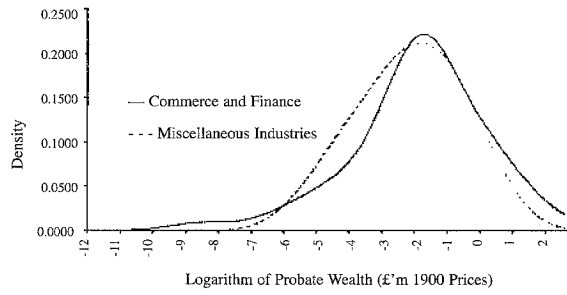


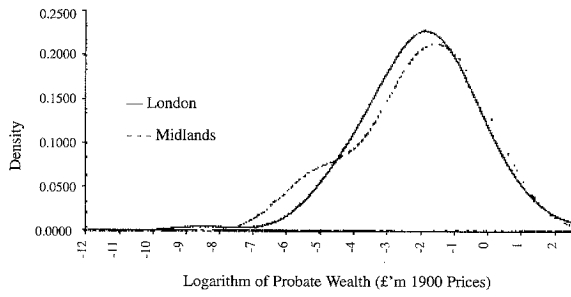


FIGURE 3 (continued)

d)



e)



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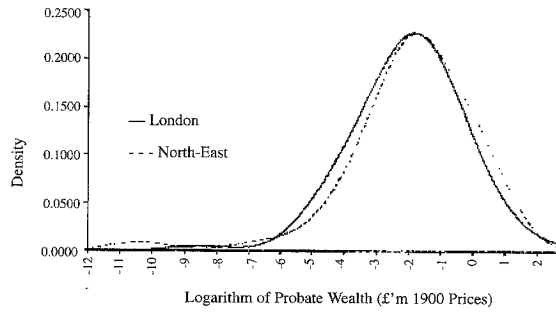
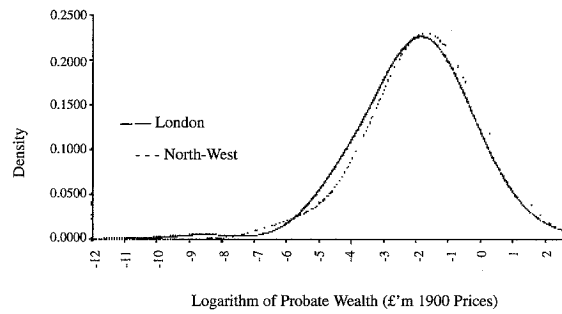
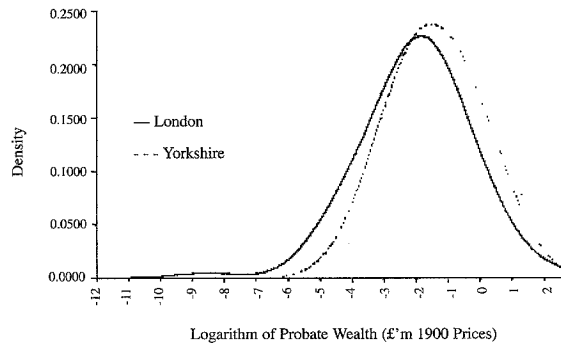


FIGURE 3 (continued)

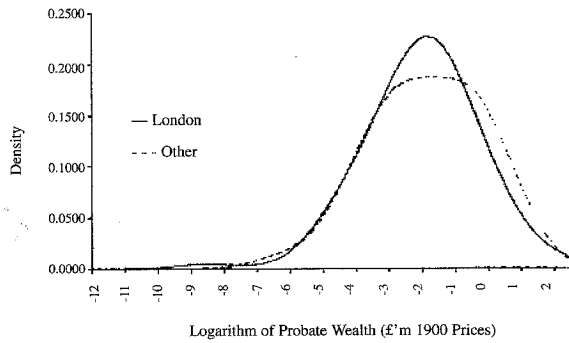
g)



h)



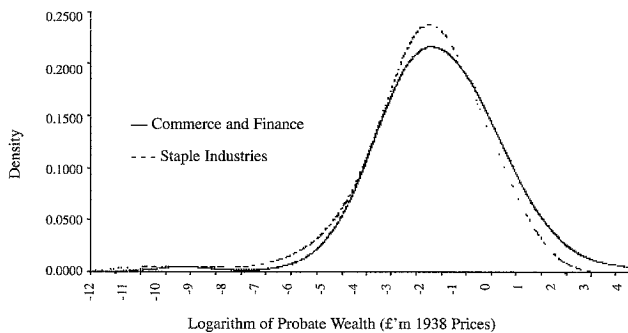
i)



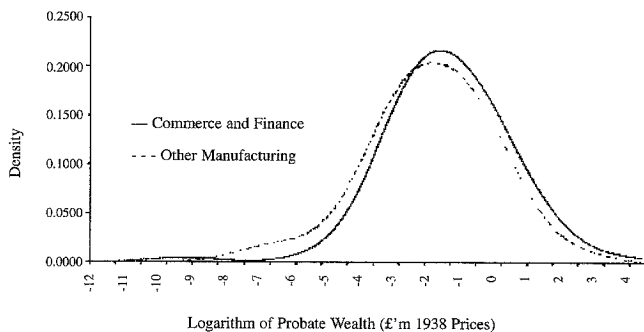
*Note:* The kernel function is specified as being Gaussian with a bandwidth of 1.0

FIGURE 4  
KERNEL DENSITY ESTIMATES OF REGIONAL AND OCCUPATIONAL WEALTH -  
BUSINESSMEN BORN 1841-80

a)



b)



c)

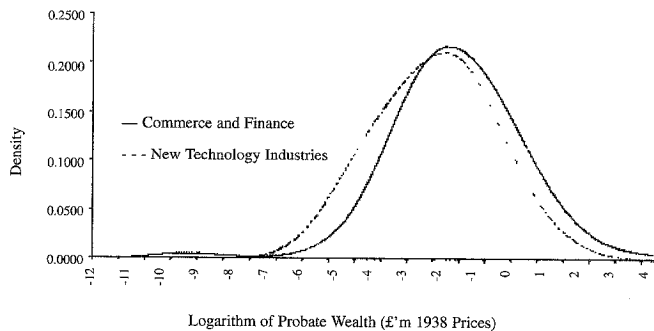
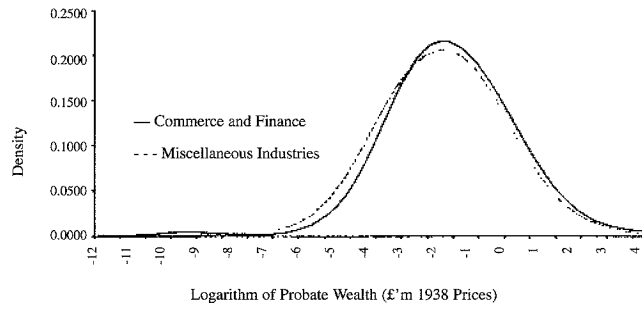
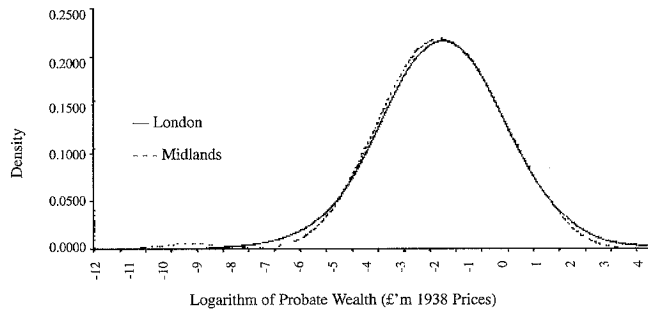


FIGURE 4 (continued)

d)



e)



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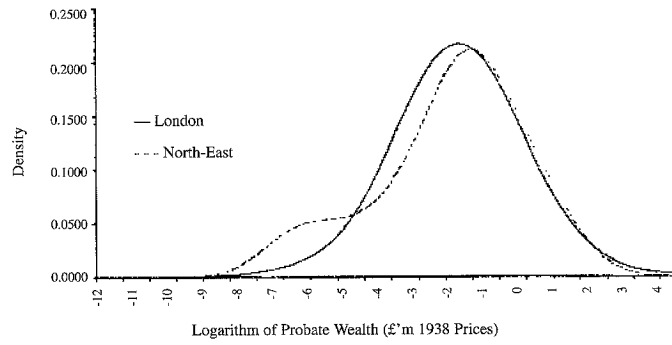
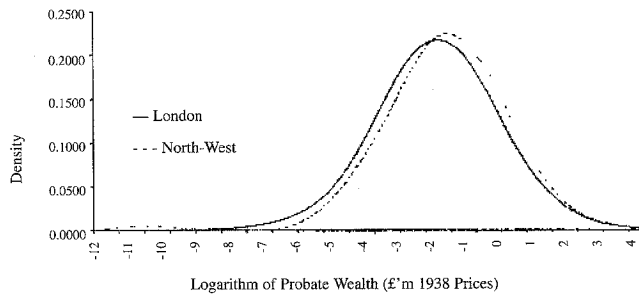
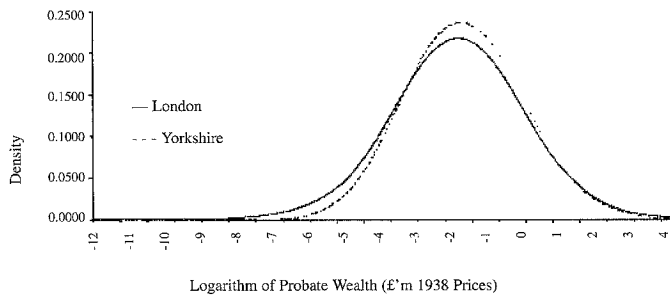


FIGURE 4 (continued)

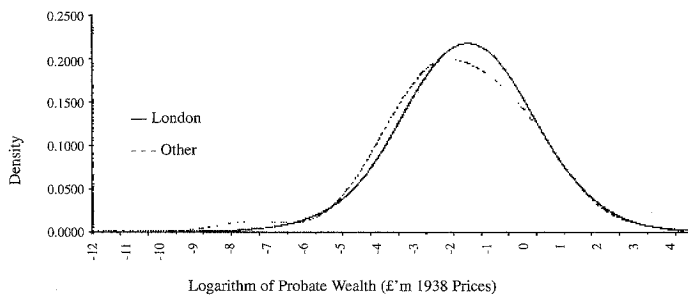
g)



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i)



*Note:* The kernel function is specified as being Gaussian with a bandwidth of 1.0

uniquely distinct centre for the great fortune makers. Although no breakdowns are given by occupational category, these data alone support the argument of my earlier paper that there was no division between London and the north in terms of the distribution of wealth.

Rubinstein's analysis of probate records and elites has stimulated a considerable amount of related research, much of which has marshalled new data and new methods of inquiry in order to test the accuracy of his judgements on the characteristics of the wealthy in Britain. With my earlier paper, I joined the growing band of critics who are at odds with Rubinstein's central contention concerning the dominance of commerce and finance, and London wealth, as compared with wealth in industry, manufacturing and the provinces. The evidence in favour of this critique is categorical, and even buttressed by Rubinstein's new research. Commerce and finance and London did not prevail over the wealth of the rest of the country. The Rubinstein hypothesis conveys an inaccurate impression of wealth making in the nineteenth and early twentieth centuries, and should be rejected as a basis for interpreting modern British history as a conflict between industrial and commercial capitalism.

#### NOTES

1. T. Nicholas, 'Wealth Making in Nineteenth- and Early Twentieth-Century Britain: Industry v. Commerce and Finance', *Business History*, Vol.41 No.1 (1999).
2. *Ibid.*, p.19
3. W.D. Rubinstein, 'Wealth Making in the Late Nineteenth and Early Twentieth Centuries: A Response', in this issue.
4. S.N. Broadberry, 'How Did the United States and Germany Overtake Britain? A Sectoral Analysis of Comparative Productivity Levels, 1870-1990', *Journal of Economic History*, Vol.58 No.2 (1998), Table 5, p.385.
5. My occupational categories do not match perfectly the sectors given by Broadberry, so these ratios are only an approximate guide. I compare the share of businessmen in my sample occupied in staple industries, other manufacturing, and new technology industries with the adjusted share of employment in Broadberry's mineral extraction and manufacturing sectors. The share of businessmen in my commerce and finance category is compared with Broadberry's finance and services sector.
6. W.D. Rubinstein, *Capitalism, Culture and Decline in Britain, 1750-1990* (London, 1994), p.35. Also see *idem*, 'Wealth Making: A Response'.
7. For example, see W.D. Rubinstein, 'The Structure of Wealth-Holding in Britain, 1809-39: A Preliminary Anatomy', *Historical Research* (1992), pp.88-9. Also see for further references Nicholas, 'Wealth Making', note 20.
8. For example, see M. Daunt, 'Gentlemanly Capitalism and British Industry 1820-1914', *Past and Present*, No.122 (1989); R. Pahl, 'New Rich, Old Rich, Stinking Rich?', *Social History*, Vol.15 No.2 (1990).
9. W.D. Rubinstein, 'The Victorian Middle Classes: Wealth Occupation and Geography', *Economic History Review*, Vol.30 (1977); *idem*, *Men of Property: The Very Wealthy in Britain Since the Industrial Revolution* (London, 1981).
10. Rubinstein, 'The Structure of Wealth-Holding in Britain', p.81 and p.85, respectively.