

POPULATION AND HOUSING IN NINETEENTH-CENTURY URBAN LANCASHIRE: A framework for investigation

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Brian Bristow holds a PhD from the University of Lancaster and has contributed two articles to *Classroom Geographer*. His present research is concerned with 'temporal and spatial patterns of mortality and fertility in nineteenth-century Lancashire' and with 'stability and change in the social areas of Preston, 1850 to 1900.'

One of the most immediate and far-reaching social consequences of the rapid increase in population and its relocation during the nineteenth century was the inadequacy of the housing market to cope with such changes. There was much that was unsatisfactory about the housing provision in the countryside¹ and in pre-industrial towns, as far as the lower orders of society were concerned. Indeed, housing was in no way a new problem, yet the difficulties of adding to the housing stock by providing houses at the right time, at the right price, and in the right location were constantly encountered throughout the period. It has been claimed that those who took on the responsibility for the housing supply in the industrial towns were often motivated by short-term considerations,² which only delayed and perhaps exacerbated the extent of the housing crisis around mid-century.

Working-class housing in particular has recently attracted a great deal of attention from social historians, historical geographers, and students of architectural history.³ One fact to emerge from the research was the absence of any consistent and close relationship between the demand for housing and the construction of new houses. Even when such a relationship did occur, the responses were often delayed, creating chronic short-term housing shortages. House construction was principally carried out by very small organisations, which were highly dependent upon borrowed capital to obtain land, materials, and to complete various stages of construction. The cost of borrowing money varied with the fluctuations in the economy, at both local and national levels.

An upturn in business created additional demands for capital, which of course increased its cost. It has been shown that the cost of loan capital, closely linked to the business cycle, was usually the most powerful controlling influence over the rate of house building;⁴ and as the demand for housing appeared to have little impact on the business cycle, it is clear that the housing supply frequently failed to match the demand, not to mention the housing needs of the population.

Anticipation of restrictive legislation and its subsequent introduction also generated pronounced fluctuations in the building rate on a local scale.⁵ Local variation too, no doubt, was influenced by boom or slump in the major employment sector of the district.⁶

Lancashire was amongst the very first regions of Britain to encounter the problems alluded to above, and, from the frequency with which Lancashire towns and cities figured in the enquiries conducted by private individuals, and local and national authorities, it was singularly unsuccessful in finding rapid solutions. It is hardly surprising that this was so, given the spectacular rise in population numbers during the nineteenth century and the fact that such large numbers were increasingly concentrated in areas of very limited physical extent. The published censuses tell us that over 700,000 houses were added to the housing stock in the period from 1801 to 1891, which, allowing for the fact that the period also witnessed the demolition of many old properties, represents a colossal effort in terms of human, capital, and material input.

It is wrong to assume that identical conditions prevailed ubiquitously over time and across space. Whilst the greatest pressures on housing were generally felt in the largest urban concentrations, as they consumed the largest volumes of population increases, these same places were best equipped to respond, in terms of capital, labour forces, and entrepreneurial skills. It is also true to say that for various reasons, including local authority intervention and rises in real incomes for the majority of inhabitants, housing conditions had markedly improved by the end of the century.⁷

Evaluation of the quality of the housing provision for the nineteenth century is not an easy task; the concept of quality obviously incorporates attributes of a widely different kind, some of which are totally beyond our ability to gauge.⁸ Information about these attributes is only available in a sporadic, intermittent manner. Further, such information is invariably highly subjective; contemporary observers judged and commented on the basis of their value systems, their beliefs, their political views and their expectations. The ten-yearly published census from 1801 onwards does, however, provide a series of snapshot views of some aspects of housing which can be used to provide a framework for further investigation. The remainder of this paper concentrates upon the use of this source of information, applied to Lancashire towns and cities for the period from 1801 to 1891.

Each published census indicates, on the basis of defined areal units, the number of houses that were occupied, unoccupied, and under construction at the time of the census. It also provides population data for the same units of administration. It is, therefore, a simple task to calculate two values which provide us with a useful framework for investigation. Firstly, the ratio of empty houses to occupied houses ($\times 100$ in what follows in order to avoid dealing in very low numbers) gives an indication of 'spare capacity'. Secondly, the occupational density, obtained by simply

dividing the total population by the number of occupied houses, provides a measure of 'crowding'. Data problems do occur, especially concerning the lack of consistency of administrative units used in successive censuses, and of the extent to which boundaries took in neighbouring rural areas. Both these present difficulties in the analysis of change over time and variation across space. They create fewer difficulties after 1850, however, and most of the results given below refer to the second half of the century. There are, of course, reservations about the quality of the data and their interpretation. This applies principally to the definition of what constitutes a house. For the 1851 census, enumerators were directed to define a house as a separate and distinct building, a definition which was to remain substantially the same for the rest of the century.⁹ The interpretation of this directive was far from consistent and created special problems in those towns and cities where many people were housed in sub-divided tenements or apartment blocks. Cellars, too, could either be treated as separate dwellings or their inhabitants included as a separate household within the main house unit. In the present context, therefore, the statistics for Liverpool in particular, with its relatively large tenement population and numerous cellars, and to a less extent, Manchester, must be treated with caution.

High Values for the ratio of empty to occupied houses are open to a variety of interpretations. An apparent over-supply of houses could feasibly be explained by the recent completion of new houses awaiting their first tenants, or alternatively, the surplus houses could have been at the end of their useful life, awaiting demolition. They might have represented some speculative venture which had gone awry.¹⁰ Were houses available, but in the wrong place, or at the wrong price? A low value on this measure would suggest some pressure on housing, with little slack to allow a reasonable measure of residential mobility, opportunities for newly married couples to set up independent homes, and openings for recent in-migrants. Whatever the interpretations, the values pose a range of other problems. Why, for example, did this ratio vary between neighbouring towns which had similar economic and social bases? Did an increase in the ratio for a particular town mean that the building industry was getting to grips with the 'housing problem', or was it rather a case of people choosing not to take up vacancies,¹¹ (or indeed, being unable to do so!). Additionally, of course, one is faced with the fact that the census refers to a fleeting moment in time; the situation might have been a temporary one which six months later was quite different.

Turning to the occupation rates of houses, again there are clearly a number of different interpretations and explanations. Regularly high occupation rates suggest pressure on housing and are a powerful indicator of living standards. Changes in rates through time imply that the relationship between supply and demand was changing, but clearly changes did not necessarily mean improvements, despite what was said earlier.¹²

This, of course, vastly over-simplifies the situation; for example, middle-class housing districts were characterised by high household sizes, but the above average size of the house was able to cope with the normal

family, an elderly relative or two, and a servant, without undue discomfort. One would need to turn to other source material (rate books can be useful here) in order to relate household numbers to the size of the house, and thus gain some impression as to the degree of crowding. As the nineteenth century progressed, a larger proportion of the population lived in larger houses; two alternative and conflicting interpretations come to mind. Firstly, that static or even increasing household densities for any town or city did not necessarily mean increasing congestion; it could simply have been a matter of the 'average' house being larger. Secondly, with a larger proportion of middle-class citizens (increasingly towards the end of the century with fewer children¹³ and lodgers) a static occupation rate suggests worsening conditions for the lower socio-economic groups.

Combining the two measures can provide an extremely useful and thought-provoking taxonomy within which to analyse spatial and temporal variation in the provision of, and demand for, housing resources. The four sets of conditions set out below represent the extreme of two combined scales, but in reality, all intermediate conditions were encountered. Suggestions as to possible interpretation are provided, but no doubt other arguments could be put forward with equal validity.

A. Where a high proportion of houses remained empty whilst houses that were lived in had high average occupation rates. These conditions are probably best explained by a general unwillingness or inability to pay for single family occupation of rented property. This in turn suggests that houses were not available at the price that people were prepared to pay; that demand in the economic sense was insufficient. Quite possibly this reflected the state of the local economy, wage rates, and perhaps attitudes regarding what proportion of one's income should go into accommodation. As now, people were prepared to trade-off one benefit against another. If in these circumstances we are seeking to lay the 'blame' for overcrowding, the responsibility seems to rest just as much upon those who paid the wages as upon those who took on the responsibility of providing houses.¹⁴ Later in the century, the high proportion of empty houses could have resulted from incomplete slum-clearance programmes, or over-ambitious suburban housing schemes.

B. Where relatively few empty houses existed in towns in which average house occupation rates were high. The most obvious interpretation is, of course, that housing was under pressure; there was little spare capacity, a situation likely to force up rents, which in turn would have created even higher occupation densities. It must not be assumed that an increase in the provision of housing would automatically reduce occupation densities. Conditions of this sort were most frequently encountered during periods of rapid population increase, before the building industry was able to respond to the changing needs of the population. In the case of Lancashire, one might expect this situation to have applied to the textile towns, such as Blackburn and Bolton, early in the nineteenth century, but rather later in the case of the towns such as Warrington, St Helens, and Barrow whose rapid expansion occurred after 1850. Few empty houses and large house-

hold sizes¹⁵ might also have been features of towns with a large middle-class population and those parts of all towns which attracted this section of society.

C. Those cases in which many houses remained empty whilst those which were occupied contained relatively small households. In most instances, this reflected an easing of population pressure, and could have been brought about by relatively slow rates of population increase, or even decline, though this was rarely encountered in industrial towns during the nineteenth century. It might have implied a relatively affluent population, but more likely, a situation in which the local economy was less dynamic than previously. The apparent surplus of housing could have depressed rents to such an extent that even those families on low incomes could hold individual tenancies; sharing houses, lodging, and giving shelter to members of the extended family were less necessary in this situation. One could also picture these conditions arising from an ill-advised boom in building in the anticipation of a population increase (or an increase in affluence) which was not forthcoming.

D. In which a low ratio of empty to occupied houses is matched by low average occupation rates of those houses in use. In these cases, housing supply was apparently in phase with needs and demands. It suggests that additional houses have been provided at a cost appropriate to the ability and willingness of the tenants to pay. Viewed through time, decreasing occupation rates with fairly constant empty house ratios suggest improved living standards and a response by the building industry to changing demands. The small proportion of empty houses might have represented a relatively high demand for houses, which in turn could have pushed up rents; the capability of occupying houses at low densities, therefore, might be indicative of fairly affluent times. Towards the end of the century it could also, of course, have reflected increasing degrees of family limitation and the acceptance of the social value of single family occupation of individual houses. Perhaps the word 'mature' best summarises conditions described in this section.

A diagrammatic summary of the four extreme cases is given below (fig. 1). Four approaches have been adopted in the application of this classification system to Lancashire towns in the nineteenth century. They are purely exploratory and no attempt is made to resolve the problems which emerge.¹⁶

1. Plotting the position of each town on a simple two axes graph for a given time makes it possible to locate each town according to the classification system just described. This was carried out for 1821 and each census year from 1851-1891 inclusive. Figure 2 shows the situation for 1851. The fact that the density of occupation is plotted on the x axis and the ratio of empty to occupied houses on the y axis is not intended to imply that one variable is considered to be dependent and the other independent. The arithmetic means are indicated for each variable and the area of the graph within which each town is located indicates how closely

Fig. 1 CLASSIFICATION OF HOUSING PROVISION/DEMAND SITUATION

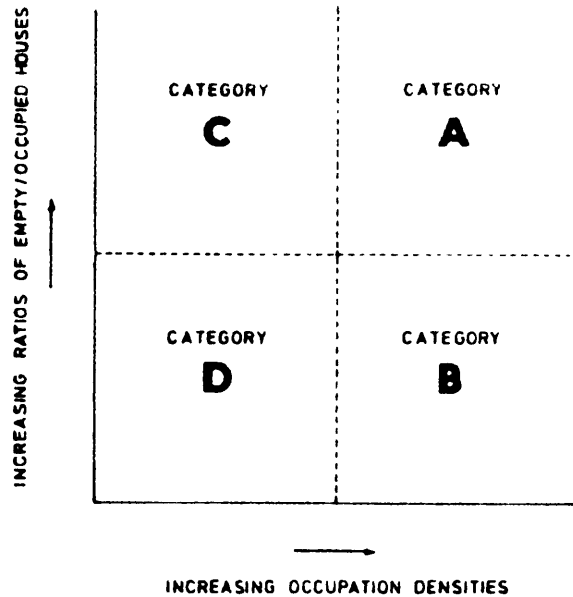
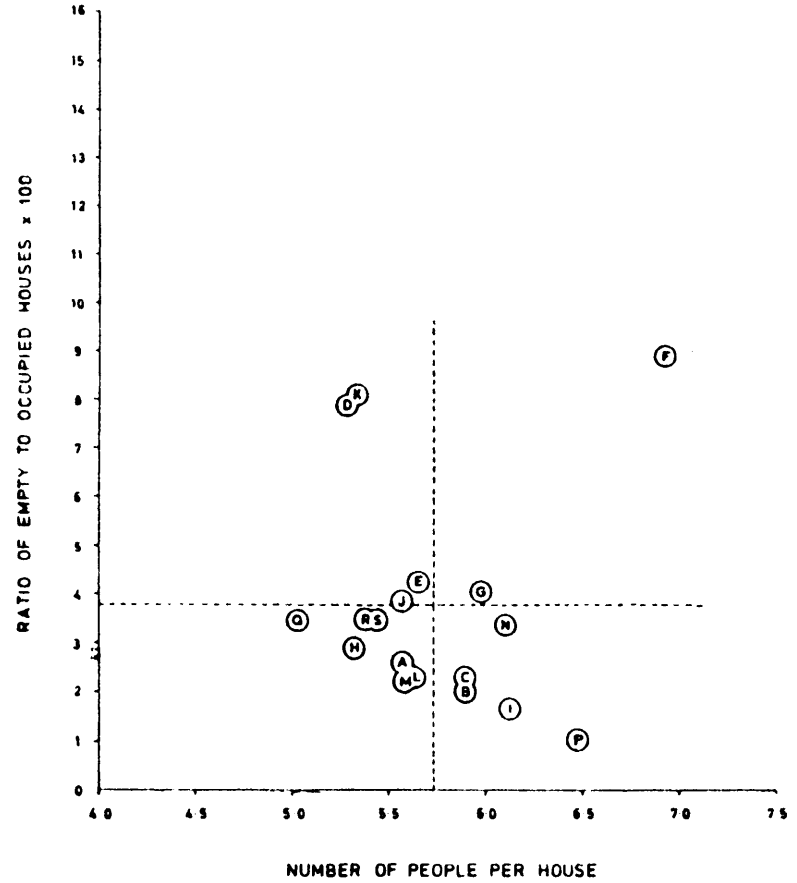


Fig. 2 RELATIONSHIP BETWEEN OCCUPATION RATES AND EMPTY/OCCUPIED HOUSE RATIO 1851



- | | | | |
|-------------|--------------|--------------|-------------|
| A Ashton | F Liverpool | K Warrington | Q Rochdale |
| B Blackburn | G Manchester | L Wigan | R Bury |
| C Bolton | H Oldham | M Burnley | S Southport |
| D Clitheroe | I Preston | N Ormskirk | T Bootle |
| E Lancaster | J Salford | P St Helens | U Barrow |

N.B. KEY APPLIES TO FIG. 2 and 8-11

Fig.3. DECENNIAL CHANGES IN OCCUPATION RATES AND EMPTY/OCCUPIED HOUSE RATIOS, MANCHESTER AND LIVERPOOL

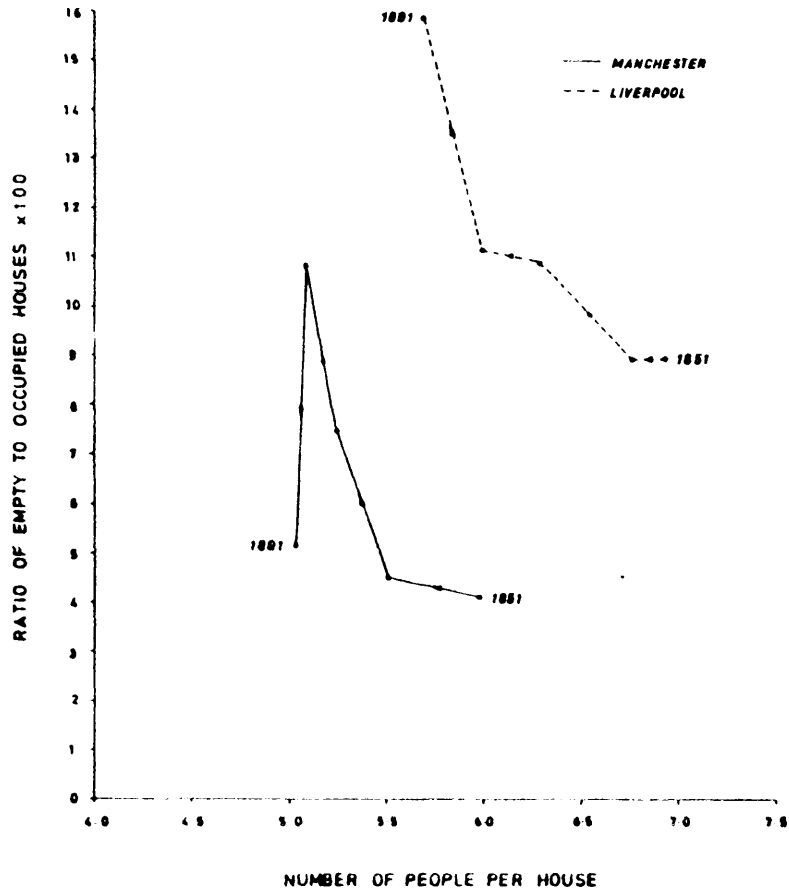
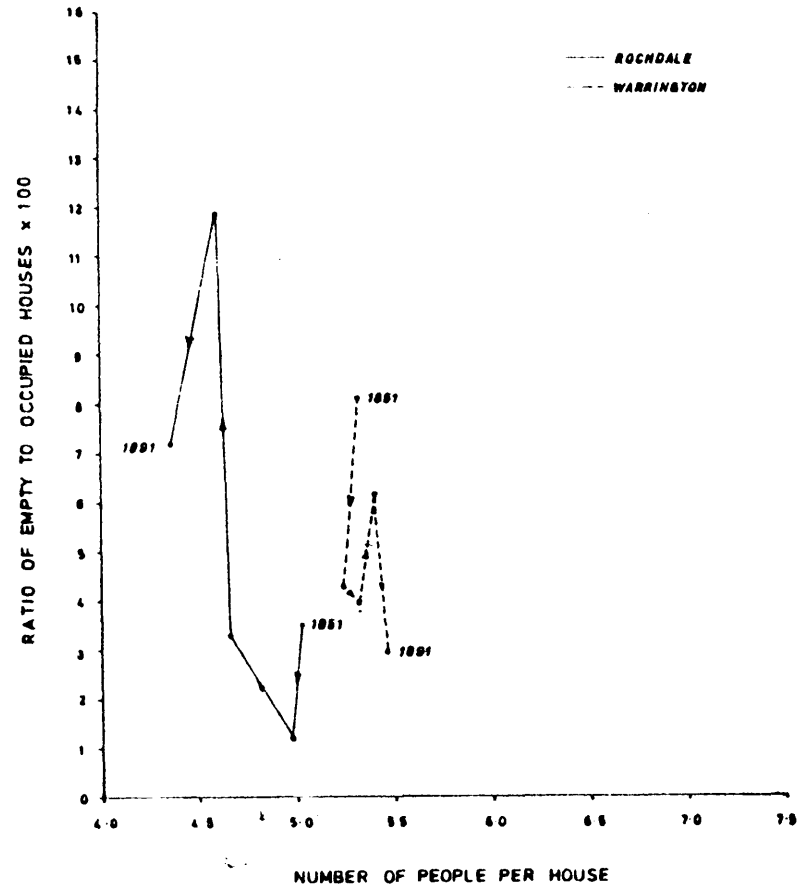


Fig. 4. DECENNIAL CHANGES IN OCCUPATION RATES AND EMPTY/OCCUPIED HOUSE RATIOS, ROCHDALE AND WARRINGTON



it conforms with conditions A to D. By calculating the standard deviations for each variable and choosing some admittedly arbitrary cut-off points, each town or city can be placed in the classification scheme.

Taking the 1851 case (fig. 2) as an example, Liverpool and, to a less extent, Manchester conformed to situation A, in which a relatively large number of empty houses existed along with high occupation rates of inhabited houses. St Helens, Preston, and to a smaller degree, Bolton and Blackburn represented situation B, possessing little spare housing capacity and high occupation rates. Only Clitheroe and Warrington experienced C type conditions to any marked degree, with low occupation rates and an apparent surfeit of housing. Situation D applied only to Oldham, but it is worth drawing attention to this relative lack of household overcrowding in Rochdale and Bury which had fairly typical empty/occupied ratios for the period.

2. Changes in the overall patterns of occurrences through time can be examined by reference to a sequence of such graphical displays. It is not sensible to examine changes over the entire century (at least in the Lancashire case) because of the inconsistency of the administrative units used in presenting census data. From 1851 onwards, the data are available for municipal boroughs, and although there were some boundary changes between 1851 and 1891, these were not sufficient to nullify the value of the exercise.

Over the period 1851-1891 the mean values for persons per house move progressively to the left, indicating a decrease in household congestion. Predictably, the movement of the mean for the ratio of empty to occupied houses varies less consistently, but the overall movement is towards greater slack in the housing market. The degree of clustering in different parts of the graph reveals some interesting situations. For 1851, for example, the points representing places are highly concentrated, with all but three falling both between 1 and 4.5 on the y axis and 5.0 and 6.5 on the x axis. By 1861, the main block is concentrated in a narrow band on the x axis, but much more widely dispersed on the y axis. In other words, the variability in occupation density was less in 1861 than in 1851, but the variability in the ratio of empty to occupied houses had increased considerably. Points become more widely dispersed in the 1871 case, but perhaps the chief difference between this and previous cases are the number of towns with high empty/occupied ratios. By 1881 this trend was even more marked, but also shows the widest range of occupation rates, from Rochdale with under 4.6 per house to Barrow with nearly 7. Finally, the pattern in 1891 is distinct; those boroughs possessing the greatest proportion of empty houses also tended to have the lowest occupation densities. This accords with what theory suggests would be the general case. The fact that it only emerges in 1891 serves to underline the eccentric and apparently irrational relationship between housing needs and availability during the period of economic and social readjustment which occupied much of the nineteenth century.

Fig.5. DECENNIAL CHANGES IN OCCUPATION RATES AND EMPTY/OCCUPIED HOUSE RATIOS, LANCASTER AND CLITHEREOE

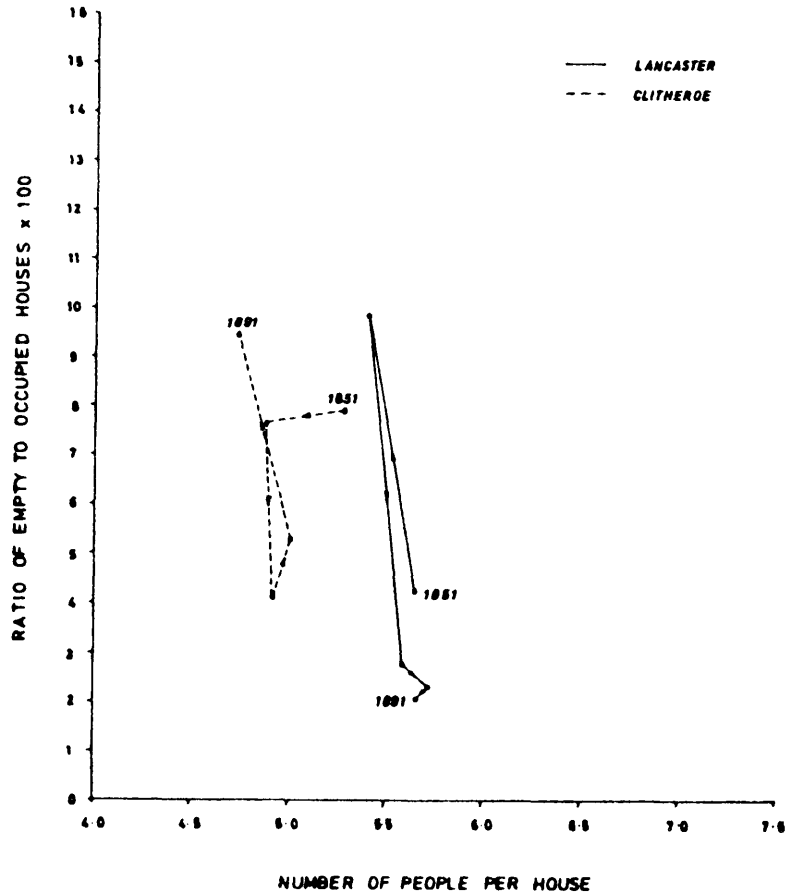
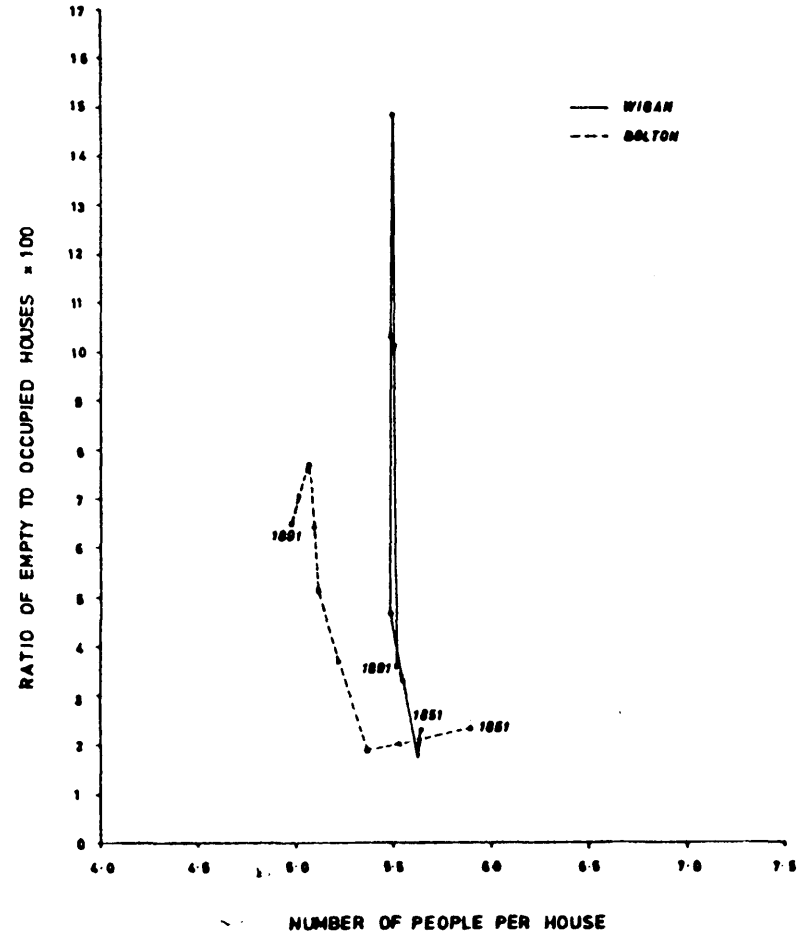


Fig.6. DECENNIAL CHANGES IN OCCUPATION RATES AND EMPTY/OCCUPIED HOUSE RATIOS, WIGAN AND BOLTON



3. A further point of interest is provided by a study of the changes experienced by individual towns through time (figs 3-7). Ten cases are presented for the period from 1851 to 1891, but it would be possible to reconstruct the 'paths' of a number of towns for earlier in the century (for example, Liverpool, Preston and Lancaster). Similar profiles are demonstrated by Blackburn, Preston, Manchester and Bolton, though they are located in different parts of the graph; these profiles are characterised by an initial decline in occupation density with little change in empty/occupied ratios, followed by a marked increase in the latter, associated with further reduction in occupation rates. Reduction in household densities continued, but at a decreasing rate, towards the end of the century. Liverpool followed a similar path, but experienced far higher values on both measurement scales.

In marked contrast, Warrington's path followed the opposite trend, with vacant houses becoming less common and occupational densities higher as the century progressed. It seems more than coincidental that Warrington along with other industrial towns outside the textile districts, experienced a much later population surge than did the cotton towns. Boroughs with less dynamic growth patterns displayed erratic paths; people could easily be living in more crowded households in 1881 and 1891 than they were in 1851, and there were far fewer empty houses available.

4. Finally, patterns of decennial change can be plotted for all towns simultaneously to highlight trends in urban Lancashire as a whole (figs 8-11). The pairs of plotted points indicate the positions occupied by a particular town at two successive census dates. Summing the distances apart of each pair of points indicates the total amount of 'movement' or change. Consistency of 'direction' or lack of it, is shown by the parallel nature (or otherwise, as the case may be) of the arrowed lines. The differences between the patterns displayed from one intercensal period and the next are most pronounced. Thus the 'movements' are exclusively right to left for the 1851-1861 period, but are fairly short. There is also a general, but not universal, shift from top to bottom. This means, of course, a reduction in occupation rates and a similar but less consistent reduction in the proportion of empty houses. However, few towns move so far as to relocate themselves in completely different sections of the graph.

The changes between 1861 and 1871 were much more spectacular, with a noticeable degree of consistency between different towns. More towns showed marked increases of empty house ratios, alongside reductions in occupation rates. In three cases, 'movement' was completely reversed (Warrington, Clitheroe and Lancaster). The diagram shows that the scale of movement for this period was considerable. Over the following ten years, it was the empty house ratio which changes most significantly (mostly increasing) accompanied by small reductions in occupation rates. Individual towns underwent quite radical changes, both in their absolute 'position' and their position relative to other towns. Rochdale, for example, went from category D to category C, according to the system described above, whilst Wigan moved from B to A as its numbers of empty houses

Fig. 7. DECENNIAL CHANGES IN OCCUPATION RATES AND EMPTY/OCCUPIED HOUSE RATIOS, PRESTON AND BLACKBURN

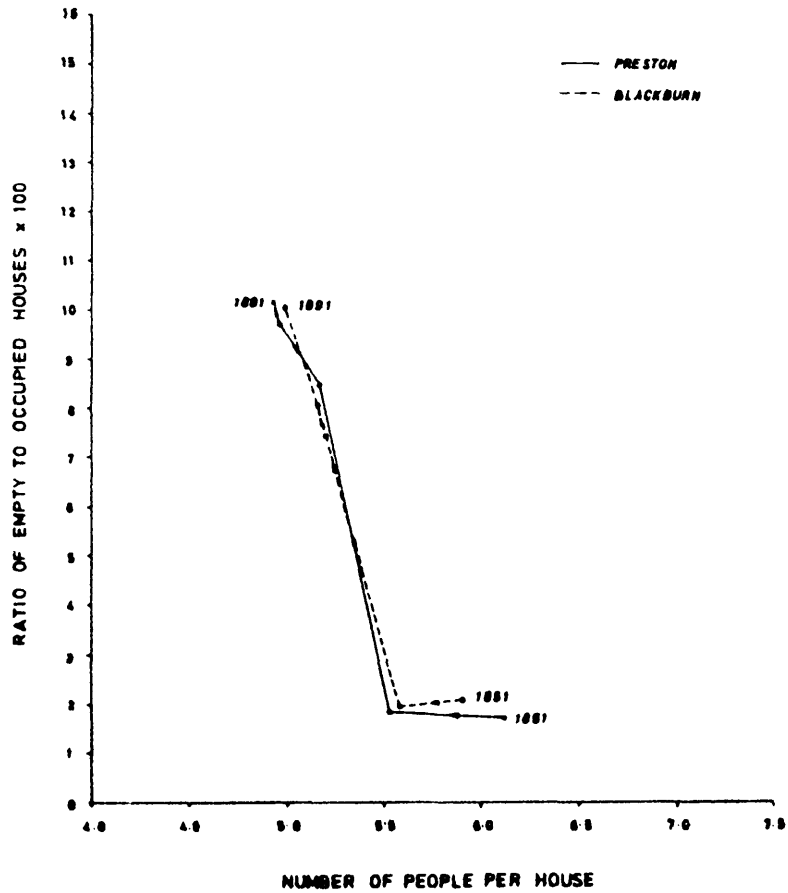


Fig. 8. TRENDS IN OCCUPATION RATES AND EMPTY/OCCUPIED HOUSE RATIOS 1851-61

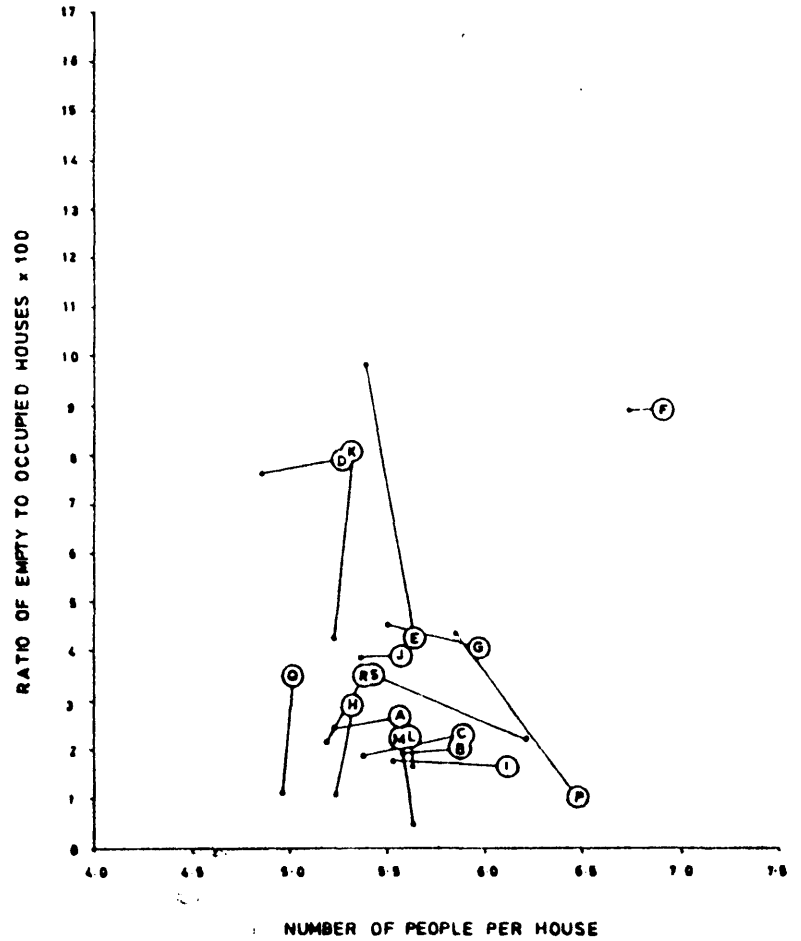


Fig. 9. TRENDS IN OCCUPATION RATES AND EMPTY/OCCUPIED HOUSE RATIOS 1861-71

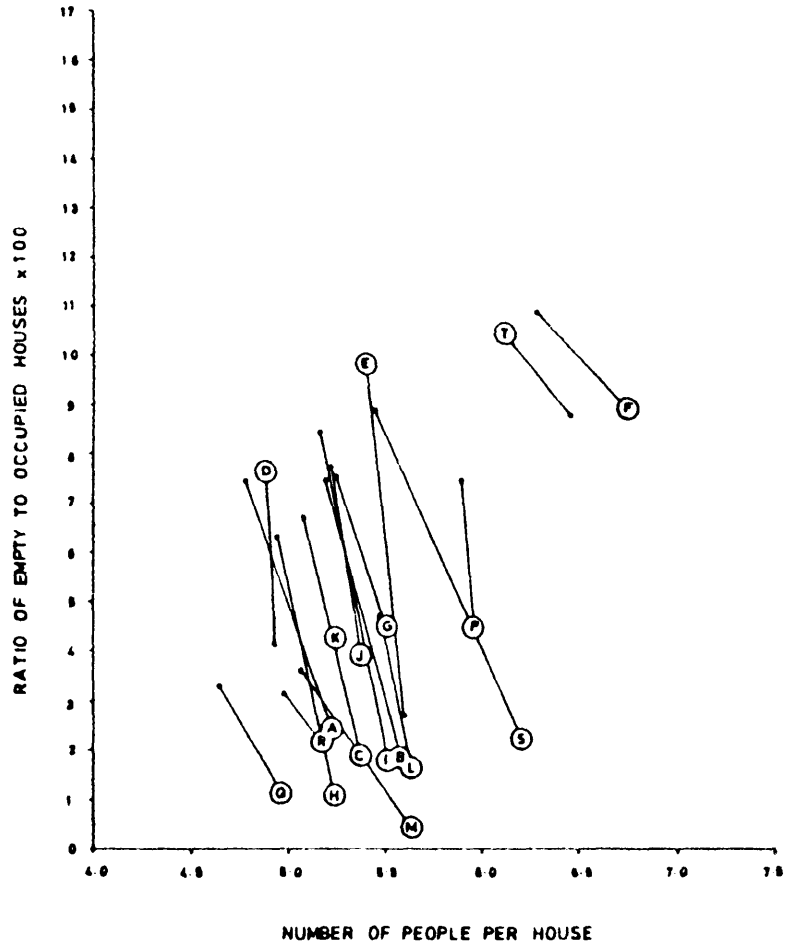


Fig. 10. TRENDS IN OCCUPATION RATES AND EMPTY/OCCUPIED HOUSE RATIOS 1871-81

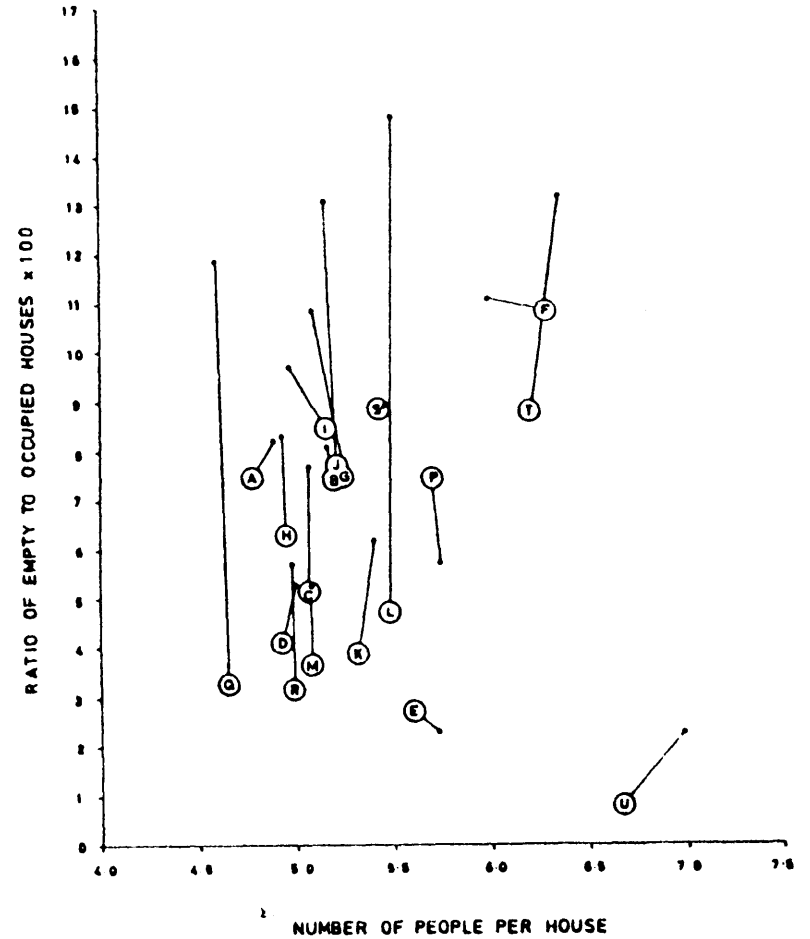
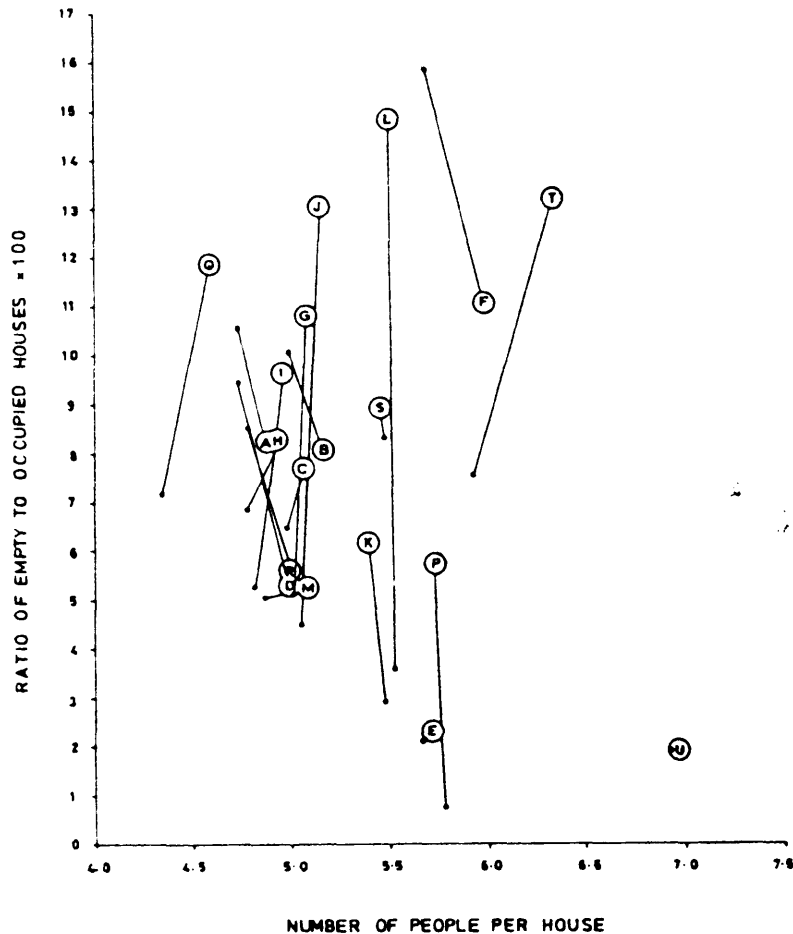


Fig.11. TRENDS IN OCCUPATION RATES AND
EMPTY/OCCUPIED HOUSE RATIOS 1881-91



shot up to the highest value of any town for the period under investigation. Liverpool, however, remained in category A and was to do so for the rest of the century.

In the decade from 1881-1891, the shifts in the empty/occupied ratios were again most pronounced. They were by no means uni-directional, but they were usually associated with decreasing occupation densities. Again, some towns experienced quite dramatic changes; Wigan, for example, reverted to the situation of little spare capacity despite fairly high occupation rates, and Rochdale, Salford and Manchester saw much of their spare capacity absorbed, perhaps as a consequence of fewer people per house.

The following table summarises the positions occupied by Lancashire towns within the classification system used. A capital letter indicates that a place qualifies for inclusion in that class on the basis that it is at least 0.5 of one standard deviation greater or less than the mean on both measurement scales. A lower case letter indicates that the above condition is met on only one of the two scales. (Table 1.)

Table 1. Summary table for Lancashire boroughs, 1851-1891

Borough	1851	1861	1871	1881	1891
Ashton	d	d	C	d	C
Barrow	*	*	B	B	B
Blackburn	d	d	c	+	c
Bolton	d	d	c	d	d
Bootle	*	A	A	A	a
Burnley	d	b	D	D	d
Bury	d	D	D	D	c
Clitheroe	C	C	D	D	C
Lancaster	+	c	b	B	B
Liverpool	A	A	A	A	A
Manchester	a	+	c	c	+
Oldham	d	D	c	d	d
Ormskirk	b	*	*	*	*
Preston	B	b	c	c	C
Rochdale	d	D	D	C	c
St Helens	B	a	A	B	B
Salford	+	+	c	c	d
Southport	d	B	a	+	+
Warrington	C	c	d	b	b
Wigan	d	b	+	a	b

Notes + With + 0.5 standard deviation of mean on both measures

* No data

No attempt has been made here to solve problems. The purpose has been to describe particular characteristics of population and housing for given towns over a given period, and to demonstrate that the organisation of very straightforward and readily available information might at least highlight the questions to be posed. Additionally, attention has been drawn to the more likely reasons for the different situations existing, which could only be verified by close scrutiny of other source material.

NOTES

Thanks are due to Avril Griffiths, cartographer in the Department of Geography, Preston Polytechnic, for producing the illustrations in this paper.

1. J. Burnett, **A Social History of Housing, 1815-1970**, 1978, pp. 30-5.
2. F. Engels, **The Condition of the Working Classes in England in 1844, 1845, 1958** reprint, translation by W. D. Henderson and W. H. Chaloner, pp. 68-70.
3. Recent studies include J. Burnett, J. N. Tarn, **Five per cent philanthropy; an account of housing in urban areas between 1840 and 1914**, 1973, S. D. Chapman (ed.), **A history of working-class housing**, 1971, and E. Gouldie, **Cruel habitations; a history of working-class housing**, 1974.
4. J. P. Lewis, **Building cycles and Britain's growth**, 1965.
5. A. K. Cairncross and B. Weber, 'Fluctuations in building in Great Britain, 1785-1849', **Economic History Review**, 2nd series, Vol. 9, 1956-7, p. 290.
6. J. Burnett, p. 16.
7. *Ibid*, p. 154.
8. In measuring over-crowding, for example, a more useful indicator than the ratio of empty to occupied houses and occupational density (see below) is the number of people per room. Only in 1891 was a technical definition of overcrowding arrived at, and the census of that year was the first to provide information on the number of rooms per house.

9. For a discussion of this, see W. A. Armstrong, 'The Census Enumerators' books: a commentary', in R. Lawton (ed.), **The Census and Social Structure**, 1978, p. 48-52, and M. Anderson, 'Standard tabulation procedures for the census enumerators' books 1851-91' in E. A. Wrigley (ed.), **Nineteenth-Century Society**, 1972, p. 138-40.
10. See a letter to the **Preston Chronicle**, 26th July 1851, referring to a housing glut of the early 'forties' in Preston.
11. Over 1000 houses in Preston contained more than one household in 1851, with several cases of four or more households per house. Over 31 per cent of all households gave shelter to lodgers, at a time when almost 200 houses lay empty. B. R. Bristow, 'Residential differentiation in mid-nineteenth-century Preston', 1982, unpublished Ph.D. thesis, University of Lancaster, p. 93 and p. 364.
12. A. S. Wohl reports steadily increasing occupation rates in London from 7.03 per house in 1811 to 8.02 in 1896; see 'The housing of the working classes in London, 1815-1914', in S. D. Chapman (ed.), p. 24.
13. A. McLaren, **Birth Control in Nineteenth-Century Britain**, 1978, p. 12.
14. J. Burnett, p. 76.
15. The mean size of households headed by members of S.E.G.I. (according to Armstrong's classification) for Preston in 1851 was 6.19. This compared with 5.03 for skilled non-manual workers, and 5.98 for unskilled workers. B. R. Bristow, p. 371.
16. Unless otherwise stated, the data presented here refer to townships, municipal boroughs or county boroughs. The exceptions are:

1851	Bury, Rochdale — Parliamentary Boroughs
1861 : 1871	Bury — Parliamentary Borough