

Measuring the persistence of poverty in East London

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Abstract

Inner east London has been one of the consistently poorest areas of the city since the 19th century, and this study explores the use of mapping techniques to see how persistent the regional geography of poverty in east London has been since the 1880s. Although the area affected by poverty has shrunk since the 1880s, there is a core area that shows persistence of poverty throughout. One notable feature of change has been a substantial shift between the censuses of 1971 and 2001, which may be explained by changes in the housing market and the local community. Data handling and sampling issues are reviewed with a view to a future study filling the gaps in the longitudinal survey.

Introduction

Charles Booth was an industrialist with a radical background who devoted much of his time in the later nineteenth century to social analysis and social reform in London. Whereas the earlier great describer and analyst of poverty in London, Henry Mayhew, had been satisfied with text and tables in writing his monumental *London Labour and the London Poor* (written at the start of the 1850s and published in full by 1862), Booth realised the value of mapping social patterns.

One of his primary tasks was to tackle systematically a question that had raised a great deal of speculation but had never been satisfactorily answered. What proportion of the population of London lived in poverty? His interest in mapping both introduced and answered a second question. Where did the poor actually live? The preliminary answer to these questions came in 1889 with the publication of his *Descriptive Map of London Poverty*, and his survey increased its scope to culminate in the publication of his *Life and Labour of the People in London* in 1903

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One of the questions that come to mind immediately when looking at the map of Charles Booth's survey of 1889 is the persistence of poverty. How much has the pattern of poverty recorded in that year by Booth and his surveyors changed?

On the positive side we should expect major changes to have taken place.

At the time the survey was carried out, major reforming forces were already at work. The London County Council (LCC) had been created in 1888 as the first directly-elected government for the whole of London, and within ten years its first experiments with social housing would be carried out in the East End. Twenty years later the first major cottage estates were being built on the outskirts of London.

Major improvements in sanitation and public health, utility provision, education and environmental improvements were also in train, as part of a process that was to continue for many decades.

Even some of the negatives had their beneficial side. The Depression and the Second World War brought about sustained deterioration in housing stock followed by a period of both war damage and resource constraints that put housing renewal at the low end of the range of priorities. On the other hand the scale of the problem was so great that it made action necessary immediately after the war. Even while the war was still being fought, Sir Patrick Abercrombie was working on his two major plans (The County of London Plan of 1943 and the Greater London Plan of 1944), which were to provide a framework for social and environmental regeneration. The sort of change envisioned by the Abercrombie Plans, and enabled by the New Towns Act of 1946, the development of statutory Green Belt, and the availability of large amounts of brown-field land cleared after war damage, meant that there was a real opportunity for redevelopment in inner London as well as on the suburban outskirts.

On the negative side, the pressure on housing stock in inner London continued to be severe. There was not enough social housing for all, in a city under constant pressure to provide housing for a steady stream of internal and international migrants, housing that had to be convenient for the range of work the migrant communities could expect to take up. Although social housing was being created in inner London, the processes of suburbanisation, overspill, and new town development were all creating outward currents that freed housing, some of it private rented housing in decaying areas, for the inward movement of migrants.

We know that most of the problem areas of London, the ones with current reputations for youth crime, poor housing, and ethnic tensions, are in Inner London and within the area that Booth first mapped in 1889. On that basis we can expect that some of the areas that Booth identified as problematic in the late 19th century are still problematic now.

The nature of poverty has changed. Very few people in London now live in the life-threatening absolute poverty that afflicted so many in the second half of the nineteenth century. Mayhew's London of people scrabbling for a living on the streets and squabbling for overnight space on pallets in grossly overcrowded common lodging houses has gone. So has the London seen by the late 19th century social reformers who found the invisible

poverty of women in attics plucking rabbit-skins all day for pennies? However there is still relative poverty, and many Londoners find it very hard to make a living despite being surrounded by the very visible wealth of the minority.

So the question posed here is:

Can we see continuity in the areas of poverty in London from the period of Booth to the present day?

The Booth Survey of 1889

One of the persistent problems of social research is that the questions asked and the data obtained to answer them change, and this makes longitudinal surveys very difficult to carry out.

The Booth survey itself was of course carried out in a city that was subject to the decennial census. The first maps were published two years before the 1891 census. On the other hand the “hundred years rule” meant then as now that information at a detailed scale was not released at all, and the labour of processing census data in pre-electronic days meant that it would have been years before Booth could have expected to see useful outcomes from the 1891 census even in the most general terms.

Clearly Booth was not interested in waiting for the census to be carried out and processed. In organising the data collection for himself, he did not attempt a rigorously statistical approach but classified areas of residence on a very Victorian hybrid basis combining factual information about income with moral assessments of the character and opportunities of the people living there.

The basis for Booth’s classification was set out in his *Life and Labour of the People in London* and the text descriptions below are taken from the tabular summary presented in this book (Booth, 1903, and viewable at <http://booth.lse.ac.uk/static/a/4.html>)

The “worst” classification [Category A, living in housing shaded black in the Booth survey] was assigned to:

The lowest class which consists of some occasional labourers, street sellers, loafers, criminals and semi-criminals. Their life is the life of savages, with vicissitudes of extreme hardship and their only luxury is drink.

These are the people to whom Victorian observers were quite happy to assign the label “undeserving poor”.

On the other hand we can see the “deserving poor” in Booth’s description of many of the people living in poverty [Category D shaded pale blue] characterised by:

Small regular earnings, poor, regular earnings. Factory, dock, and warehouse labourers, carmen, messengers and porters. Of the whole section none can be said to

rise above poverty, nor are many to be classed as very poor. As a general rule they have a hard struggle to make ends meet, but they are, as a body, decent steady men, paying their way and bringing up their children respectably.

We can see that the classification was created by a more or less intuitive synthesis of income data, the characteristics of the work done by particular groups, and moral judgements. Interestingly, Booth does not seem to have been interested in housing in itself, and assessment of housing stock and quality do not figure in his categorisation.

What we get is information generalised into social categories, with the information usually applied to whole streets or blocks of housing. For example we know that every house shaded black has been assigned to the category described above without there being any possibility of getting more detailed information from the maps about specific buildings or households. The field books contain a great deal more information but it is still often impressionistic.

How do we compare the Booth survey with more recent data sources?

The 1971 and 2001 Censuses

The 1971 Census is the earliest census currently available in a form that allows direct electronic analysis. Information at household level is inevitably not available but we have access to data down to Enumeration District level.

The tables of available data available from 1971 are fairly limited. Booth's classification is essentially one of social class and it is tempting to use the social class data from 1971 in comparison, but the Social Class Socio-Economic Group (SC SEG) classification used in that year was not regarded as totally satisfactory and in the 2001 census it was replaced by the National Statistics Socio-Economic Classification. Direct comparison across the boundaries of these two classifications is not easy, and this discourages the use of social class as a comparator.

The 1971 census does offer a number of other possibilities, including tenure, economic activity and household amenities. Tenure is not helpful in this case, since the situation in 1971 at least was one in which the pattern of social housing before the right to buy was introduced meant that there were effectively monocultural areas of social housing that would not be differentiated. The amenities tables are also problematic (this is also true of 2001) in that social housing was provided with amenities matching different minimum standards as time went on, meaning that a mapping based on this is as likely to differentiate between different ages of social housing as to pick out real differences in the living standards of the occupants.

In the end the decision was taken to use the overcrowding index from Table SAS 18, where an occupancy rate of 1.5 or more per room is taken as the threshold of overcrowding. This may not be a direct measure of poverty but it is a reasonable surrogate. It also has the advantage of relating to one of the criteria most often observed by Victorian observers and

being directly comparable to the corresponding table for 2001 once the data from the latter (presented in raw numbers) are converted to ratios per thousand to match the 1971 figures.

This decision makes the choice of criterion for 2001 very simple, and the corresponding overcrowding measure for that year has been chosen as well.

Choosing a study area

Rather than examine the whole Booth map area, the decision was taken to select a large pilot area that would enable evaluation of the method before going on to map the whole area. The Inner East End area was selected as a district with a very wide range of variation in Booth classification. A square of 5.5 km was selected using the boundaries of the 1889 maps as the margins on the north and east, defining an area bounded by Highbury Corner and Hackney Wick in the North, Borough Road and the Isle of Dogs in the south.

Some parts of the square had to be excluded from the survey for different reasons. Booth did not record conditions in most parts of the City of London and a sizeable part of the southern section was occupied by the Thames. The decision was taken to concentrate on the parts of the current boroughs of Tower Hamlets and Hackney that fell within the square, meaning that about 70 per cent of the square was actually sampled.

Sampling method

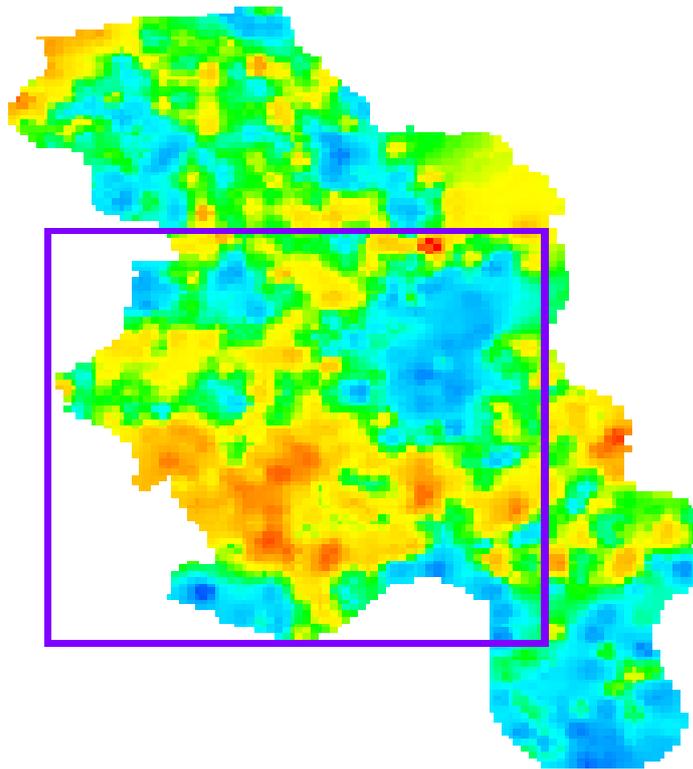
Surface gradient maps were constructed using MapInfo, from the 1971 and 2001 overcrowding data for Hackney and Tower Hamlets. The illustration shows as an example the gradient map (MapInfo uses the term “grid”) for 2001 overlaid by the study area bounds. Grids are built from patterns of sampling points and provide a continuous surface of values, meaning that any location on the grid will have a defined value derived from the data values at the original data points, with the weighting of different data points contributing according to an inverse distance weighting algorithm.

A 100m sampling grid was then placed over the study area [it was deliberately not aligned directly with the 100m mesh of the National Grid] and the three distributions were then sampled on the 100m intersections where they fell within the Tower Hamlets and Hackney section.

Inevitably there must be a difference between the ways in which we can sample the distributions. In the Booth case we can only use presence, absence, or a proximity measure – a sample point matches or does not match a recorded instance of poverty or is within a certain distance of one. In the two census cases we can construct value surfaces on which any location has a derived value based on the original sample points, and obtain precise numerical values.

In the case of the Booth maps, any sample point within 100m of at least one housing block was given the value of the nearest block. Only cases where the nearest block was coded as Poor or worse were recorded, and logical T (for True) values were assigned.

In the case of the 1970 and 2001 census grids, it was thought appropriate to use relative rather than absolute criteria, and after some experiment the criterion for inclusion was defined to include all intersection points with values equivalent to the mean value for the whole grid plus one standard deviation. As in the Booth cases, T values were assigned to the cases that met this criterion.



In cases where an intersection met some but not all of the three criteria, the unmatched years were given F (False) values. All intersections with a positive poverty score for at least one of the years are therefore defined in the database and have T or F scores for the three years as appropriate.

The majority of intersections did not have a positive poverty score for any year and therefore carry implicit F values for all years. These were not actually coded, but are “visible” on the map as white space. On that basis it is the pattern of T values (i.e. true for the existence of poverty) that really matter.

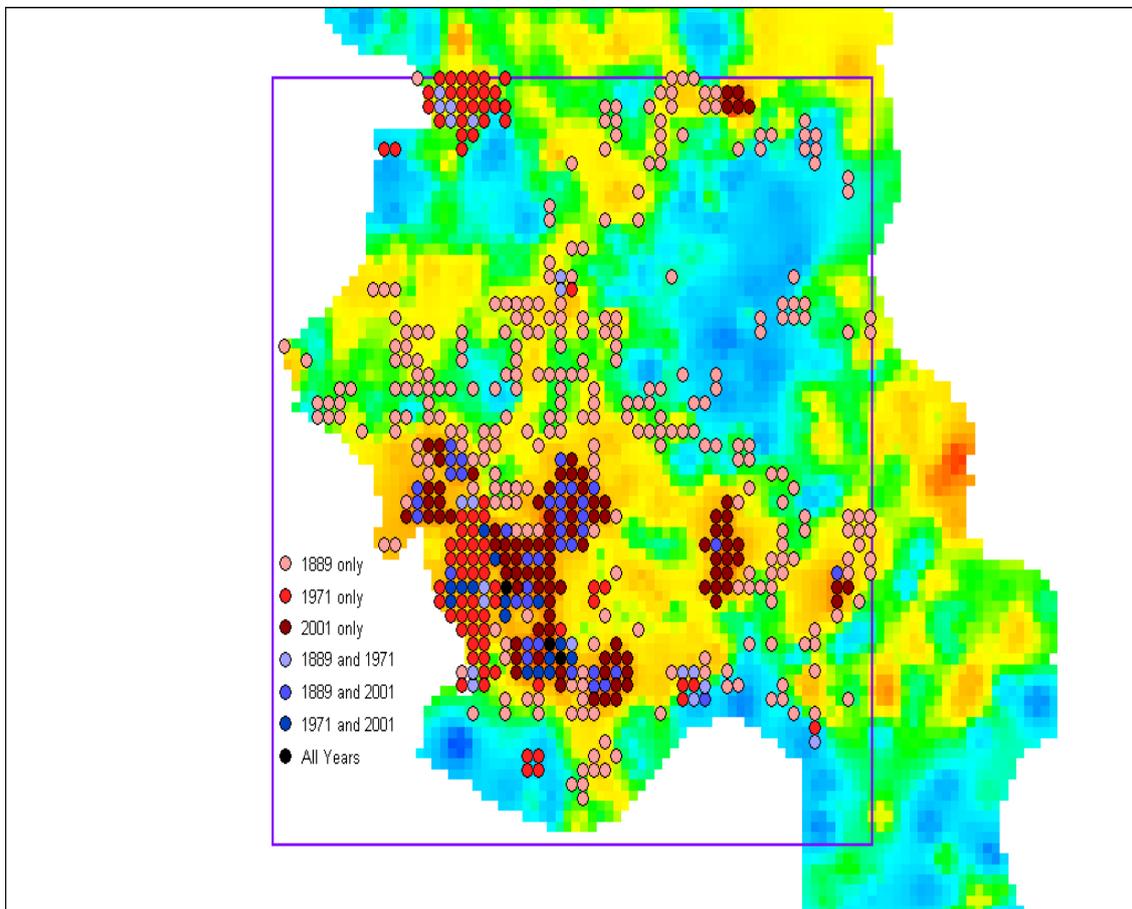
Analysis

At this stage we need only perform a basic analysis. We can move on to a more detailed spatial analysis after the pilot study is completed.

By performing a series of queries on the logical values in the fields we can identify and map separately the intersections that conform to the seven possible sets of values [excluding those that are always false and have already been excluded]:

- *Booth only TFF*
- *1971 only FTF*
- *2001 only FFT*
- *Booth and 1971 TTF*
- *Booth and 2001 TFT*
- *1971 and 2001 FTT*
- *All Years TTT*

The mapped outcome is shown below, with the live intersections shown as dots on top of a reference grid of the overcrowding values for 2001.



A number of features emerge straight away. Firstly, it looks as though the answer to our initial question is positive, and the persistence of poverty is demonstrated by the map. The nearer the blue end of the colour range in the 2001 grid, the lower the level of overcrowding. If we look at the distribution of the “live” intersections with T values for at least one date,

we can see that a majority of them are in the yellow through red areas. At a second stage of analysis we may work to get numerical assessments of the relationships but in the meantime we can be content with a visual comparison.

The second feature to make an impression is the wider range of poverty on the 1889 map. Although largely confined within or very close to the yellow and orange (high overcrowding) areas of 2001, the intersections unique to 1889 cover a much bigger geographical spread.

Thirdly, there is quite a tight geographical distribution of the blue coded intersections – the ones with poverty scores for two dates. The majority are in clusters in eastern Tower Hamlets in a range running down from the Old Nichol area above the west end of Bethnal Green Road down through Whitechapel and then towards the Thames. There are only a few isolated areas of real continuity including one in Dalston and another in Shadwell.

There is a handful of points that show continuity across the whole range of dates (shown in black), east of Brick Lane and below Commercial Road, and they too are in the same cluster.

A last interesting feature is a real change in distribution between 1971 and 2001. Locations that feature only in 1971 are confined almost exclusively to the eastern edge of Tower Hamlets abutting the City, and Dalston, with a few outliers such as the block in the old inner London Docks areas. In 2001 there was an eastward shift (although still within the area of continuity. Dalston no longer figured at all but there were large new concentrations in Mile End and Hackney. Since the two distributions were obtained using the same criterion and very similar recording units (Enumeration Districts and Output Areas) this is one of the changes least easily explained by inconsistency in sampling. In this case we may have to look at changes both in housing provision and community composition over the thirty-year period, with the arrival and consolidation of the Bangladeshi community being one of the likely contributing factors.

Points for consideration

As a pilot study trying to reconcile different data collection modes, this has been reasonably successful, but there are a number of issues that should be addressed before moving on to the next stage.

Are the data collection criteria appropriate? It could be argued that the greater apparent spread of poverty in 1889 is a function of the data collection decision. However if we had excluded Booth's "Poor" category and focused only on the three lowest categories, it would arguably have narrowed the range too much. The "Poor" category contained the deserving poor of Booth's classification, and the modern use of 1.5 or more people per room is arguably a similar classification, including a large number of households that are under-resources but not concentrating only on the very poorest.

Is the sampling procedure appropriate? Systematic grid sampling techniques are always problematic and in this case as in others, a matter of metres could assign sample points values that seem quite unrepresentative of particular patterns. The area around the notorious Flower and Dean Street lodging house area, which on the basis of the census of 1891 had a

good claim to be one of the most overcrowded in London, is barely touched by the sampling points. If there is a problem here it is with the Booth pattern, since the two later patterns can be built into surfaces that are sensitive to local variations. It might be worth looking at more advanced methods of proximity analysis to convert the simple all-or-nothing patterns of Booth into a more sensitive recording surface.

The question remains whether the major adjustment between 1971 and 2001 is something that we could have expected to find occurring over similar time spans throughout the whole period, rather than a unique result of the major changes in the housing market that took place under and after Thatcherism?

An important task if this assessment is to be carried on has to be the use of the paper census records for selected intermediate years to build geographies of poverty for the long unexplored period between 1889 and 1871.

References

Booth, C (1903) *Life and Labour of the People in London*. London: Macmillan.

Mayhew, H (1861-62) *London Labour and the London Poor*. London: Griffin Bohn. Part of this book had been published as an incomplete serial work a decade earlier.