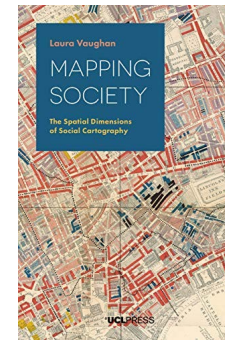

Charles Booth and the mapping of poverty

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> From where, off Shoreditch High Street, a narrow passage, set across with posts, gave menacing entrance on one end of Old Jago Street, to where the other end lost itself in the black beyond Jago Row; from where Jago Row began south at Meakin Street, to where it ended north at Honey Lane – there the Jago, for one hundred years the blackest pit in London, lay and festered; and half-way along Old Jago Street a narrow archway gave upon Jago Court, the blackest hole in all that pit.[1]

Social conditions: observing the problem

Before we continue further into these two centuries' worth of carto-graphic wanderings, it is important to discuss the influence of the work of the great social reformer and father of social investigation, Charles Booth.

Booth is not an unknown figure in the social sciences. At least 10 books have been dedicated to establishing his importance as the father of the field, while the two series of maps which accompanied Booth's 17-volume, 14-year project are themselves famous for their cartographic importance. Yet, possibly due to the ongoing division between the social and the spatial sciences, few of the books about Booth written in the past quarter century devote more than a passing mention to the maps.[2]

This is the first of this book's two chapters dealing with poverty maps. It will lay out the essential importance of Booth's maps, which have been described as an 'elaborate exercise in social topography',[3] and what they tell us about the relationship between urban configuration and poverty. The second chapter will show the impact Booth had on a small number of

other early social scientists either side of the Atlantic, from which we will gather more about the spatial form of poverty in Chicago, after which we will turn to York and then back to London.

We will start with a divergence from the conventional history of social cartography, which places Charles Booth as the progenitor of the poverty map. A significant precursor to his work is found in the set of maps of Liverpool published in 1858 by a parish priest, Abraham Hume, who lived in All Souls, Vauxhall – possibly the poorest and unhealthiest district of the poorest city in England (see Figure 3.1).

Maps were a constant in Hume's method. Prior to the Liverpool study, he had used them for his contribution to the 1851 census of religious worship (which was the first and only time until recent history when an enquiry into religion formed part of the official decennial census). The census used four different schedules to record attendance at the established and non-established churches of England and Wales and of Scotland. Hume subsequently gave evidence before two select

Figure 3.1 Rev. Abraham Hume's *Map of Liverpool, Ecclesiastical and Social* (coloured historically), 1854.

From A. Hume, *Condition of Liverpool, Religious and Social, Etc*. 2nd ed. (Liverpool: Privately printed, 1858). Electronic image courtesy of Tinho da Cruz, Department of Geography and Planning, University of Liverpool.

committees of the House of Lords on 'Means of Divine Worship in Populous Places' and 'Church Rates', and went on to conduct many other religious geographical studies in later years.

Deeply concerned by the results of the religious worship census, which seemed to suggest that the significant reduction in church-going and a surprisingly high non-conformist presence meant the country was on its way to being 'a heathen society', Hume undertook to investigate the situation locally, to see if church-going was associated with poverty. Almost as soon as he had been given charge of his Liverpool parish Hume organised six theological students to visit the 2,400 houses in the area and compile records on their housing conditions as well as patterns of church-going. Hume set out his statistics street by street in a pamphlet published in 1858, alongside a set of maps – which were in fact the same map coloured up four different ways – to denote, in turn, ecclesiastical, historical, municipal and moral and social statistics.[4]

Hume explained his method as follows.

> Desirous of ascertaining it more minutely, I applied to all the relieving officers within the Borough; and they very kindly furnished me with lists of streets in their respective districts, in which out-door relief is most uniformly distributed. Each of them divided his list of streets into two classes; those which were wholly pauper, and those which were half or partially so. There were nearly 200 streets included in all; viz – 56 of the former kind, and 139 of the latter. All of these are indicated on the map, by dark serrated marks, which are denser in the former than in the latter.[5]

Hume's map was marked up with dark serrated marks for 'pauper' streets and light serrated marks (in reality, more sparsely drawn) for 'semi-pauper' streets as well as chapels and churches and related ecclesiastical data. His data on the location of streets of crime and immorality, and the location of poverty streets (divided into semi-pauper streets and pauper streets), took up a considerable amount of the text in his pamphlet, where he also discussed the relationship between church-going and poverty. His notation of areas of cholera and violent deaths in an inset of the map indicates his association of poverty with disease on the one hand and crime on the other.

We can also see a section of the poorest district in the section of the map reproduced in Figure 3.2, which is centred on Hume's own parish area and the map's key is in Figure 3.3.

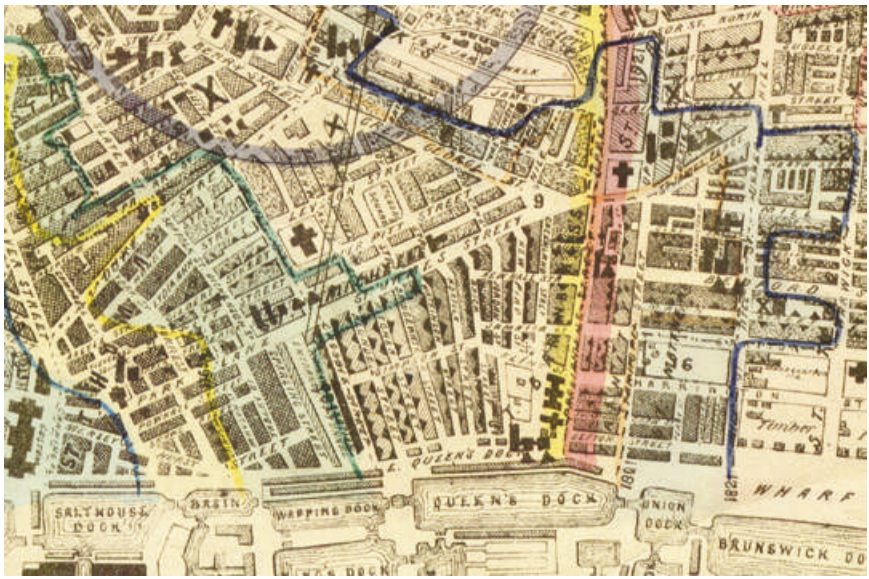


Figure 3.2 Detail of: Rev. Abraham Hume's *Map of Liverpool, Ecclesiastical and Social*

From A. Hume, *Condition of Liverpool, Religious and Social, Etc*. 2nd ed. (Liverpool: Privately printed, 1858).

Although this was a survey that focused on religious observance, Hume's descriptions of the local conditions point to how attuned he was to the location of poverty in the interstices of the district:

> the moment we diverge from these main lines to the by-ways which are less known, we find destitution of every degree, and crime and suffering of every kind. All the lower part of Toxteth Park, lying along the line of the river but at some distance, is of this kind; and Everton which within the last thirty years was an elegant suburban retreat, is now crowded with an humble population. These broad distinctions will be sufficient to indicate the 'region of pauperism'.[6]

Looking at the map it is clear that the poor were living in tight clusters in a small number of streets. Many of these would have been back-to-back dwellings that the Liverpool Sanitary Act of 1842 (possibly the first public health legislation in England) had condemned a few years earlier, due to the lack of ventilation and sanitation within them (see Figure 3.4).[7] Hume finds the largest clustering of pauperism to be located in St. Thomas', Toxteth, and the next in order in St. James'. Overall, he finds poverty in 195 streets, but smaller localities have

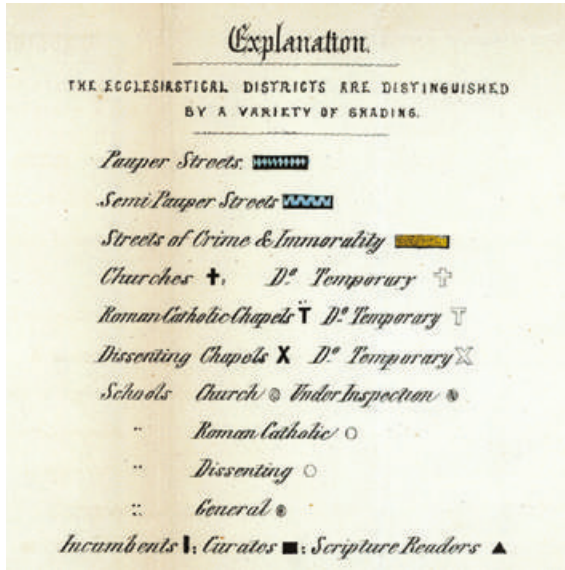


Figure 3.3 Key to Rev. Abraham Hume's *Map of Liverpool, Ecclesiastical and Social*

From A. Hume, *Condition of Liverpool, Religious and Social, Etc*. 2nd ed. (Liverpool: Privately printed, 1858).

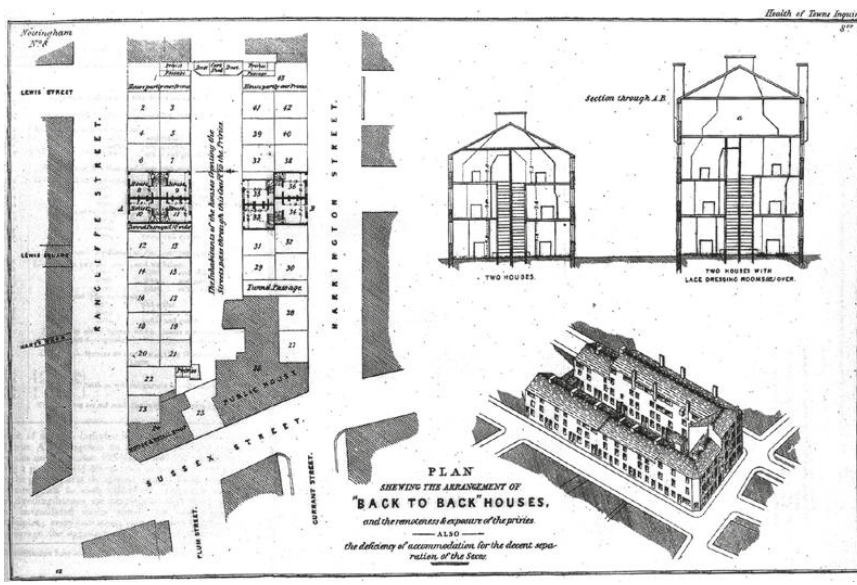


Figure 3.4 Thomas Hawksley's *Plan Shewing the Arrangement of 'Back to Back' Houses and the Remoteness and Exposure of the Privies, also the Deficiency of Accommodation for the Decent Separation of the Sexes*.

T. Hawksley, 1844. Wellcome Collection, https://wellcomecollection.org/works/mcwh8yh4.

clusters – 'specially devoted' to crime, vice and immorality – in 'only' 33 streets in total.[8]

The city's growing prosperity meant that the middle classes could increasingly afford to move away from the overcrowded inner city, so their presence in the centre diminished. Hume argued that not only had their presence provided a positive influence, but the middle classes had also cushioned the worst of the poverty through their contributions to local church taxes and support for community amenities such as libraries, schools and hospitals; in parallel, the greater demand on day labour at the nearby docks resulted in the creation of 'an exclusive belt surrounding the docks in which the density of population was greater than anywhere else in the city'.[9] Hume points out how the city's topography helped increase overcrowding, which he saw as an important contribution to poverty, since suburbanisation was constrained by the presence of the docks to the west. The result was the formation of a close-packed band of poverty by the docks, surrounded at a distance away by a semi-circle of more prosperous households.

Space syntax analysis of Liverpool's urban morphological evolution from the 1850s to today has shown how the city's original arrangement of radial streets emanating out from the docks created a remarkably enduring pattern of localised spatial segregation in areas such as the one here, with Princes Avenue (labelled New Road on the map's right-hand side) demarcating the district of Toxteth-Granby that, after a spell as a relatively prosperous suburban enclave of Jewish immigration, went into a deep decline.[10] This decline was partially due to the collapse in the city's shipping industry in the 1930s along with the widespread damage wrought by the heavy bombing of the docks (which were an important conduit of supplies during the Second World War). An earlier study of Toxteth, in the post-war period, shows how a combination of severe economic deprivation along with the ongoing spatial and social isolation of the district's minority black community had led by that time to the local population being significantly disadvantaged, with the perception of Toxteth as a 'no-go' area only exacerbated by the 1981 riots that took place in the district. The authors pointed to the need for any social regeneration to take account of the lack of mixing as well as the lack of wider spatial connectivity, to ensure any improvement to the local community's situation.[11] Indeed it has taken until the turn of the new millennium for the area to start to benefit from the general uplift in the city's circumstances, coupled with targeted social projects.

Social geography: diagnosing the problem

Two thousand copies of Hume's map were sold or distributed. One was set before the select committee of the House of Lords, *Appointed to Inquire into the Deficiency of Means of Spiritual Instruction and Places of Divine Worship in the Metropolis, and in Other Populous Districts in England and Wales, Especially in the Mining and Manufacturing Districts* (and etc.) of 1857–8; the map was also displayed at the National Association for the Promotion of Social Sciences meeting held in the same year in Liverpool. Only a few years later, Charles Booth, a shipping industrialist then still living in Liverpool, was on the campaign trail in the city for a Liberal Party seat for the national elections of 1865. His diaries show how shocked he was to see the extent of poverty in Toxteth when canvassing in the area. While there is only circumstantial evidence for him having seen Hume's maps, it seems more than a coincidence that when Booth embarked on his survey in 1880s London he employed similar methods of gathering statistics and mapping them to those that had been used by Hume. As David Smith has noted, Hume's maps could very well be considered a precursor to Booth's.[12] Nevertheless, in scale, ambition and influence, the two men's efforts cannot compare.

Although, like Hume, Booth was not a social theorist, he was an empiricist. His approach to studying the conditions underlying poverty was based on a confidence that the science of statistics was fundamental to social progress. Having staked a considerable fortune from his shipping business, he embarked on the study that became his life's work.

Aiming to understand the causes and contributory factors to poverty, Booth planned his research in a business-like way. This was especially important in a context where other theories were lacking a factual basis; as his biographers wrote: 'no one really knew the truth about how the poor lived. It was if they were living behind a curtain on which were painted terrible pictures.'[13]

What is particularly interesting is the social milieu in which Booth undertook his project. The late nineteenth century was a time of growing concern about the very nature of urban society. As Reeder states in his introduction to the reproduction of the 1889 poverty maps,

> during the 1880s a new perception was being formed of London's social condition, growing out of a spate of writings on how the poor lived by journalists and city missionaries . . . Middle-class anxieties were fuelled by descriptions of . . . the poor as a brutalised and

> degenerate race of people, the victims but also the agents of the deteriorating forces in city life.[14]

Booth's work coincided with a critical point in the social and economic history of London. This was a period when London's labour market was based on small-scale production and the finishing trades. Work was seasonal, and workers were employed on a casual basis, with employment rates fluctuating with the demands of the market. Few were experts in a single trade. Instead, workers would hold several occupations throughout a single year (a fact that would also need to be considered when examining census records). Anna Davin shows how this pattern of work made workers much more spatially dependent; knowledge of casual work, or references for work or charity, were reliant on local knowledge built up through long-standing residence in the area. This had the greatest detrimental effect on the weakest and least powerful people socially; 'those who depended on their local environment the most to support them in their everyday life'.[15] Yet the poorest classes were most likely to have to move frequently due to changes in income or rent costs. This enforced transience increased their relative disadvantage: 'variations in family income or household composition were often a reason for changing house. When income shrank through illness or unemployment, leaving even less margin for rent, somewhere cheaper had to be found.'[16] Davin shows that this situation of supposed restlessness was criticised by the so-called comfortable classes, who had little contact with the poor, except through the accounts of reformers and professionals such as clergy and public health inspectors. Paradoxically, the poor were also criticised for being immobile, concentrating in large masses of disease and immorality.

The degradation of the physical environment in poverty areas became a matter of increasing public concern, with many campaigners writing pamphlets on the subject. One of the most influential was that by Reverend Andrew Mearns, *The Bitter Cry of Outcast London*, which resonated widely in its descriptions of the 'pestilential human rookeries' in which the poor were living:

> We do not say the condition of their homes, for how can those places be called homes . . . Few who will read these pages have any conception of what these pestilential human rookeries are, where tens of thousands are crowded together . . . To get into them you have to penetrate courts reeking with poisonous and malodorous gases arising from accumulations of sewage and refuse scattered in all directions and often flowing beneath your feet.[17]

The poor problem had become a spatial problem, since high concentrations of poverty were seen to risk the moral and physical contamination by the casual poor of the respectable poor. Booth's enquiry, then, started in a context wherein poverty was considered a moral problem. As we saw in Hume's study, a correlation between an absence of church-going, excess of drink and general moral imprudence was associated in the popular imagination as the root of the problem of poverty. Political concerns with this matter came to a peak with the 1886 Trafalgar Square riots, which brought to public attention the presence of a mass of poverty within shouting distance of London's heartland. Six months later Charles Booth started his survey, with his team setting out on foot to conduct a preliminary inquiry into the poverty conditions and occupations of the people of East London. This study aimed to classify every street, court and block of buildings across the metropolis by direct observation, but it soon became clear that in order to cover the entire city Booth's team would need to switch to capturing statistics on a street-by-street basis.

Booth's city-wide enquiry essentially aimed to discover how many people were living in poverty, what kept them in this state and what might be done to alleviate it. His ability to force the 'poverty question' away from a debate about morality and towards a consideration of practical solutions was a significant one: he showed that poverty was more likely to be due to under- or unemployment and less likely due to personal failure (drunkenness and the like). Importantly, Booth's classes were based on income combined with employment patterns and status, rather than social classes. Once Booth had compiled his statistics he consulted experts on the accuracy of his coding: in fact, Booth's ambition to be statistically rigorous has been validated in recent years, with research into his classificatory scheme showing it to be internally consistent in how it differentiates the poverty classes.[18]

In one of his first addresses about the survey to the Royal Statistical Society Booth stated: 'it is the sense of helplessness that tries everyone; the wage earners, as I have said, are helpless to regulate or obtain the value of their work . . . We need to begin with a true picture of the modern industrial organism . . . it is the possibility of such a picture as this that I wish to suggest.'[19] By this time Booth was becoming aware of current thinking in the fields of social reform and practical philanthropy. Ruskin, Octavia Hill and others were talking about giving time and intelligence to finding a solution to poverty in preference to simply making charitable donations.[20] This thinking was also in tune with Booth's ongoing conversations with his future collaborator, Beatrice Webb, about the possibilities of social diagnosis through scientific enquiry.[21] At

the same time there was widespread publicity regarding the conclusions from Henry Hyndman's enquiry for the Social Democratic Federation, published in 1885, which claimed that 25 per cent of the population lived in conditions of extreme poverty. It is said that this claim helped bolster Booth's resolve to conduct a study that would disprove what seemed to be an unlikely statistic.[22]

In addition to his study of poverty, Booth carried out a series of detailed studies on the working conditions in the principal London industries, as well as on specific subjects he felt relevant to the study of life and labour, such as the 'sweated' industries. His series ended with an inquiry into 'Religious Influences', which included detailed accounts of his interviews with clergy from across the religious spectrum.

Booth's preliminary results were shocking. While Hyndman's estimate of 25 per cent was seen to be excessive, Booth found 33 per cent of London living in poverty, with an even greater proportion, 35 per cent, among those living in the city's East End. Not only had he determined that the rate was greater than had been estimated previously, his detailed reports shed much light on the nature of poverty. One of his many important findings was that regularity of income was as significant to poverty as its level. Booth showed that people working in certain industries, such as tailoring, which suffered from ebbs and flows throughout the year, experienced similar fluctuations in rates of poverty, such that they were never assured of a steady income. He also showed that poverty was linked to where people lived.

The street study, which started in 1889, was captured on a detailed scale map (6 inches to 1 mile or 1: 10,560) according to finely delineated gradations of poverty and prosperity from black, dark blue and light blue for the poverty classes through pink and red to gold for the wealthiest. From a cartographic point of view, one of the striking aspects of the study is that the unit of analysis was the street segment, namely the section of street between two junctions, so the finest variations could be recorded, occasionally even differentiating different sides of the same street. Yet it is likely the darker colours would have been chosen to meld together from afar to emphasise clusters of poverty streets. The colour scheme used on the map was as follows:

> Black. The lowest grade (corresponding to Class A in the statistical study), inhabited principally by occasional laborers, loafers, and semi-criminals – the elements of disorder.
>
> Dark Blue. Very poor (corresponding to Class B), inhabited principally by casual labourers and others living from hand to mouth.

> Light Blue. Standard poverty (corresponding to Classes C and D) inhabited principally by those whose earnings are small . . . whether they are so because of irregularity of work (C) or because of a low rate of pay (D).
>
> Purple. Mixed with poverty (usually C and D with E and F, but including Class B in many cases).[23]
>
> Pink. Working-class comfort. Corresponding to Class E and F, but containing also a large proportion of the lower middle class of small tradesman and Class G. These people keep no servants.
>
> Red. Well-to-do; inhabited by middle-class families who keep one or two servants.
>
> Yellow. Wealthy; hardly found in East London and little found in South London; inhabited by families who keep three or more servants, and whose houses are rated at £100 or more.

The data used for these classifications were based on several sources, first and foremost among which were the School Board Visitors, who had a detailed knowledge of families with children. This was a well-judged decision, as their role (to ensure school attendance) required familiarity with the entire family and its living conditions, as those who were living in the worst conditions did not have to make even the minimal payment for school. As part of their regular round of inspections, which sometimes would have been repeated over several years, such visitors would record the state of the housing, of its inhabitants and whether the breadwinners of the household were fit to work, in addition to the size of the household and – importantly – the regularity of its income. The visitors' information was cross-checked against reports by philanthropists, social workers, policemen and others, which along with Booth's own assessments provided as scientific a record as was available at the time.[24] The survey was published in 1891 in four sheets as the *Descriptive Map of London Poverty 1889* (see Figure 3.5).[25]

Having completed the street survey, Booth also studied 4,000 households in detail to provide additional data on the causes of poverty. His conclusions were that poverty was multidimensional in its *aspect* (namely the observed data) and in its *causes*, and that there were causes that came from the state of the labour market – namely that they were circumstantial. The causes, both circumstantial and personal, fed off each other, so that external poverty might exacerbate personal circumstances and vice versa. Bearing this in mind, it is evident that despite the first impression of the map as being quite stark in dividing the city into only eight classes,

Figure 3.5 Charles Booth's *Descriptive Map of London Poverty*, 1889, sheets 1–4 compiled into a single image.

Drawn up to accompany C. Booth, *Labour and Life of the People*. Appendix to volume II, ed. Charles Booth (London and Edinburgh: William and Norgate, 1891).

in fact its scale of colours represented a combination of factors such as regularity of income, work status and industrial occupation. Booth was in effect recognising that in many instances regularity of income was primarily shaped by a person's occupation.

While scholars criticise the supposedly subjective nature of the survey (and its particularly moralistic language, in terming the lowest class as vicious – that is, pertaining to vice), the scope, rigour and scientific method make Booth in many scholars' eyes the first true social scientist.[26]

Booth's maps showed that pockets of poverty could be found throughout the city, while the East End working classes, which had been feared as a source of political action, was much more varied than had been assumed. In refutation of the public fears, it was clear that the poorer working classes were unlikely to be able to organise any form of action, let alone threaten social order. According to Kevin Bales, these results alone were seen as a breakthrough by many commentators,[27] while Booth's paper to the Royal Statistical Society in May 1887 led to widespread newspaper coverage due to his reported 'illumination of what had become in the public's mind as "darkest London"'.[28]

Ten years after the first survey Booth and his team undertook a revision of the maps: 'Every street, court and alley has been visited . . . changes have been most carefully considered . . . [most changes are] the result of the natural alterations of ten years of demolitions, rebuilding and expansion involving changes in the character or distribution of the population'.[29] The results of this survey were published in the maps 'Descriptive of London Poverty 1898–9', which comprised 12 sheets of detailed maps, covering a wider area still than the 1889 survey. In order to create this survey, members of the Booth Inquiry went on walks around the area, usually accompanied by a policeman, during the period between May 1897 and October 1900. The preceding decade had coincided with a period of quite extensive slum clearance across London and this shift in localised patterns of poverty and prosperity is very clear when comparing the two maps, as we will see below. Indeed, the notebooks recording these interviews are a vivid record of how the streets had changed since 1889.[30] See, for example, the page for an area around Chapel Market, Islington (Figure 3.6):

> Large business done, Jews have lately begun to take over the shops. Shopkeepers live above their shops & stalls. Two courts out of it on the North side – purple barred with black in the map. A roughish set of coster & fish curers – no trouble to the police. Dark rather light

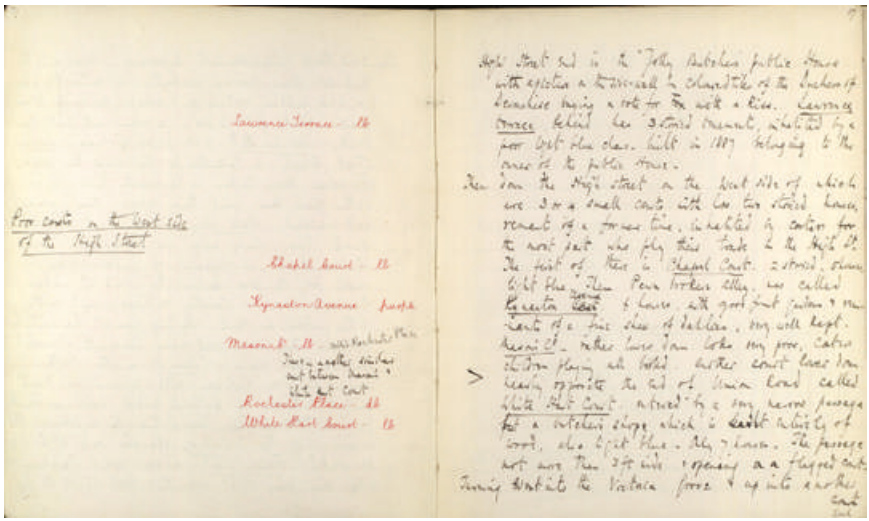


Figure 3.6 'George H. Duckworth's Notebook: Police and Publicans District 14 [West Hackney and South East Islington], District 15 [South West Islington], District 16 [Highbury, Stoke Newington, Stamford Hill]', 1897, p. 199.

Booth, C. 'Poverty Series Survey Notebooks (Online Archive).' British Library of Political and Economic Science, https://booth.lse.ac.uk/notebooks/, Reference: BOOTH/B/348.

to dark blue then black. Union Square has 15 2 storied cottages. Chapel Place is the other court.[31]

Reading the maps of poverty

The Inquiry used two sets of watercolour maps throughout the study to document the condition of each street in the study area and as a basis for recording initial findings before preparing the final version.[32] These were displayed to the public at two of the principal London Settlement Houses (Toynbee Hall and Oxford House),[33] with an invitation to the public to view them and propose corrections. The maps were also displayed to a scholarly audience; in his 1887 address to the Royal Statistical Society, Booth drew people's attention to the 'many coloured map hanging on the screen', encouraging them to draw close to see its detailed colouring, '[recommending] this graphic method of representing the condition of the people as one most easily to be comprehended, and, what is still more important, most easily to be verified'.[34] Booth was intending to use his graphic method to communicate the true nature and extent of poverty in London to both the public and the politicians of the time, to expose 'the numerical relations which poverty, misery and depravity bear to

regular earnings and comparative comfort, and to describe the general conditions under which each class lives'.[35]

The survey and its maps drew extensive press coverage. *The Guardian*, for example, stated that Booth's map of poverty had lifted the 'curtain behind which East London had been hidden' and presented the nation with a 'physical chart of sorrow, suffering and crime'.[36] Booth's maps went beyond displaying graphic patterns; they provided the spatial and social context of poverty by showing the arrangement of one in relation to the other. He could illustrate how frequently poverty streets were situated cheek by jowl with red or gold streets. If we look at Figure 3.7, which zooms in on a patch of the 1889 survey maps, it is clear that even in the impoverished East End the well-to-do streets, coloured red, are just one turning away from the next step down in class – those coloured pink, who are just a street away from the blues and blacks of the bottom grades of street. This subtle organisation of the marginal separation of class or land use was carried out by integrating similar uses or classes along the same street alignment but effectively segregating different uses by putting them on different alignments.[37] Another typical feature of the London

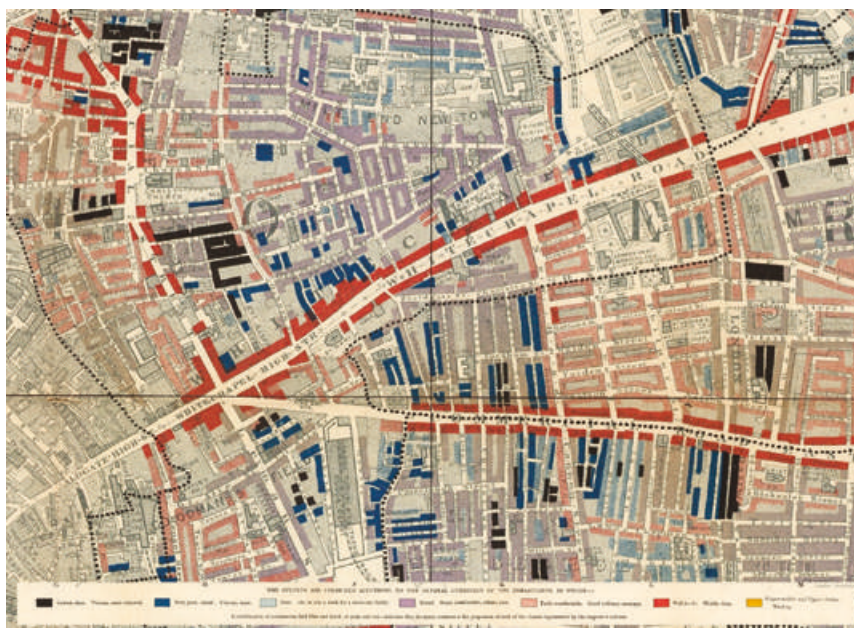


Figure 3.7 Sample area from *Descriptive Map of London Poverty,* 1889, showing marginal separation of poverty from relative prosperity (overlaid with the key to the map).

Booth, *Life and Labour of the People*. Image copyright Cartography Associates, 2000.

street is its domino-like symmetry of uses across each street, which, as Richard MacCormac has stated, 'affirms its character as a place'.[38] Yet, there was no explicit plan to organise the nineteenth-century city in this way. Instead, this pattern had emerged as part of the process of continuity and change which brought about the spatial logic of the city at the time.

The manner in which the historical city adapted to form marginal differences in accessibility that differentiate class and situation is striking. By using street morphology to organise the social and economic form of the city, a variety of classes could be located in the same area. These findings support the historical analysis which showed how the area's structure provided opportunities for a well-organised mesh of economic interdependency, so that diverse groups could benefit from their mutual spatial proximity to support a flexible spatial economy. Naturally, we should not forget that use of the nineteenth-century city's streets was demarcated by sex as well as class. Ellen Ross has written about how for women of Booth's poverty classes there were elaborate systems of borrowing, lending and support, even with small loans.[39]

David Reeder has described how much the 'territorial variations in the conditions of life in different London districts were related to the residential patterns that had evolved over the course of the century'. Considering the map in its entirety, it is striking how it is made up of distinctive patches of poorer streets, set within a frame of 'well-to-do' streets. Equally, London's then socio-spatial framework of an armature of prosperous streets (coloured red), demarcates the boundaries between one neighbourhood and the next. We can also see how at its edges the city does not fall off into an abyss of no-man's-land but has more porous street structures set within open land, challenging conventional descriptions of the urban fringe as *tabula rasa*.[40] The map was in effect capturing the process whereby London's social contours are shaped over time. But more significantly (as Kimball maintains), the visual rhetoric of the map changed the public view of poverty, making the problem seem much smaller than had been supposed, and thus manageable. We can see this type of rhetoric take effect in the comments of a Daily News reviewer:

> [The map] is in many colours, and the specks of black will show us where to find the haunts of the lowest class . . . Happily, the strange landscape shows a fair predominance of the more cheerful colours. It is a pink, and a red, and a light blue landscape, on the whole; and only here and there . . . are the dismal shades which seem but so many varieties of black.[41]

It is not only the fine-scale layout that seems to have had an impact on social conditions, creating pockets of irregularity in the urban grid. Pfautz notes how for Booth, '[the concept of] 'poverty area' represented one of the most developed and sophisticated areal concepts in the inquiry. Specifically, it denoted the little groups of 'black and blue' streets which, it will be remembered, had an apparently random pattern of distribution on the 'social map' of London.[42] Larger-scale obstacles in the urban fabric had a deleterious effect on the ability of people to move around and improve their social and economic conditions. Booth frequently noted in his writing that physical boundaries such as railways had the effect of isolating areas, walling off their inhabitants and isolating them from the life of the city. The urban historian H. J. Dyos has also pointed out 'how often these introspective places were seized by the "criminal classes", whose professional requirements were isolation, an entrance that could be watched and a back exit kept exclusively for the getaway . . .'. [43] Gareth Stedman Jones has also noted that

> [o]ne great effect of railway, canals and docks in cutting into human communities [is] a psychological one. . . East Londoners showed a tendency to become decivilised when their back streets were cut off from main roads by railway embankments. . . Savage communities in which drunken men and women fought daily in the streets were far harder to clear up, if walls or water surrounded the area on three sides, leaving only one entrance.[44]

Booth's maps show how the impact of railway lines was frequently, and ironically, to reinforce class division: on the one hand they created the possibility to escape the city to clearer air a commuting distance away for those who could afford the move, but on the other hand, for those who could not afford to move away, the situation was worsened by the impact of the railways on the local environment. Booth himself wrote of an area of East Battersea:

> Of the other extreme, the worse elements have for the most part taken refuge in blocks of houses isolated by blank walls or railway embankments, or untraversed by any thoroughfare. Some of the courts have long been notorious in the neighbourhood – one, for instance, is popularly known as 'Little Hell'.[45]

If we zoom in on the West End of London we find a clear example of the marginal separation of classes mentioned above, with a network of streets that ranges from the grandest houses to the blackest slums (Figure 3.8

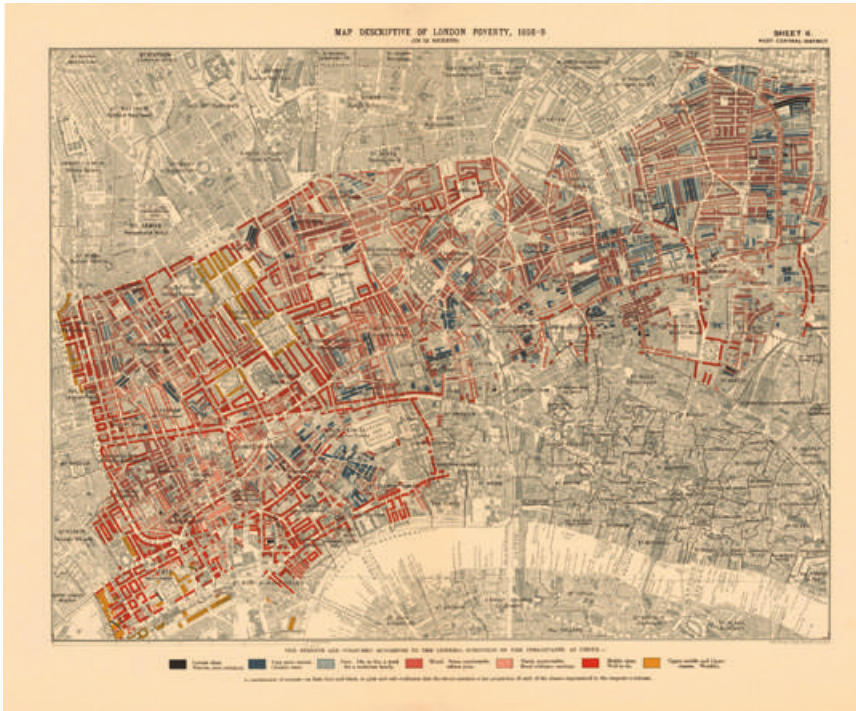


Figure 3.8 Charles Booth's *Map Descriptive of London Poverty*, 1898–9, sheet 6.

West Central District. Covering: Westminster, Soho, Holborn, Covent Garden, Bloomsbury, St Pancras, Clerkenwell, Finsbury, Hoxton and Haggerston.
LSE reference no. BOOTH/E/1/6.

and 3.9). The map also highlights how the parish of St Giles in the Fields to the south of Oxford Street (the street coloured red running west to east) had pockets of severe poverty, with a large number of streets in the poverty class colours of black, dark blue and light blue, framed by streets coloured red ('middle class'). As Christopher Breward has written, 'The stark difference between Marylebone, to the north of Oxford Street and Soho, to the south, was marked along architectural, ethnic, social and professional lines';[46] further, the poor Soho district was only a few turnings away from the streets coloured yellow (or gold) in the parish of St George Bloomsbury to the north of Oxford Street. Notably, the yellow streets tend to be removed slightly from the main streets of the city, by having only one flank of the square facing a well-connected street. At the same time (as already mentioned in Chapter 2 – see Figure 2.7), the specific morphology of Soho that made it an area which differs from its surroundings allowed it to contain a range of marginal social activities and classes which could coexist with the contrasting surrounding areas by virtue of the spatial containment of the district. This subtle

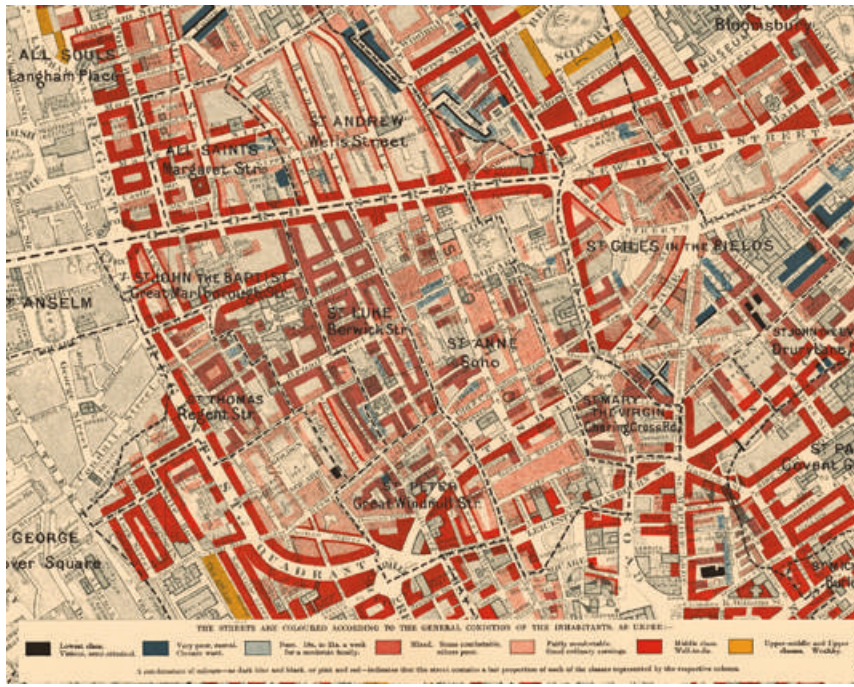


Figure 3.9 Detail of Charles Booth's *Map Descriptive of London Poverty*, 1898–9, sheet 6 (overlaid with the map's key).

LSE reference no. BOOTH/E/1/6.

organisation of space is the way in which the layout of streets has in the past intersected with the distribution of poverty in cities such as London, in a way quite different from modern-day gated housing areas.[47]

By translating the amorphous, ungraspable problem of poverty into a measurable social issue that could be targeted with pinpoint accuracy, Booth's maps had provided a means to start finding solutions to a problem that hitherto had been out of reach and out of sight. Booth, Dyos and Stedman Jones all pointed towards the possibility that changes to the urban layout could themselves contribute to the decline of poverty areas. The following section reviews the latest empirical research into this notion.

Analysing the maps of poverty

Booth's definition of poverty was intentionally relative, given that he was using a description of class, not income. In other words, he did not define a basic level of subsistence, below which an individual could fall; rather,

he established what the conditions were in which poverty took place. Although he refers in his writings to a line of poverty, which he notionally positioned at a 'bare income' of 18s. to 21s. per week,[48] this was a hypothesised line demarcating the boundary between those who were just getting by and those who were in want. It was based on Booth's close observation of a statistical sample of a large population – across many industries active in London at the time. These conditions included the physical setting within which people were living. Pfautz also notes that one of the factors that was especially important for Booth 'in determining the class of residents . . . [was] *situation*, in contrast to *site*. Here Booth took specific note of the accessibility of areas to one another, particularly areas of living to areas of work.' In other words, Booth recognised that if an individual found it difficult to get to work from home, they would find it harder to get a job. Indeed, there are many accounts of dockers having to live within reach of the port of London, or the city's jobbing tailors having to live within barrow-wheeling distance from the tailoring industry's heartland.[49]

Booth's observations on poverty situated the problem as being to do with the regularity of income just as much as its level. Yet he also put great emphasis on the impact of street layout on social situation. Scattered through his writing are comments such as '. . . the "poverty areas" tended to be literally walled off from the rest of the city by barrier-like boundaries that isolated their inhabitants, minimizing their normal participation in the life of the city about them. . .'. [50] Booth was also deeply aware of the impact of the physical conditions of housing on poverty. Amongst his recommendations to the Royal Commission on Housing (1901) about the urban spatial solutions to housing and poverty were provision of better transport to allow for dispersal to the suburbs, improved planning – open space, widening of thoroughfares and opening up of courts, closing of houses not fit to live in, supervision of new buildings, slum clearance and a policy of construction and reconstruction throughout London (not only in its crowded parts).[51]

One of the worst areas was the infamous Nichol district in Shoreditch, East London. It had featured in a thinly fictionalised novel by Arthur Morrison (written at the instigation of a local vicar, Arthur Osborne Jay). Despite, or probably because of, its somewhat sensationalist language, *A Child of the Jago* did much to raise the public consciousness of the dire conditions in this location at the time:

> It was past the mid of a summer night in the Old Jago. The narrow street was all the blacker for the lurid sky; for there was a fire in a

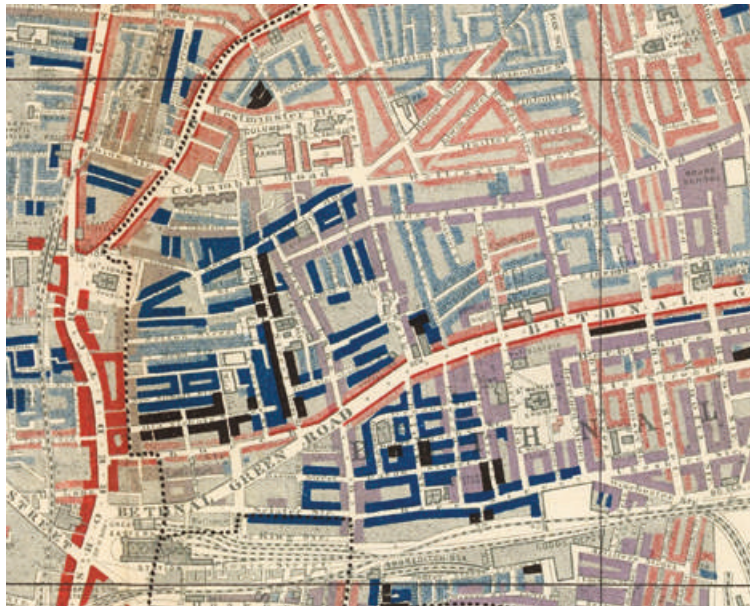
> farther part of Shoreditch, and the welkin was an infernal coppery glare. Below, the hot, heavy air lay a rank oppression, on the contorted forms of those who made for sleep on the pavement: and in it, and through it all, there rose from the foul earth and the grimed walls a close, mingled stink – the odour of the Jago.[52]

As Morrison wrote, the Nichol was a densely populated warren of streets containing appalling housing conditions. Life expectancy was said to be just 16. The district's rotten housing stock meant that it was the last refuge of the poor and its bewildering layout meant that it had a reputation locally as a criminal enclave. One resident attested that living in the Nichol was 'something like a ghetto . . . In the Nichol there seemed to be a wall enclosing you'.[53] When surveying it in the 1880s Booth's team had classified the area's streets at the lowest grades, black and dark blue (respectively connoting 'Very poor, casual, chronic want; lowest class' and 'Vicious [i.e. pertaining to vice], semi-criminal' respectively) – see Figure 3.10a, showing the area on the 1889 map.

Booth's project became part of the drive for reform which sought state intervention to relieve poverty conditions. The Nichol's housing was demolished and replaced by the Boundary Estate. It was the first project constructed by the newly formed London County Council, the first state social housing in the country. The process of spatial change, which would normally take a significant period to have an impact on social patterns of life, was much more rapid in cases such as this. The aim of the slum clearances was to tidy up the overly complex geometry of the street layout. Instead of the dense, labyrinthine layout of the Nichol a central circus ringed by red brick blocks of flats were constructed, with streets radiating out from the centre to connect with the surrounding area. Once constructed, the complex was rapidly inhabited. Less than 10 years later, the streets were classified by Booth's team as 'pink, fairly comfortable' (see Figure 3.10b and, for an image of one of the estate's streets, Figure 3.11). Even at its time it was a step up from the surrounding area. However, in the same unfortunate pattern seen today in many regeneration projects, the original inhabitants of the cleared streets had to move elsewhere as they could not afford to move into the new housing. This led to worsening conditions in the surrounding housing, which became more overcrowded.

Research into the spatial nature of this variation in levels of poverty has used space syntax methods for modelling and analysing space to quantify the geometric, topological and metric properties of the Booth maps of poverty to see if there are consistent relationships between spatial isolation (or 'segregation' in space syntax terminology) and levels of poverty.

(a)



(b)

Figure 3.10 a) Detail of *Descriptive Map of London Poverty*, 1889 showing the Old Nichol area and b) Detail of the same area on the *Map Descriptive of London Poverty*, 1898–9, sheet 6, showing the new estate.

West Central District. Covering: Westminster, Soho, Holborn, Covent Garden, Bloomsbury, St Pancras, Clerkenwell, Finsbury, Hoxton and Haggerston.
LSE reference no. BOOTH/E/1/6.

Figure 3.11 Abingdon House, Boundary Estate, Old Nichol Street.

Photograph by Clem Rutter, Rochester, Kent (http://www.clemrutter.net) via Wikimedia Commons.

Space syntax methods use mathematical measures of a model of the street network to calculate the relative accessibility of every street to all other streets within the system (or within a defined distance). With these methods, measures of the relation of each street segment to all others can be set alongside social and economic measures, such as, in this instance, Booth's classifications.[54]

The first stages of space syntax research into the Charles Booth maps found that socially or economically marginalised individuals follow distinctive patterns of settlement and that underlying these patterns were spatial conditions that may have influenced this distribution. For example, the analysis found that interruptions to the grid structure significantly influenced the spatial configuration of a poverty area, giving rise to conditions of both spatial and social segregation.[55] Detailed spatial analysis found that while districts such as Soho had formed localised areas of poverty, the East End of London had a stronger differential

between the spatial integration of 'middle class' streets and all the poorer streets. We can see this in Figure 3.12, which shows a section of the space syntax analysis of the Booth map of poverty 1889 for the East End, with the main streets classified as 'middle class' being markedly more likely to be coloured in the warmer shades of integration. In parallel, there were localised clusters of very poor streets, which the analysis found were physically cut off from the life of the city.

In showing a measurable relationship between spatial segregation and living in poverty, the research findings indicate that Booth's three poverty classes constituted a spatially defined poverty line. In other words, the space syntax analysis provided evidence to support Booth's own hypothesised line of poverty, with the streets coloured black, dark blue and light blue being much more likely than average to be spatially segregated.[56]

We saw in Chapter 2 how the spatial patterning of urban contagion was seen as akin to a diseased body. The diagnosis made through maps of disease was followed by the cure; the opening-up of the slum areas with wide thoroughfares which would overcome the social degradation that was perceived as being bound up in the environmental degradation of the city. Haussmann's redesign of Paris was a cleansing of disease, but also

Figure 3.12 Detail of *Descriptive Map of London Poverty*, 1889, showing the East End district of London, overlaid with space syntax analysis of spatial accessibility for each street to all other streets within 800m.

Image by the author.

a purging of pockets of revolutionary activity.[57] Similarly, John Nash's decision on the alignment of the new Regent Street in his masterplan from 1809–33 had been a conscious confirmation of the perceived need for separation between the 'streets and squares occupied by the nobility and gentry [to the west], and the narrow streets and meaner houses occupied by mechanics and the trading part of the community [to the east, broadly in the Soho district]'.[58]

Further analysis of change between Booth's maps of 1889 and 1899 showed that the slum clearance programme which had been implemented during that period had an effect of improving the physical and social situation of the immediate surroundings of the clearances, but this masked the fact that the poorest people contained within these areas had to find cheaper accommodation deeper within or outside of the district. In fact, detailed analysis of the spatial/economic change over time found that the areas surrounding the slum clearances experienced a marked drop in economic situation – a ripple effect as an outcome of spatial change and an indication that the improvement of spatial organisation may not have had a significant impact on the lowest classes.[59]

We have seen from the disease maps how spatial patterns of deprivation persist over considerable periods of time. Scott Orford and Danny Dorling's work is especially insightful in showing how the many attempts to improve housing quality over the past 100 years have 'failed to substantially alter the geography of poverty'.[60] Yet research into this persistence has tended to concentrate on the social causes of poverty, and much less on the possible effects of physical planning on poverty patterns. Other research has found distinctive patterns in the spatial distribution of poverty and that 'forms of deprivation are patterned spatially by a series of urban processes, which lead to greater concentrations of problems in particular places'[61] The notion that when poverty is concentrated in large areas, it can have deeper effects on its local population is important. In her study of these so-called neighbourhood effects, Ruth Lupton states that 'physical characteristics, through their impact on population mix, lead neighbourhoods to "acquire" certain other characteristics, such as services and facilities, reputation, social order and patterns of social interaction, as people and place interact'.[62] Areas can also acquire negative reputations that are very difficult to shake off. Problems such as access to resources, the opportunity to gain information on jobs or to improve one's education can be shaped by living in an area where the majority of

the population lives in poverty. We saw this pattern in Hume's Liverpool, where he referred to the impact of the middle classes moving out, and indeed it continues today.

Space syntax research into the long-term persistence observed by Orford, Dorling and others selected one of the most highly deprived areas in London to see whether the persistence in poverty over extended periods of time is related to the spatial structure of the area. Government support in the form of housing benefit and council tax benefit were chosen as the most appropriate indicators of whether individuals were below a threshold of need, and hence the closest to Booth's own form of assessment. As contemporary data are an indication of situation below a notional poverty line, a different adaptation of data from the Booth dataset was needed. It was decided to create a proxy for Booth's method of classifying streets according to a scale in which the greater the proportion of benefit recipients in a street segment, the lower its classification. The poverty data were plotted against data on the space syntax measures of accessibility of the street network, to see if there was a relationship between the two. Whilst the study was small in its scope, its findings suggested that even today there is a correspondence between poverty (as measured by the proportion of households in a street being recipients of both benefits) and spatial segregation, although the wider trend of the area's gentrification means that the relationship is not as strong today as it was in the past. In fact, poverty is deepening in some pockets of the contemporary East End while prosperity is increasing elsewhere.[63]

The relative stability of concentrated disadvantage is a rather remarkable phenomenon. In 2006 *The Economist* provided intriguing examples of the persistent nature of deprivation in London from Booth's day to the present, even at a micro ecological level. It compared poverty and prosperity rates between 1898 and 2001 in a section of the Chelsea neighbourhood of west London. The study found that in general the classes had 'upgraded', especially along the southernmost edge of the neighbourhood and on the west. This was partly a reflection of the neighbourhood becoming popular in the 1960s with cultural figures. In some ways it is transformed, as the newspaper notes; today Booth's investigators would be recording the presence of designer clothing shops and a high concentration of expensive cars. Yet small pockets of poverty remain present. Where Booth's investigators observed 'Evil looking drink-sodden old . . . women' these 'have been replaced by the merely down and out or struggling. . .'.[64]

Booth's legacy

Charles Booth's enquiry established the importance of empirically derived evidence. He showed that districts such as the East End were not an undifferentiated morass of poor, criminal streets, but in fact contained a variety of classes, with finely differentiated deprivation situations. While his critics argue about the 'impressionistic' nature of his study, it was in fact his development of a methodology for social investigation which combined direct observation with statistics, drawing on both quantitative (statistical) and qualitative methods, that established the importance of using mixed methods for studying complex problems. Not only did he test poverty by various indicators such as income, overcrowding, educational attainment, servant-keeping and so on, he also incorporated unquantifiable social influences, such as church attendance.

The maps were a vital tool in this regard. In contrast with the sensationalist accounts of 'darkest London' and the well-meaning studies that had preceded Booth, the maps provided a method for visualising a problem – not only to allow for targeted solutions, but also to start to hypothesise on the underlying systemic causes for those problems and, thus, to make legislation that was built on evidence, not rhetoric. Booth also showed that data become more persuasive if mapped because they extend opportunities for interpretation beyond the domain of the statistician.

Booth's maps provided visual confirmation for his statistical evidence, showing the need for legislation to alleviate the situation of large cities such as London in general, as well as the East End in particular. In addition to his ground-breaking work on poverty in old age,[65] Booth also addressed the Royal Commission on Housing (1901) on the subject of urban spatial solutions to housing and poverty.[66] From the earliest days of his enquiry, Booth was concerned with both housing form and overcrowding, recognising the relationship between the physical environment and poverty:

> Space and air are everywhere at a premium . . . In the inner ring all available space is used for building, and almost every house is filled up with families. It is easy to trace the process. One can see what were the original buildings; in many cases they are still standing, and between them, on the large gardens of a past state of things, have been built the small cottage property of to-day. Houses of

> three rooms, houses of two rooms, houses of one room – houses set back against a wall or back to back, fronting it may be on to a narrow footway, with posts at each end and a gutter down the middle. Small courts contrived to utilise some space in the rear, and approached by archway under the building which fronts the street. Of such sort are the poorest class of houses . . . Another sort of filling up which is very common now is the building of workshops. These need no new approach, they go with, and belong to, the houses, and access to them is had through the houses. Some are even arranged floor by floor, communicating with the respective floors of the house in front by a system of bridges. These workshops may or may not involve more crowding in the sense of more residents to the acre, but they, in any case, occupy the ground, obstruct light, and shut out air.[67]

Several Building Acts followed, transforming the traditional London morphology. These Acts set out minimum permitted street widths and a maximum ratio of height to street width, banning courts, entrances closed off from the streets and dead-end streets. The rules led to building at higher densities, with greater distance between the blocks than before. Instead of building dense aggregations of two-storey houses arranged in courts and alleys, regulation determined that housing must be constructed with a setback from the road in front of the block to cope with the new height requirements, and with open space between the blocks at the rear. The new rules also prevented infill development due to the spacing restrictions. Height limits introduced further restrictions on building proximity (due to the need for air circulation). Regulations were also set governing the form of staircase and balcony access. Although balconies were highly valued by tenants, they were seen under the new regulations as an unhealthy mixing of people within a block. Finally, legislation was increasingly made about rooms and their layout – minimum sizes were set out and houses were ideally to be self-contained. For the first time, legislation explicitly defined the ways the buildings could be arranged and guaranteed that in the future there would no longer be rooms constructed without outside access, light and air. It also influenced planning thinking regarding the need for suburbanisation. Clearly new forms of housing alone were not going to solve the problem of overcrowding and, in his final volume of the survey, Booth argued for the city's suburban expansion as the one and only way that overcrowding, congestion, squalor, poverty, disease and degeneracy would be resolved.

This would take the form first of physical expansion and then the expansion of the city administratively.

Booth's conception of the city as being made up of natural areas with their own local ecology was highly influential. Although in the early part of his investigations Booth more or less confined himself to the use of pre-existing administrative areas, primarily for descriptive purposes, he later started to construct his own spatial units of analysis, using these to explain differences between different areas of a city. The natural area concept was a complex one, comprising a combination of several factors – site, situation, population type and institutions – that collectively determined its character. This concept was one of several reasons that Booth's project continued to have impact in the twentieth century, notably influencing the Chicago School.[68]

Subsequent social mapping projects – by the Hull-House settlement to record data on wages and nationalities in Chicago, and by W.E.B. Du Bois on the 'Negro Inhabitants' of a district of Philadelphia and their social condition and, back in London, by Booth's own team member, George Arkell, to record data on the relative density of settlement patterns in Jewish East London – are all direct legacies of Booth's work. All three studies will be elaborated in the next two chapters. More broadly, the legacy of Booth's work in social mapping can be seen even today across a wealth of topics, from disease through poverty, racial segregation and crime, as we will see onwards throughout this book.

NOTES

1. A. Morrison, *A Child of the Jago*, 3rd ed. (London: Methuen & Co, 1897).
2. An important exception to this is David Reeder's chapter in a book on nineteenth-century social investigation: D. Reeder, 'Representation of Metropolis: Descriptions of the Social Environment in *Life and Labour*,' in *Retrieved Riches: Social Investigation in Britain 1840–1914*, ed. D. Englander and R. O'Day (Aldershot: Ashgate, 2003). In fact, David Reeder's notes on the London Topographical Society's reproduction of Booth's first set of published maps are among the most detailed analyses of the maps. See D. Reeder, *Charles Booth's Descriptive Map of London Poverty, 1889* (London: London Topographical Society, 1984). See also the work of S. Swensen, 'Mapping Poverty in Agar Town: Economic Conditions Prior to the Development of St. Pancras Station in 1866,' (London: London School of Economics, 2006); and analysis of Booth's wealthy classes in a single district of London in P.J. Atkins, 'The Spatial Configuration of Class Solidarity in London's West End 1792–1939,' *Urban History* 17, no. -1 (1990).
3. D. Englander and R. O'Day, eds, *Retrieved Riches: Social Investigation in Britain 1840–1914 (Paperback Edition, 2003)* (Aldershot: Ashgate, 1998), p. 328.
4. W.S.F. Pickering, 'Abraham Hume (1814–1884). A Forgotten Pioneer in Religious Sociology,' *Archives de sociologie des religions* 17, no. 33 (1972), p. 35.
5. A. Hume, *Condition of Liverpool, Religious and Social, Etc*, 2nd ed. (Liverpool: Privately printed, 1858), p. 21.
6. Hume, *Condition of Liverpool*, p. 21.

7. The Act came about due to the findings of the Report on the Health of Towns (1840) that 39,000 persons in Liverpool lived in 7,800 underground cellars and 86,000 persons in the same city lived in 2,400 airless courts of back-to-back dwellings.
8. The map dates from 1845 and reveals the cramped conditions in the Broad Marsh area of Nottingham.
9. Hume, *Condition of Liverpool*, p. 41.
10. J. O'Brien and S. Griffiths, 'Relating Urban Morphologies to Movement Potentials over Time: A Diachronic Study with Space Syntax of Liverpool, UK,' in *11th International Space Syntax Symposium*, ed. Heitor, T. (Chair), M. Serra, J.P. Silva, A. Tomé, M.B. Carreira, L.C. Da Silva and E. Bazaraite, 98.1–98.11 (Lisbon, Portugal: University of Lisbon, 2017).
11. See O. Uduku and G. Ben-Tovim, *Social Infrastructure in Granby/Toxteth: A Contemporary Socio-Cultural and Historical Study of the Built Environment and Community in 'L8'* (Liverpool: Race and Social Policy Unit, University of Liverpool, 1998).
12. D. Smith, *Victorian Maps of the British Isles* (London: Batsford, 1985), pp. 63 and 110, although Rosemary O'Day attributes much of the technical innovation in social geography to George Arkell, who went on to draw up the map of Jewish East London, about which more in Chapter 5. R. O'Day and D. Englander, *Mr. Charles Booth's Inquiry: Life and Labour of the People in London Reconsidered* (London: Hambledon Press, 1993), p. 18. Along with the work of Anne Kershen and David Englander, Rosemary O'Day's book is one of the most comprehensive modern-day overviews of Booth's project.
13. T. Simey and M. Simey, *Charles Booth, Social Scientist* (London: Oxford University Press, 1960), p. 64.
14. Reeder, 'Charles Booth's Descriptive Map of London Poverty, 1889.'
15. J. Hanson, 'Urban Transformations: A History of Design Ideas,' *Urban Design International* 5 (2000), pp. 217–18.
16. A. Davin, *Growing up Poor: Home, School and Street in London 1870–1914* (London: Rivers Oram Press, 1996), pp. 34–5.
17. Rev. A. Mearns, *The Bitter Cry of Outcast London: An Inquiry into the Condition of the Abject Poor* (London: James Clarke & Co, 1883), p. 7.
18. Bales, 'Charles Booth's Survey,' p. 92.
19. C. Booth, 'The Inhabitants of Tower Hamlets (School Board Division), Their Condition and Occupations,' *Journal of the Royal Statistical Society* 50, no. 2 (1887).
20. Octavia Hill's meticulous work on housing conditions, highlighting for example the impact of 'middle men' in inflating the cost of renting housing, led the UK Government Commission in 1886 to look at the housing conditions of the working classes.
21. Beatrice Webb *née* Potter was a cousin of Booth's by marriage, a devoted writer on social matters. A member of the Fabian Society, she helped to establish the London School of Economics and Political Science with her husband, Sidney Webb, amongst others.
22. Although Hyndman's claim is said to have sparked Booth's enquiry, there is no evidence they met before 1886 and Booth's interest in poverty dates back much earlier.
23. The areas coloured purple might indicate a street in transition from one state to another, and indeed the space syntax comparison between the two maps has found that purple streets (at least within the East End study area) were more likely to change – whether up or down a class. Pfautz cites one example of this from Booth's police interview notebooks: 'Kensal New Town, owing to its distance from inner London, was not a popular district for artisans, but the opening up of the Central London Railway and the advent of electric trams have completely altered its outlook as a place of residence for the "pink" class.' H.W. Pfautz, ed. *On the City: Physical Pattern and Social Structure; Selected Writings of Charles Booth*, Heritage of Sociology (Chicago: University of Chicago Press, 1967), pp. 116–17.
24. Booth, *Labour and Life of the People*, vol. 1, p. 5.
25. The four sheets covered an area from Kensington in the west to Poplar in the east, and from Kentish Town in the north to Stockwell in the south – and published in subsequent volumes of the survey. These maps are collectively known as the *Descriptive Map of London Poverty 1889*. They use Stanford's Library Map of London and Suburbs at a scale of 6 inches to 1 mile (1:10560) as their base. Information from https://booth.lse.ac.uk/learn-more/what-were-the-poverty-maps. Accessed 2 August 2017.
26. For example, Topalov (1993) maintains that there is an interpretive quality to the Booth maps: first in the definition of class division, second in the possible subjective assigning of families to class categories. In addition to this, he criticises the fact that some of the data

were extrapolated from the individual (school records) to the family level. Nevertheless, the Visitors' information was 'cross-checked against those of philanthropists, social workers, policemen and others' (Englander and O'Day, p. 124).

27. K. Bales, 'Popular Reactions to Sociological Research: The Case of Charles Booth,' *Sociology* 33, no. 01 (1999).
28. Bales, 'Popular Reactions to Sociological Research', pp. 155–6. The first paper was Booth, 'The Inhabitants of Tower Hamlets.' Booth went on to become the Society's president.
29. C. Booth, *Life and Labour of the People of London*, vol. 1: East, Central and South London (London: Macmillan and Co, 1904), pp. 6–7.
30. *Maps Descriptive of London Poverty, 1898–9*. According to the LSE website (see note above), the 12 sheets – covering an area from Hammersmith in the west to Greenwich in the east, and from Hampstead in the north to Clapham in the south – were published in the survey volumes between 1902 and 1903. The maps use Stanford's Library Map of London and Suburbs at a scale of 6 inches to 1 mile (1:10560) as their base.
31. George H. Duckworth's Notebook: Police and Publicans District 14 [West Hackney and South-East Islington], District 15 [South West Islington], District 16 [Highbury, Stoke Newington, Stamford Hill], 1897. Booth, C. 'Poverty Series Survey Notebooks (Online Archive).' British Library of Political and Economic Science, https://booth.lse.ac.uk/notebooks/. Reference: BOOTH/B/348, p. 17.
32. Kimball, 'London through Rose-Colored Graphics,' p. 366. Kimball writes further of how 'the first set, now held at the Museum of London, was watercoloured between 1886 and 1891; these were the foundation of the 1889 East End and 1891 London lithographic maps. The second set, now held at the London School of Economics, was watercoloured between 1894 and 1899, forming the basis of the final 1902 lithographic maps'.
33. Toynbee Hall was the first of many settlement houses, principally in the UK and the USA. These were social settlements set up by a movement whose purpose was to have middle class people live amongst the poor, sharing knowledge and skills and providing services, such as day-care, health and education.
34. Booth, 'Condition and Occupations of the People of East London and Hackney', pp. 284–5.
35. Charles Booth, 1889, quoted in Reeder, 'Charles Booth's Descriptive Map of London Poverty, 1889.'
36. *Manchester Guardian*, 17 April 1889, cited in A. Kershen, 'Henry Mayhew and Charles Booth: Men of Their Time,' in *Outsiders & Outcasts: Essays in Honour of William J. Fishman*, ed. G Alderman and C. Holmes (London: Duckworth, 1993), p. 113.
37. See more on this conceptualisation of marginal separation in B Hillier, 'Cities as Movement Economies,' *Urban Design International* 1, no. 1 (1996).
38. R. MacCormac, 'An Anatomy of London,' *Built Environment* 22, no. 4 (1996), p. 308.
39. E. Ross, 'Survival Networks: Women's Neighbourhood Sharing in London before World War I,' *History Workshop*, no. 15 (1983).
40. L. Vaughan, S. Griffiths and M. Haklay, 'Chapter 1: The Suburb and the City,' in *Suburban Urbanities: Suburbs and the Life of the High Street*, ed. L. Vaughan (London: UCL Press, 2015).
41. *East London Life Daily News*, 16 April 1889, Charles Booth Archive, London School of Economics, A58.53. Cited in Kimball, note 25.
42. Dyos, 'The Slums of Victorian London,' p. 25.
43. D. Cannadine and D. Reeder, eds, *Exploring the Urban Past: Essays in Urban History by H. J. Dyos* (Cambridge: Cambridge University Press, 1982).
44. G. Stedman Jones, *Outcast London: A Study in the Relationship Between Classes in Victorian Society (*Oxford: Peregrine Penguin Edition, 1984), pp. 15–16.
45. Booth, *Life and Labour of the People of London*, 1: East, Central and South London.
46. C. Breward, 'Fashion's Front and Back: "Rag Trade" Cultures and Cultures of Consumption in Post-War London C. 1945–1970,' *The London Journal* 31, no. 1 (2006), p. 30 – in a section entitled 'Carnaby Street schmutter'.
47. See detailed analysis of poverty and prosperity in the Oxford Street area of the 1880s and 90s in Vaughan, 'The Spatial Form of Poverty in Charles Booth's London'.
48. The quote is from Booth's address to the Royal Statistical Society, 1887, cited in A. Gillie, 'The Origin of the Poverty Line,' *Economic History Review* 49, no. 4 (1996, November), p. 715. See also P. Spicker, 'Charles Booth: The Examination of Poverty,' *Social Policy & Administration* 24, no. 1 (1990).

49. Anne Kershen, personal communication, 4 December 2017. Kershen reports that the 1930s/50s trade unionist Mick Mindel stated similar. It relates to the fact that around the turn of the twentieth century garments were wheeled in barrows or even prams to and from tailoring workshops and the premises of wholesalers.
50. Quoted in Pfautz, *On the City*, 120.
51. C. Booth, *Improved Means of Locomotion as a First Step Towards the Cure of the Housing Difficulties of London* (London: Macmillan, 1901).
52. Morrison, *A Child of the Jago*, p. 1.
53. R. Samuel, ed. *East End Underworld: Chapters in the Life of Arthur Harding* (London: Routledge & Kegan Paul, 1981), p. 2.
54. See appendix for further detail on the space syntax analysis of the Booth maps.
55. L. Vaughan et al., 'Space and Exclusion: Does Urban Morphology Play a Part in Social Deprivation?,' *Area* 37, no. 4 (2005).
56. Vaughan and Geddes, 'Urban Form and Deprivation.'
57. 'The effectiveness of riot or insurrection depends on three aspects of urban structure: how easily the poor can be mobilized, how vulnerable the centres of authority are to them, and how easily they may be suppressed. These are determined partly by sociological, partly by urbanistic, partly by technological factors.' E. Hobsbawm, 'Cities and Insurrections,' *Ekistics* 27, no. 162 (1969), p. 304.
58. J. White, *Some Account of the Proposed Improvements of the Western Part of London: By the Formation of the Regent's Park, the New Street, the New Sewer, &C. &C. Illustrated by Plans, and Accompanied by Critical Observations*, ed. J.E. Moxon (London: W. & P. Reynolds, 1814), p. 48. Dyos, 'The Slums of Victorian London,' p. 36 details how the poorer streets were 'deliberately skirted' by Nash's plans. A contemporaneous report on progress with the road works stated that the 'New Street' would create an opportunity for the Crown to preserve 'that best built-part of the Town from the annoyance and disgrace which threaten it on either side'. See Great Britain. Parliament. House of Commons, 'The First Report of the Commissioners of His Majesty's Woods, Forests, and Land Revenues [Electronic Resource]: In Obedience to the Acts of 34 George III. Cap.75. and 50 George III. Cap. 65,' (London: Author, 1812), Part 1, p. 96.
59. For detail of the analysis, see L. Vaughan, 'The Relationship between Physical Segregation and Social Marginalisation in the Urban Environment,' *World Architecture* 185, special issue on space syntax (2005).
60. Orford et al., 'Life and Death of the People of London,' p. 34.
61. P. Spicker, 'Poor Areas and the "Ecological Fallacy",' *Radical Statistics* 76 (2001), p. 3.
62. R. Lupton, '"Neighbourhood Effects": Can We Measure Them and Does It Matter?,' (London: London School of Economics, 2003), p. 5.
63. Vaughan and Geddes, 'Urban Form and Deprivation'.
64. *The Economist*, 'There Goes the Neighbourhood,' 4 May 2006.
65. See C. Booth, 'Poor Law Statistics,' *The Economic Journal* 6, no. 21 (1896); C. Booth, *Old Age Pensions and the Aged Poor: A Proposal* (London: Macmillan and Company, 1899); D. Collins, 'The Introduction of Old Age Pensions in Great Britain,' *The Historical Journal* 8, no. 2 (1965). Booth's concern about the relationship between old age and poverty led him to push for an old age pension in the form of a universal scheme of governmental support in old age, but there was concern that the 'undeserving poor' would waste all the money on drink. The legislation that followed was a somewhat watered-down version, but still, for its time it was an enlightened development.
66. Booth, *Improved Means of Locomotion*.
67. Booth, 'Condition and Occupations of the People of East London and Hackney', 281–2.
68. The 'Chicago School' connotes a group of sociologists who practiced at the University of Chicago in the first half of the twentieth century, whose work was distinctive in its formal systematic approach to gathering and analysing social data, an empirical approach that differed from the prevailing philosophical approach. See more about the School in Chapter 6.