Mapping Society

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Crime and disorder

A thoroughly vicious quarter. The presence of the Cambridge Music Hall in Commercial St. makes it a focussing point for prostitutes . . . North up Wilkes St. . . . is a lodging house frequented by ex-convicts. “Six or seven old ‘lags’ living there now”. No shame about having been in prison here, one came across street to check whether his license had come yet.¹

Moral geography

The previous chapter showed how easily the terms ‘ghetto’ and ‘slum’ are conflated such that the negative attributes of a number of streets might be assumed to apply to entire areas, and thus to everyone living within them. In this chapter we will see how instances of disorder, deviant behaviour and indeed crime are collectively used to label areas as problematic, so as to cause an ecological fallacy to take hold. The subtler maps will be more cautious in doing so, but still, even today, we see the problematic use of crime maps to obfuscate the specificity of crime: areas are written off as prone to crime, without getting to grips with the underlying causes of crime nor the nature of that crime.

In the early part of the nineteenth century, techniques in mapping statistics started to allow scientists to pinpoint the location of clusters of urban problems. Innovations in mapping in the latter part of the nineteenth century brought to the attention of the public the scale of the problem, as well as how it might be ameliorated.

From Mayhew and Booth through to the criminological practice known as ‘broken windows’ today (that argues that broken windows are signifiers
of a problem area), the social ranking of places by signs of physical disorder has a long history:

At the west end of Dorset St. leading into Brushfield St. is Little Paternoster Row. Black on both sides in map on East side only. 2 & 3 storied common lodging houses. Ragged women & children. Holey toeless boots. windows dirty, patched with brown paper & broken. Prostitutes, thieves & ponces.

While one might argue with the criticism of Booth’s maps of poverty as being mere topographies of morality, it is fair to say that by displaying how vice, crime, disorder and so on were arranged spatially these maps did highlight areas as problematic and hence present the clearance or tidying up of slum areas as a solution.

Felix Driver has written about how ‘the watchword of nineteenth-century social science was “improvement”; social science became a form of philanthropy, whose chief strategy was to find the means to ameliorate the living conditions of the poor’. In fact, as Driver points out, though many writers on the history of the social sciences make a distinction between the two, it is quite difficult to distinguish between the activities of nineteenth-century scientists and those of the reformists. Especially in the case of the ‘environmentalists’, namely the scientists who mapped statistics onto maps, mapping immoral behaviour onto the urban environment, they were in effect blaming the dirty or diseased environment for the ‘vicious’ or ill health of the people it contained. By ameliorating the environment, its inhabitants could supposedly be improved in one fell swoop.

The success of medical topography was highly influential in this sense (as we saw in Chapter 2), given that by mapping patterns of disease it was possible to arrive at correlations between ill health and aspects of climate, topography or drainage. Once medical geographers moved into cities and became sanitary scientists, it was an easy shift to move from the reform of housing conditions (and their associated diseases) to intervention into social conditions (and their associated poor morals). Driver cites a quote from the London Statistical Society in 1849 that recommends improving factors such as education and policing to create a healthy social fabric.

The prevailing concern was that the dense, dark urban fabric would conceal the worst of the social indecencies of the rookeries, whose interiors,
as Robin Evans has pointed out, were ‘characteristically portrayed as the scene of daylight dissipation, drunkenness and criminal conspiracy . . . a picture not of an actual place but of a latent condition’. The association between physical and moral degradation went deeper still; it was the immoral habits of the poor which were said to fester in (and be fostered by) the worst of the tenement dwellings: ‘filthy habits of life were never far from moral filthiness’. Not only that, but the potentially contagious nature of the immorality to be found in the most physically segregated corners of the city, provided places where the moral disease was located beyond the gaze of the public and beyond the control of the police. The conviction was that ‘virtue could be wrought from architecture as surely as corruption was wrought from slums’. The physical solutions to these festering sores on the body of the city were termed ‘bridges’ by the editor of the journal The Builder. They were to be scientifically based solutions that, by the mid-nineteenth century, centred on constructing institutions such as model dwellings and Ragged Schools as well as public parks. At the same time, the conviction was that by opening up the urban ‘labyrinths’ of courts and cul-de-sacs the new urban order would expose the secret haunts of the immoral poor to the light of day in order to make them more amenable to moral improvement.

As in London, elsewhere in other rapidly growing cities similar reforms were in train. Hell’s Kitchen (a midtown district of Manhattan, New York) had acquired a notorious reputation by the end of the nineteenth century. Joseph Varga describes how various police practices, backed up by statutes relating to ‘disorderly conduct’, were applied in specifically ‘frozen zones’, where criminality was unofficially left unpolicied. Over time, these areas then became the target for improvement of their physical conditions. The sort of tenement houses we have already seen, designed by the New York city legislators to cleanse the area of disease, were meant at the same time to achieve concomitant moral and social improvements. Joseph Varga argues that this had only partial success, stating that the externally constituted boundary of the new communities transmuted over time to become a demarcation of an area that contained negative behaviour, such as gang activity. Evidently once it was conceded that there might be an association between environmental degradation and social vice it was a short step to find social vice where there were signs of environmental degradation – particularly dirt. Accessibility then, ‘through movement’, was viewed as ‘good’ in normative terms by middle-class urban elites, a way of cleaning up the city and making it more governable.
By the time of the Chicago School, this approach to ameliorating urban crime and deviance had become fixed into a solution to the problem of slums (and, later on, ‘ghettos’). Although proponents of this school recognised the ecological fallacy of associating individuals with the perceived ‘derelict and vicious’ character of their area, the tendency to see the evolution of cities as a natural process of sorting between advantageous and less advantageous locations, instead of a political outcome of racist or economic processes, started to take hold. The influence of ideas of moral geography over the course of the last century, which transformed into notions of social disorder, are still extant to a certain extent today, when the regeneration of social housing is often justified by using terms such as ‘blight’ and when depictions of an area’s dirt, graffiti and deterioration are sometimes used to justify wholesale destruction, rather than piecemeal regeneration.

**Contagion and morality**

Although this book focuses on the past two centuries, it is important to bear in mind the position of prostitution as an aspect of urban crime and deviance that dates back centuries, if not millennia. Bronislaw Geremek’s history of *The Margins of Society in Late Medieval Paris* shows, for example, how prostitutes had designated zones, or entire streets on the edge of the city. He writes that ‘knowing where prostitution was practiced contributes important information about the social topography of the town’, given that it was typically assigned to specific areas inside or outside of the walls. This was a form of social hygiene that placed vice in close proximity to poverty and well away from the more prosperous areas. Equivalent statutes applied to London, Venice, Dijon and other cities throughout Western Europe.

A slightly different sort of social hygiene meant that well into the eighteenth century, Portsoken, the easternmost ward in the City of London and the only one completely outside of its walls, became the preferred place of settlement for incomers, such as French Huguenots or Jewish merchants. The ward was as close as these new arrivals could get to the City’s regulated markets without actually living inside it (see Figure 6.1, map of Portsoken, 1772).

Gilles Palsky has recounted how, from their invention in the early decades of the nineteenth century, most thematic maps related to the natural sciences. Yet with the emergence of human sciences for the study
of human society, the rapid development of graphic innovation launched a century of developments in social cartography, much of which has been described in this book’s preceding chapters. The many maps which were drawn up throughout the century allowed for the spatial patterns of social statistics to be described and summarised, and even allowed the discovery of new facts: they enabled differences to be made visible.

Pierre Charles Dupin’s invention of the choropleth map in 1826, which presented an analysis of the distribution and intensity of illiteracy in France in shaded areas from black to white, was possibly the first modern statistical map. Three years later, André Michel Guerry created the first comparative choropleth thematic maps, showing crimes against persons and crimes against property in relation to level of education, across the departments of France. His method took hold first in France and then spread to English-speaking countries with the translation of his work from the French.

This was a period during which France led the world in capturing social statistics on maps. One example, discussed by Palsky, Distribution des

Figure 6.1  Portsoken Ward with its Divisions into Parishes. From a Late Survey. Published in J. Noorthouck, History of London (London: privately printed, 1772). Image copyright Jonathan Potter Ltd.
Prostituées dans chacun des 48 quartiers de la Ville de Paris [Distribution of Prostitutes in each of the 48 quarters of Paris, 1836], captured an ostensibly neutral picture of the spatial distribution of data on the relative density of prostitute populations across Paris that had been provided by its police force. These were not, as Palsky has shown, ‘neutral illustrations, but were primarily conceived as arguments in scientific or ideological debates, and . . . their sign system played a major role in their persuasive effect.’

The maps featured in the book De la Prostitution dans la ville de Paris considérée sous le rapport de l’hygiène publique, de la morale et de l’administration [Prostitution in the city of Paris: considered in terms of public hygiene, morals and administration] by Alexandre Parent-Duchâtelet. Its telling of the history of prostitution in the city since the sixteenth century was highly influential and its maps were innovative in capturing data graphically; indeed they provided a visual underpinning to the interpretation of the moral statistics captured in the book. Yet Duchâtelet’s research was influential in its own right – despite a use of physical stereotyping that is jarring to the modern reader (he attributes plumpness of figure to laziness and greed, a raucous voice to social origin, abuse of alcohol and exposure to cold) – especially his radical thinking on the social causes of prostitution. His conviction that the main reasons for turning to prostitution were related to poverty and that poverty was a function of the social conditions of the time show an unusual sympathy towards the human condition of those on the margins of society.

Reading Michael Ryan’s report from 1839 on the comparative merits of how prostitution was managed in France, America and Britain, it is interesting to see how he praises Duchâtelet’s book for its detail on how Paris managed to control the vice of prostitution through spatial means. Paris was at the forefront in regulating prostitution spatially. Ryan details how in Paris brothels were not allowed near sacred buildings, palaces, residences of high functionaries, schools or hotels. Nor were brothels permitted within the visual ambit of schools, unless they were beyond a bend in the street; it was preferred that they be situated within narrow, ‘little frequented’, thinly populated streets. Moreover, in ‘streets or courts which end in a wall, or have no thoroughfare, and which no one would attempt to enter with a view of abridging his road, the police never refuse to tolerate them, when asked’.

The fear of moral (let alone physical) contagion is a constant refrain throughout Ryan’s book, which describes the risk that the ‘daughters
of the ignorant, depraved, and vicious part of our population’ might ‘enter upon a life of prostitution for the gratification of their unbridled passions, and become harlots altogether by choice. These have a short career, generally dying of the effects of intemperance and pollution, soon after entering upon this road to ruin’. This is a fear not dissimilar to that of those who wrote about San Francisco’s Chinatown, where the reader is not always entirely clear whether the fear of contagion is just as much about immorality as about the physical aspects of disease:

The lowest form of prostitution – partaking of both slavery and prostitution – they have planted and fostered to a lusty growth among us, and have inoculated our youth not only with the virus of immorality in its most hideous form but have, through the same sources, physically poisoned the blood of thousands by the inoculation with diseases the most frightful that flesh is heir to.

Later in the century we can see how for Booth’s policemen, interviewed in the 1898–9 survey notebooks, prostitution was a common feature of the worst of his streets. In fact, the descriptor of Booth’s lowest rank of poverty centred on the concept: ‘Black. The lowest grade (corresponding to Class A), inhabited principally by occasional labourers, loafers, and semi-criminals – the elements of disorder’. Spatial disorder was related to social disorder, dirt to immorality. Note the many references to courts, or a narrowing of a street, in the following passage:

Into Dorset St. black in map. still black . . . thieves, prostitutes, bullies. All come from lodging houses. Some called “doubles” with double beds for married couples, but merely another name for brothels: women, draggled, torn skirts, dirty, unkempt, . . . Jews standing about in street or on doorsteps . . . The back rooms of a common lodging house for men & women come through into this ct. from the front of the street, open drains & taps on the west side of the Ct. for washing purposes. The next East is Old Dorset Court. Has been done up.

Dirty children, lb. db. in map. Kings Arms Court. Db in map, now no dwelling houses, great mess, old boots, tins, orange peel, onion skins, paper. Black Lion Yard still dark blue as map, mixture of Irish & Jews. Rough; houses 4, 3 & 2 storied, some small shops.

As we saw in the analysis of the Booth maps in Chapter 3, Booth and his team’s reading of spatial conditions stemmed from an intuition that has subsequently been borne out with spatial analysis. Their frequent allusions to the problematic layout of poverty areas was an expression of their concerns regarding the characteristic of many areas of deepest poverty: that they were spatially segregated, cut off from the lifeblood of the city. Booth’s professed desire to tidy up the streets, to bring spatial order to the social disorder, stemmed from his correlating of complicated spatial arrangements with the presence of disorderly conduct. Even though this spatial determinism was essentially incorrect, in the sense that the layout did not directly cause the social outcome, the underpinning idea, that social inequity was shaped or supported by a lack of spatial connectivity, has a significant basis in fact.

Almost contemporaneous with Booth’s maps, and indeed with the Hull-House project in Chicago, was the work of William Thomas Stead in the latter city. Stead was probably Britain’s first investigative journalist; he had established by this time a record for campaigning newspaper articles against poverty and prostitution, including promoting in 1883 the polemical pamphlet released by the Rev. Andrew Mearns, ‘The Bitter Cry of Outcast London’, through the pages of the Pall Mall Gazette. Stead’s journalism was highly successful, contributing to the setting up of a Royal Commission on the Housing of the Poor in 1884. In contrast with the measured tones of the Booth and Hull-House projects, Stead’s text is distinctive in its use of sensationalist language, with lurid descriptions of the disreputable and the degenerate occupying the worst districts of the city of Chicago. Having travelled to the United States to attend the World’s Fair of 1893 in the city, Stead published the 500-page ‘If Christ came to Chicago! A Plea for the Union of All Who Love in the Service of All Who Suffer’, in which he proclaimed that faith in Christ by every town-dweller would ‘lead directly to the civic and social regeneration of Chicago or any other great city’. The map drawn up for Stead’s book (Figure 6.2) depicted the worst of the precincts he studied. Not only was the choice of precincts intentional, so were the boundaries he selected for the map itself, which emphasises the dominance of prostitution within the precinct by choosing a tightly defined set of streets. By colouring brothels in red he drew the eye to the scale of the problem. The dry tones of the map

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were not entirely guileless. Contemporary records of his extended stay in Chicago describe how, following his visits to Fourth Avenue (central on the map), effectively the heart of the city’s red-light district, Stead stirred up controversy amongst the city’s dignitaries by addressing meetings in its most respectable bastions, such as the Women’s Club, where he accused its members of being more disreputable than a harlot because of the self-indulgence of their style of living, which ignored the poverty surrounding them.  

Stead was using his best weapons – shocking language and sensationalist imagery – to get across his frustration with the depths of vice and immorality that he had seen in the city. Similarly, the focus on the brothels in the pull-out map to his book was much more shocking at the time than can be comprehended today: he was in effect providing a directory of vice, a dramatic contrast with the Christian language suggested by the book’s title.

Stead’s description of his map of the nineteenth precinct, with its ‘forty-six saloons, thirty-seven houses of ill-fame and eleven pawnbrokers’, which he points out as the ‘moral sore spots of the body politic’, maintains that it in fact underestimates the reality of the problem. It gives, he wrote,
‘an unduly favourable impression’, as many of the stores and offices are ‘more or less haunted by immoral women’, while the precinct has so many saloons that it is impossible to not become intoxicated. Stead’s writing becomes Wesleyan in his subsequent description of the area, where you ‘look in vain’ for ‘any bath or washhouse where cleanliness, which is next to godliness, can be cultivated’.33

In many ways these views of prostitution have not changed for centuries. Medieval views of prostitution as being associated with defilement and disease meant that despite the relative toleration for prostitutes, their physical marginalisation placed them outside the structures of society. Nineteenth-century Paris and London similarly viewed the prostitutes themselves as the ‘refuse and filth of society’,34 while in the contemporary United States, popular culture has red-light districts viewed – by the main protagonist in the film Taxi Driver – simply as ‘filth’.

Contemporary regulations seem to tolerate prostitution as long as it is not out of place. In fact, the ‘out of placeness’ of prostitution as being akin to filth is, by a little stretch, akin to the anthropologist Mary Douglas’ own definition of dirt as being ‘matter out of place’ – not in the simplistic sense of dirt being in opposition to cleanliness, but in the sense that disgust towards the disordered or the dirty is part of a need to make a separation between the clean and the defiled.35 Prostitution is considered to be ‘in-place’, as Hubbard puts it, when it takes place in the economically (and physically) marginal spaces of the city. Whether in medieval times or today, removing the polluting, deviant behaviour of society so that it is out of sight seems to continue to be the acceptable way of treating prostitution in most western cities.36 One gets the sense from writings such as those of Stead that the vehemence of his language and the strength of his moral geography, is due to his recognition that the only way to improve the problem of prostitution (and the more general arduous struggle of the district’s denizens against poverty) is to drag urban problems out of the city’s dark corners into public view so that people can no longer ignore them.

**Drink: a modern plague?**

We saw in Chapter 3 how the Reverend Abraham Hume drew up a series of four maps showing the ‘Condition of Liverpool, Religious and Social’ in a self-published booklet from 1858. Hume listed a large number of public houses in the borough of Liverpool in his booklet – one for every 307 individuals, with many districts having far more than their fair share.
He found a distinct geography of poverty, typically located in clusters a single turning off the main roads, yet crime was more tightly clustered still. He found criminals present in 33 of all the streets he studied, in contrast with poverty, which was present in 195 streets in total. These clusters ‘specially devoted’ to crime, vice and immorality were a focus for police concern, who reported that ‘the professional prostitute is always the ally of thieves’.37

Hume was at pains to make a distinction between crime, which might lie beyond clerical influence (though a Christian rebuke might have some effect), and immorality, which had the potential to be improved. Hume linked ‘intemperance’ with various other ‘social evils’ relating to immorality – the one being often the ‘parent’ of the other. Intemperance, meaning a lack of moderation or restraint, was a term that was in common usage by the mid-nineteenth century, so readily available to be associated with the temperance movement, namely the movement against immoderate indulgence in intoxicating drink.38

Intemperance was an important social concern during the latter half of the nineteenth century in Britain. Many organisations started to focus their efforts on social change, rather than changing the habits of individuals. James Kneale writes how the social context of drink – the role of the drink trade and rituals of conviviality (‘treating’, or buying a round of drinks amongst friends or acquaintances) – became common discussion points in temperance documents.39 Once drinking became seen as a social problem and not a disease of the individual, it was a logical move to start to map the location of the problem in its urban context, which explains the proliferation of drink maps during this period, whose cartography represented alcohol ‘as a spatial problem’.40

Charles Dickens pointed to another concern at this time: the replacement of small pubs with ‘gin palaces’. A gin palace was essentially a large building that offered gin, instead of the traditional, small pub. His chapter on the subject in ‘Sketches by Boz’ opens with a droll description of the ‘disease’ of large gin shops being created by knocking several smaller ones together, attaining a ‘fearful scale’, with quiet old pubs being replaced by plate-glassed spacious premises:

The gin-shops in and near Drury-Lane, Holborn, St. Giles’s, Covent-garden, and Clare-market, are the handsomest in London. There is more of filth and squalid misery near those great thorough-fares than in any part of this mighty city . . . The hum of many voices issues from that splendid gin-shop which forms the commencement of
the two streets opposite; and the gay building with the fantastically ornamented parapet, the illuminated clock, the plate-glass windows surrounded by stucco rosettes, and its profusion of gas-lights in richly-gilt burners, is perfectly dazzling when contrasted with the darkness and dirt we have just left. The interior is even gayer than the exterior. A bar of French-polished mahogany, elegantly carved, extends the whole width of the place; and there are two side-aisles of great casks, painted green and gold, enclosed within a light brass rail...  

This is contrasted with the ‘filthy and miserable appearance of this part of London’ with ‘wretched houses with broken windows... every room let out to a different family...’ The gin palaces were, Dickens reported, full of ‘drunken besotted men, and wretched broken-down miserable women’. In fact, he stated that though drunkenness was a great vice, poverty was a greater vice still:

...and until you can cure it, or persuade a half-famished wretch not to seek relief in the temporary oblivion of his own misery, with the pittance which, divided among his family, would just furnish a morsel of bread for each, gin-shops will increase in number and splendour. If Temperance Societies could suggest an antidote against hunger and distress, or establish dispensaries for the gratuitous distribution of bottles of Lethe-water, gin-palaces would be numbered among the things that were [reduced in number and splendour]. Until then, their decrease may be despaired of.  

Temperance societies had a role to play, therefore, in mapping the ‘disease’ of gin palaces in a similar way to mapping yellow fever or cholera in a previous generation. An early example of this is the Map Shewing the Number of Public Houses in the Metropolis, which was presented in a paper about the connection between alcohol and crime read by John Taylor in 1860 ‘Before the National Association for the Promotion of Social Science’ and compiled for the National Temperance League. Along with a red mark for each location selling alcohol in London, the map included data on the population of the city at the time of the last census (1851) as well as the number of dealers in alcohol.

A more graphically effective pub map was compiled by the National Temperance League. It featured a map of a large area of London, covered in large pink spots, one for each pub (see Figure 6.3). Entitled The Modern Plague of London, it unabashedly presented London as if it were contaminated with a ghastly disease of the skin, with a pink pox covering
the central districts almost completely. The map’s dots were drawn out of scale to emphasise the problem (see Figure 6.4, a detail of the above).

It is interesting to contrast this with Charles Booth’s own more sober drink map (see Figure 6.5), which distinguished between on- and off-licences, charting the differences between landscapes of street-corner beerhouses in working-class neighbourhoods and the grander gin palaces on the main thoroughfares of the West End of London, and showing also the relationship between intemperance and an absence of places of worship. This map, the only stand-alone map included in Booth’s vast study, was produced for the social science section of the Paris Exhibition of 1900:

On it the five different forms of licensed premises are marked according to their character, excepting that in the case of the City [which had too many to mark at this scale] . . . to give to the ordinary reader, at a glance, an impression of the ubiquitous and manifold character of the three most important social influences.14
Two categories of elementary school are shown, along with the six categories of places of worship (five for different church denominations and one for synagogues) and five different types of ‘Houses Licensed to Sell Intoxicating Drinks’, depending on the nature of the license (see Figure 6.6). In many places the black circles of public houses completely outnumber the churches and schools. Reading through the volume on ‘Notes on Social Influences’ for which this map is an accompaniment, the commentary repeatedly makes this association, but also brings the social influences back to the physical conditions of the built environment: ‘between evil conditions of health and evil conditions of life generally. The results of jerry building. More care exercised in paving and sweeping of streets and dust removal, but still much to be desired in poorer parts: refuse still dumped on the marshes’.\(^{45}\)

A detail from the map covers an area of the West End (see Figure 6.7) which had a veritable epidemic of pubs; it is not a coincidence that this area was chosen for another map, by Joseph Rowntree and Arthur Sherwell for their highly successful 1899 book, *The Temperance Problem and Social Reform*.\(^{46}\)

Brian Harrison has written about how the pub and the temperance society were in constant competition with each other for the attention of the growing masses of Victorian urban society. This was a new
Figure 6.5  Map Showing Places of Religious Worship, Public Elementary Schools, and Houses Licensed for the Sale of Intoxicating Drinks, London, 1900.

Charles Booth, 1900. Copyright Cornell University – PJ Mode Collection of Persuasive Cartography.
Figure 6.6  Key to Map Showing Places of Religious Worship, etc., London, 1900.

Charles Booth, 1900. Copyright Cornell University – PJ Mode Collection of Persuasive Cartography.
development; in rural parts, there was a symbiotic relationship between pub and church, with church meetings taking place in pubs and church-goers stopping off at the pub on the way to prayers. Parsons might even promote church-ales. Moving into the city the pub became central to social life, especially for the working-class man (as we saw to a lesser extent in Rowntree’s work on York), who ‘had to choose the life of the pub and the music-hall or the life of the temperance society, mutual improvement society, and chapel: there was nowhere else to go’. Pubs were also stopping-off points for transportation and, prior to the building of the railways, coaching-inns took on the role of railway termini today. They would line the main commuter routes into the city, such as the Strand on Booth’s map (see road running south-west to north-east at the bottom of Figure 6.6). Indeed, remnants of the role of the pub in historical commuting routes can still be seen on the periphery of cities, such as the many pubs situated along the Great North Road leading into London through Chipping Barnet. Many of the West London pubs, just as in the East End, were catering for people working locally (see the cluster around Covent Garden market immediately north of the Strand in the Figure 6.6). Other places had areas of exclusion determined by the land owner, so the district abutting the British Museum and Russell Square on Booth’s map is markedly devoid of pubs, due to rules imposed by the area’s land owner, the Duke of Bedford; an absence of pubs enhanced the value of the estate, although the map shows pubs situated on its margins, well positioned to supply the grand houses within the area. In fact, from the 1860s onwards a clear distinction could be made between pubs licensed for drinking on their premises and ‘off-licenses’, namely establishments where you could buy drink to consume elsewhere. There were many more of the latter in prosperous areas than in poverty areas.

Harrison’s analysis shows that the dominance of pubs in poverty areas is not so much due to alcohol being a problem of poverty, but due to the importance of pubs for recreation for working-class people. Many pubs in these areas had licenses only for beer (that is, not for spirits); they provided a place of conviviality outside of the crowded home, as we saw in the analysis of the drink map of York in Chapter 4. The lit-up entrances to drinking establishments, as well as their ornate exteriors, were an attractive beacon in the dark streets of London, especially in the case of gin palaces (see Dickens quote above).

In addition to recreation, the pub served a variety of other purposes: as a meeting-place for public organisations of all types, whether reform movements or the emerging trade unions. Anne Kershen describes how in
1889 the strike committee of the Jewish branch of one of the trade unions, the AST (the Amalgamated Society of Tailors), met at ‘the unimposing White Hart public house in Greenfield Street’. Pubs were also used as the informal meeting point for jobbing tailors to pick up information on the availability of piecework; by the middle of the nineteenth century, rather than simply posting their names on lists of those seeking labour, the unemployed were themselves forced to wait in pubs in the hope of being selected for work by prospective employers. Given that pubs provided an accessible location, with an interior hidden from the public eye, it is not surprising that they also served the criminal classes, with activities such as procuring prostitutes or gambling finding their natural place there.

Revisiting the juxtaposition of churches and pubs on the map of *Religious Worship . . . and Houses Licensed for the Sale of Intoxicating Drinks* it becomes clearer still the extent of the battle the temperance societies had to fight against the competing attractions of drinking establishments. Putting aside Anglican churches, which were more likely to have a dominant position on the street, most religious institutions were in relatively tucked-away locations. More importantly, the social role of the pub, especially for the working man (and, to a lesser extent, the working woman) was as central to city life as its spatial position on the street. Nevertheless, as Harrison maintains, the pub and the temperance society were similar in their ability to provide a collective experience to the single working man, especially the many migrants from rural areas, integrating the newcomer ‘into urban society by initiating him into business habits’ and helping him to overcome the ‘shock of transition’ from the countryside to the city.

The temperance societies in the United States had a similarly challenging role. In Chicago and other major cities the various temperance societies did battle with the large number of saloons on the city streets. Robert Graham’s 1883 pamphlet, ‘Liquordom in New York City, New York’, contained a series of maps of sections of the city’s streets, marked up with the various types of ‘liquor’ available. New York’s infamous Bowery district is shown with an almost uniform array of saloons on every street in the area, although closer inspection reveals lager beer is present on many more streets than ‘liquor’ (spirits). The pamphlet’s author Robert Graham was secretary of the Church of England Temperance Society, and had travelled to New York from England (via Canada) to organise temperance associations in the city. Having arrived in 1881 he was escorted on a tour of the city’s ‘slums’ to gather statistics on liquor licenses in order to assess the ‘state of
temperance affairs in America’. His pamphlet compares the numbers of saloons, or drink-shops, and the churches and schools in New York City, writing that:

It is an undoubted fact that just where the poverty and misery is greatest, there is the largest number of saloons. Granted squalid and overcrowded homes, with a minimum of comfort and a maximum of filth, it is not to be wondered at that saloons with polished woods, meretricious gilding, light, warmth, and freedom, should compete with and beat out of the field the three bare and comfortless rooms which are home only in name. To the real home in the city of New York, which is within the reach of every man in it, there can be no deadlier enemy than the 10,168 saloons which crowd its alleys and throng its courts.\(^52\)

His pamphlet states that he drew the maps to emphasise ‘the huge disproportion of saloons apparent to the eye . . . especially in the poorer quarters of the city’.\(^53\) His conclusions were not dissimilar to those regarding London, highlighting the attractiveness of public drinking places for the deeply impoverished people of New York.

The second edition of his pamphlet, ‘New York City and Its Masters’, published in 1887,\(^54\) highlighted the number of churches and schools (568) in comparison with the number of saloons (10,168), to show the ‘startling disproportion between agencies for good and evil’.\(^55\) The pamphlet’s maps of the 23 assembly districts of the city contain statistics on the district’s population as well as the number of churches, schools and saloons in the district, working out the ratio of saloons per head of population to argue for the need for a dramatic reduction in drinking establishments, especially in poverty areas. His work did not stop there. Graham went on to publish a pamphlet on ‘Social Statistics of a City Parish’, which investigated the social conditions, nationalities and so on of the population of Trinity Parish, New York, which was suggested as a template for further investigations into the situation in the city.

This was a period of intense activity in the social investigation of the alcohol problem.\(^56\) Almost simultaneously with Graham’s work, Henry Blair, a Republican senator from New Hampshire, was drawing up a map locating saloons across New York City to accompany his book *The Temperance Movement or the Conflict between Man & Alcohol*, published in 1888. His June 1886 enumeration of 10,168 saloons and places selling
alcohol within the metropolis, were charted on a map of 9,000 of these that he termed as akin to a chart of despair:

The eye is the chief inlet to knowledge, and the map of New York city which accompanies this book, upon which are located over 9000 of the 10,168 saloons and places where intoxicating liquor
was for sale in that metropolis on the thirtieth day of June 1886, looks like a chart of the capital city of the regions of despair. And when we consider that this great city controls the pivotal State of the Union, and how helplessly it drifts in the maelstrom of alcohol, we require more than the faith which removes mountains if we are still to hope for the republic.⁵⁸

What is striking about Blair’s map, ‘of New York City from the Battery to Central Park, showing the Location of all Drinking-Places’, is how it shows the combination of the spatial and social dynamics which were shaping the location of saloons in New York at the time. On the one hand, the map shows a dramatic decline in the number of saloons in the more prosperous, ‘up-town’ districts of Manhattan (the right-hand end of the map); the spatial distribution of drinking places seems to confirm the prosperity–poverty trajectory proposed by all the temperance writers. Yet closer examination shows a much more intricate pattern, with some streets carrying large numbers of saloons and others, many fewer.

One of the most interesting clusters is in a dense triangle of saloons sited on the edge of the Lower East Side, at the bottom of Bowery, a street lying in the shadow of the Third Avenue elevated railway, the ‘El’ (note the markings like railway tracks in Figure 6.10). Indeed, by the late nineteenth century the Bowery had become synonymous with squalor, with Theodore Roosevelt referring to it in an essay as ‘a highway of seething life, of varied interest, of fun, of work, of sordid and terrible tragedy’.⁵⁹ Its reputation as a centre of prostitution and its all-night saloons were a matter of public concern, with commentators convinced that they were the source of the ‘ruination of numberless men and boys’.⁶⁰

In fact, if we zoom in on the Bowery, and its parallels such as Christie and Forsyth, it did indeed have many more saloons than elsewhere in the area. Further study shows that while there was a particularly large number of saloons around the convergence point of the three main routes in the district, the numbers reduced progressively with distance from the main routes, especially within the depths of the Lower East Side. There might be a social explanation for this: the Lower East Side was at the time the centre for Jewish immigrant settlement, and members of this community were much less likely to frequent bars than other poverty groups (see Figure 6.11). However, looking at Garyfalia Palaiologou’s space syntax analysis of Manhattan c.1891, overlaid with the enlarged section of the saloon map in Figure 6.10, we can see that while there is a social logic to
Figure 6.9  Saloon Map of New York City, 1888.
Figure 6.10  Detail of *The Temperance Movement or the Conflict between Man & Alcohol* (Saloon Map of New York City), 1888, overlaid on space syntax analysis of Manhattan c.1891.

The section of the saloon map is highlighted with a black, dashed box.

the distribution, it also follows a spatial logic: Christie and Forsyth streets (running south to north on the map) are both highly accessible streets at the neighbourhood scale; in other words, you would expect there to be much more passing traffic along those streets than on the streets lying to their east. On the other hand, when considering patterns of accessibility at a more local scale, the streets at the heart of Manhattan’s Jewish quarter formed a localised area of relative inaccessibility, which would have helped create a sense of an inward-looking district that simultaneously connected outwards along its main roads.61

Temperance movements were much less active after the turn of the twentieth century. In the United States the passage of the 18th amendment to the constitution in 1919 brought into law the national prohibition against the manufacture of alcohol, which reinforced the anti-saloon legislation that had previously been passed in 1916 in nearly half of the states. Prohibition brought about a significant reduction in alcohol consumption and, in parallel, a rise in illegal production and consumption.
The need for temperance campaign maps reduced accordingly. The same was the case in other countries such as the United Kingdom, where the devastation of the First World War shifted the public focus onto legislation to alleviate ongoing problems with housing conditions, especially for soldiers returning from war. Yet social problems continued to manifest in cities and the worst of these, criminal activity, intensified in some areas – or at least drew greater public attention due to their concentration in certain inner-city areas.

Crime and deviance

Crime and deviance have been the backdrop of many of the maps we have seen so far, especially those concerning poverty. Maps of nationalities, race and religion have also mentioned the spatial incidence of crime; in some cases, such as the map of San Francisco’s Chinatown, the authors have not been shy about attributing a rise in crime directly to racial factors.

It is no coincidence to find that both the maps presented below emanated from scholars affiliated with the University of Chicago. The notion of the city as a laboratory for studying urban society was first conceived by the group of sociologists based at the university who were known as the Chicago School. Robert Park, together with Ernest Burgess and colleagues, was one of the first to propose that the complexity of urban societies requires an empirical approach that controls the shape and form of the spatial environment as one might control a chemical in a laboratory. The combination of their institutional backing and the setting of the rapidly growing city made Chicago the ideal place to ‘do urban research’ for much of the period leading up to the Second World War and on into the 1950s.

One of the School’s most influential ideas was Burgess’s conception of cities as if they were made up of concentric zones. In an idea first articulated in 1925 in *The Growth of the City: An Introduction to a Research Project*, Burgess proposed that the growth of cities typically followed a concentric process of expansion: from an inner Zone I (termed Loop – clearly Chicago was the model) surrounded by a Factory Zone, set within Zone II (the Zone in Transition), surrounded by Zone III (the Zone of Workingmen’s Homes), surrounded by Zone IV (a Residential Zone) and finally Zone V (the Commuters’ Zone). Despite Burgess’s explanation that his chart was ‘an ideal construction’, its impact on planning ideas
continues to this day. But another idea that appears in the same paper, disorganisation theory, is equally important for its influence on the maps that we will consider below (as well as in its long-term influence on the discipline of criminology).

Burgess argued that as cities expand, ‘a process of distribution takes place which sifts and sorts and relocates individuals and groups by residence and occupation’ (see Figure 6.12). The result, he wrote, is a mosaic of social worlds comprised of immigrant areas such as Chinatown or the Jewish ‘ghetto’, whose inhabitants move progressively through each zone, seeking ‘the Promised Land’ beyond. These naturally evolved areas have developed alongside other residual areas, ‘submerged regions of poverty, degradation and disease’, where accepted rules of social behaviour are absent. If cities grow too fast, Burgess wrote, the internal movements of people through the zones create a ‘tidal wave of inundation’, leading to excessive social disorganisation in the form of crime, disorder, vice, insanity and suicide. He was stating that social disorganisation occurs where there is a lack of collective social values and

Figure 6.12  Chart 2 – Urban Areas, illustrating the growth of cities.
effective social control on deviant behaviour; so delinquency is the outcome of community breakdown, rather than individual deviance. Shaw’s later work with McKay, which expanded the study to 21 American cities, supported Burgess’s hypothesis that the physical deterioration of residential areas accompanied by social disorganisation is greatest in a central zone in the business district, and declines progressively from the inner city to its peripheral areas. These propositions have since been refuted by scholars who argue that the model does not explain the reality of complex urban processes, yet the beauty of its simplicity means that notions of disorganisation – as well as the concentric zones model – continue to hold in many criminology studies today.

The following two maps show us different aspects of disorganisation at almost the same time, in 1920s Chicago. The first, Map no. VII showing places of residence of 7,541 alleged male offenders placed in the Cook County jail during the year 1920, 17–75 years of age, was created by a team headed by Clifford R. Shaw for the Local Community Research Committee of the University of Chicago. The map was published in the Committee’s second monograph, Delinquency areas: A Study of the Geographic Distribution of School Truants, Juvenile Delinquents, and Adult Offenders in Chicago. Shaw and his colleagues’ five-year study had considered the geographic distribution and the rate of occurrence of delinquency and crime, as a ‘unique approach to the problem of conduct as it is influenced by the type of community background’.

The map covers a vast territory (see Figure 6.13) as reflected in the great volume of statistics gathered for the study, which considered a variety of data sources on delinquency rates according to sex and age across various temporal periods. This was a sophisticated analysis. Instead of simply counting numbers by area, it took account of population size to calculate a rate by area. The key findings were that delinquency rates varied in inverse proportion to distance from the city centre (namely, the Loop); that differences in delinquency rates differed according to the background of the community; and that especially high rates of delinquency were to be found in areas that were deteriorating physically. Notably, another aspect of the study’s refinement was that it took account of change over time.

The study found that the addresses of male offenders were concentrated in the inner-city area (closest to the central-eastern section of the map). In fact, the area mapped by Hull-House a couple of decades earlier was quite close to the most densely marked area on the map (see map detail in Figure 6.14).
Figure 6.13  Map no. VII showing places of residence of 7,541 alleged male offenders placed in the Cook County jail during the year 1920, 17–75 years of age.

Although Shaw and colleagues read the results as if they supported the concentric rings notion (with a marked decline in numbers as distance from the Loop increased), in fact, other patterns emerge from closer study of the map. For example, crime is greater in locations east of the river, especially in those further segmented by the railways. The text of the book covered many other topics (the map featured here was one of 10 large maps published in the book) and its conclusions also suggested that delinquency could be associated with the type of community within which people lived, stating that juvenile delinquents were influenced by their community’s ‘situation’ – that is, the social environment within which young people grew up; again, this confirmed Burgess’s propositions regarding social disorganisation.

A better-known text from almost the same time is *The Gang: A Study of 1,313 Gangs in Chicago* by Frederic M. Thrasher, published in 1927. Still in print today, the text recorded the youth gangs that had grown up in the city. His map outlined the typical areas of gangland, aiming to record their position in the life and organisation of the city. In addition, each dot on the map recorded the location of their meeting places, their ‘favourite haunts and hang-outs’ (see Figure 6.15).
The text is full of the most intricate detail on the spatial nature of gang activity and the way in which disorderly behaviour takes place in the interstitial, marginal areas of the city, namely 'the spaces that intervene between one thing and another'. In fact, an interesting game could be

Figure 6.15  Chicago’s Gangland, 1927.
played spotting the many synonyms for segregated areas used in the course of the book. The wilderness, the slum, the colony and the territory are found to nestle on the barriers, borders or frontiers of another gang’s area. These are typically in low elevation areas – valleys, gullies or canals – which are segmented by railroad tracks or highways; in some cases, they occur in a veritable wilderness or so-called blackspot. Taking just one randomly selected page, we have a description of such an area:

Across these turbid sewage-laden waters lie the crowded river wards. In the drab hideousness of the slum, despite a continuous exodus to more desirable districts, people are swarming more than 50,000 to the square mile. Life is enmeshed in a network of tracks, docks, factories and breweries, warehouses, and lumber-yards . . . ramshackle buildings . . . besmirched with the smoke of industry. In this sort of habitat, the gang seems to flourish best.71

As Thrasher himself explained, the interstitial area is akin to the natural phenomenon of ‘foreign matter [which] tends to collect and cake in every crack, crevice, and cranny’. Similarly, he wrote, there are ‘fissures and breaks in the structure of social organisation’ — which is how gang activity manages to survive: in the similarly fragmented ‘interstitial region in the layout of the city’. Importantly, he refers both to local severances in the urban street network and to entire regions of disorganisation, such as the ‘poverty belt’, where neighbourhoods have deteriorated and populations are in flux or have abandoned the area entirely.73

The detail of the map in Figure 6.16, covers the same area as the detail of Map no. VII in Figure 6.14. It is interesting to note that Thrasher’s ‘Rooming House’ area within the Loop was predicted in Burgess’s paper, where he wrote that ‘within a deteriorating area are rooming-house districts, the purgatory of “lost souls”’. Like many of the encircled areas on the map, this was not exclusively a gang area. It contained myriad other activities: churches, schools, clubs and banks and other ‘wholesome institutions’.74 yet the Loop is said by Thrasher ‘to form a sort of interstitial barrier between [it] and the better residential areas’.75

**Spatial mechanisms of crime, deviance and immorality**

Once the influence of the Chicago School started to wane, social scientists started to criticise the social ecological approach, stating that is was a form of environmental determinism. Many scholars continue to argue today that attributing any agency for architectural or urban settings to
shape social outcomes ‘may facilitate architectural thought but it is not a sociological analysis’. Such concerns have emerged recently in several studies of the riots that took place in major cities in the United Kingdom in 2011. The research has been a subject of some controversy due to newspaper reports that a disproportionate amount of the arrested rioters had come from supposedly disorderly social housing estates. In fact, a detailed spatial criminological analysis has found the only spatial association to be that rioters were more likely to engage in the disorder close to their home location and to select places visited frequently or at which they spent much of their time. Rather than proving that bad design leads to crime occurring in specific types of locations, the studies found that certain types of crimes are shaped by spatial conditions, and that the built environment can create the preconditions for social deterioration and for crime to be more likely to occur in such areas.

The study of crime itself has shifted in recent times from a focus on criminal behaviour – on the psychological or social motivations for people to deviate from society’s norms – to creating a sub-discipline of...
environmental criminology, which involves studying the circumstances in which crime takes place, such as the physical environment, the opportunities to commit crime, and the lack of safeguards to prevent the crime from taking place.  

Around the same time that studies of environmental criminology emerged, a new vision of how cities function was formulated in the field of architecture. Several propositions, such as the work of Kevin Lynch, and especially in the work of Hillier and Hanson, have argued for an approach that takes account of the relationship between the spatial configuration of cities and the way urban space is used in daily life. Instead of modelling the city as a featureless plain in which crime takes place, scholars have started to examine the underlying processes that shape movement patterns in the city, the distribution of commercial and residential land uses across the street network, the relationship between street permeability and mixed uses, and the navigational and cognitive aspects of space, including topological and morphological properties of urban spaces. These studies have examined how urban spaces facilitate or impede social and economic processes. When looking at crime, they will typically consider the way the street network is organised and how both the movement densities and potential crime targets, in the form of land uses and people, are distributed across the network in ways that can have an effect on the distribution of crime patterns.

Nevertheless, there is currently insufficient integration between the built environment disciplines and crime science. While crime scientists may emphasise the influence of the built environment on crime, and increasingly employ sophisticated spatial statistical models in doing so, their analysis of urban form and layout tends to be inconsequential. It is not unusual to find, for example, that crime data are summarised by area, or measure distances ‘as the crow flies’, even though the spatial constitution of the street layout can have an important role in where crime takes place – and where it does not. For built environment-based research, the reverse has frequently been the case. As a result, criminologists can be sceptical about the results from studies of the relationship between street networks and crime, although there is a growing cohort of scientists whose use of spatial mapping coupled to robust statistical analysis of crime is attracting attention in the field.

One key aspect of the latest crime mapping research is the increasing ability to go beyond identifying clusters or hot spots of criminal activity towards analysing the common factors between different locations of
crime. For example, are burglaries more likely to take place in dead-end streets than in streets with passing traffic? Does it matter if the dead-end is visible from the main road or not, and so on? We are currently at a juncture where increasing computer power, alongside a growth in websites where people can check on their own local patterns of crime, give the impression that the ability to study crime is accessible to any person with a decent computer – a form of data democracy that is unprecedented. As we will see in the next chapter, this may very well be a false vision. In many ways, 200 years of social cartography have brought us much closer to understanding the spatial logic of urban societies, but in many other ways the ability to map data speedily and in a highly detailed fashion increases the responsibility of the spatial scientist to explain social structures more comprehensively than ever before.

Notes

3. The quote is from one of Booth’s notebooks, describing Dorset Street – ‘the worst street I have seen so far’ – which became notorious as the site of the murder of Mary Kelly, the last of Jack the Ripper’s victims. Booth, ‘Poverty Series Survey Notebooks (Online Archive)’, BOOTH/B/B351, pp. 100–1.
6. My italics. Quotation is from Joseph Fletcher, Secretary to the London Statistical Society in 1849, quoted in Driver, ‘Moral Geographies,’ 279.
7. Evans, ‘Rookeries and Model Dwellings’, p. 95.
15. The Hebrew bible’s book of Joshua tells the story of Rahab the prostitute (who gave refuge to Joshua’s spies), whose house was built into the wall of the city of Jericho. [Joshua 2:1–24].
18. Some of London’s old City parishes were even named in this way, so that there were two wards: Farringdon Without and Farringdon Within, set either side of the city’s walls. See also L. Vaughan, ‘The Paradox of City Walls: Enclosure, Boundary, Barrier,’ Lobby magazine 3 (2015).
20. Friendly and Denis, 'Milestones in the History of Thematic Cartography.'
24. M. Ryan, Prostitution in London: With a Comparative View of That of Paris and New York, as Illustrative of the Capitals and Large Towns of All Countries: And Proving Moral Deprivation to Be the Most Fertile Source of Crime and of Personal and Social Misery: With an Account of the Nature and Treatment of the Various Diseases Caused by the Abuses of the Reproductive Function (London: H. Bailliere, 1839), p. 73. Alongside its counterpoint, a map of the origins of prostitutes provided to the reader a statistical picture of migration from the countryside and its association with vice at that point in time, raising numerous questions regarding whether the women brought the immoral behaviour with them, or whether it emerged as a result of the conditions of their new environment.
29. Booth, ‘Poverty Series Survey Notebooks (Online Archive)’. BOOTH/B/B351 pp. 131–3. ‘Pink, on map purple’; ‘lb to purple, d blue in map’, means in other words that the street has improved from purple to pink or from dark blue to light blue or purple in the past decade; ‘lb. db. in map’ means that the street has risen from dark blue to light blue over time.
32. Robinson, Muckraker.
33. W.T. Stead, If Christ Came to Chicago – a Plea for the Union of All Who Love in the Service of All Who Suffer (London: The Review of Reviews, 1894), p. 117. Stead was also confident that maps could play a role in solving a problem. Elsewhere in the book he advocated that the city's Central Relief Committee should issue a map highlighting districts requiring 'visitation and relief', which ideally should correspond to electoral districts, all the better for relieving the distress of the city's citizens (see p. 139).
34. Ryan, Prostitution in London, p. 75.
35. M. Douglas, Purity and Danger: An Analysis of Concepts of Pollution and Taboo (London: Routledge and Kegan Paul 1966). Uncleaness is more akin to the way in which the ancient Israelites maintained boundaries through the rules of kashrut (continued today in orthodox Jewish practice). Order is created by classifying animals and the line of the social boundary is held by strict rules regarding separation between communities. In this way contamination or pollution are avoided. See commentary on Douglas's theories in Sibley, Geographies of Exclusion, pp. 36–7.
38. The American Society for the Promotion of Temperance, for example, was founded in 1826. The British Association for the Promotion of Temperance was established by 1835, although treatises against alcohol were published many decades earlier. Both movements probably came about due to a growing recognition that excess consumption of alcohol was dangerous; in fact poisonous. See S. Couling, History of the Temperance Movement in Great Britain and Ireland (London: W. Tweedie, 1862).

Dickens, pp. 146. Lethe-water probably alludes to 'Lethe', one of the rivers of Hades, drinking of which is said to induce oblivion. The decline of the countryside surrounding London was similarly symbolised by the transformation of a country pub into 'a mere suburban gin-palace'. See E. Walford, *Hampstead: Rosslyn Hill*, vol. 5: *Old and New London* (London: Cassell, Petter & Galpin, 1878), British History Online, http://www.british-history.ac.uk/old-new-london/vols/pp483-494.

42. See more information on this map on the Cornell University website at https://digital.library.cornell.edu/catalog/ss:19343434.


44. This is from a section on Hackney, close to the River Lea; Booth, *Life and Labour of the People in London*, p. 338. For Booth's police officers, the connection between intoxication and crime was obvious: 'As to warning publicans not to serve men on the verge of drunkenness, Drew said magistrates now thought it was the police's duty as much to prevent as to detect crime, therefore they had to warn Publicans. But he admitted it was a counsel of perfection & in practice was not often carried out.' Booth, 'Poverty Series Survey Notebooks (Online Archive)', BOOTH/B/350, p. 113.

45. The map was entitled *Map Showing Number of Public Houses in a District of Central London*. Joseph Rowntree was, aside from being the founder of a highly successful chocolate business, father to Seebohm Rowntree, author of the study of poverty in York seen in Chapter 3. His interest in temperance emerged in the late 1880s following a talk at the Yorkshire Quarterly Meeting of Quakers.


49. See aforementioned analysis, comparing churches and synagogues, in Vaughan and Sailer, *Metropolitan Rhythm of Street Life*.


53. Graham, 'New York City and Its Masters.'

54. Graham, 'New York City and Its Masters,' p. 11.

55. Other maps include *The Lighthouse Saloon Map of Philadelphia*; this was published in 1901 in a pamphlet that described the operations of the 'Lighthouse' mission during the preceding five years.

56. The map states that 'On the 30th day of April 1886, it appeared from the records of the Board of Excise Commissioners, that there were 9168 Licenses to sell intoxicating liquor in force in the city, and 1000 places, by estimate, were selling without license. Total number of saloons or places where liquor was obtainable, 10168; of which over 9000 licensed places are located on this map.'


60. The analysis of the street layout of Manhattan at the scale of the entire island finds the main north–south routes being the most accessible; at the more local, neighbourhood scale (segment angular integration at radius 2500, illustrated in the main space syntax image in Figure 6.10), it is avenues such as the Bowery, running on to become Second Avenue, that are the most likely to have generated high rates of pedestrian movement alongside significant vehicular transport. The inset of 6.10 shows analysis of the same measure at the radius of 800m, a scale which predicts local movement flows. Full space syntax analysis of Manhattan over time can be found in G. Palaiologou, ‘Between Buildings and Streets: A Study of the Micromorphology of the London Terrace and the Manhattan Row House 1880–2013’ (Ph.D. diss., UCL, 2015).


68. Nevertheless, although there were a large number of areas (113), these areas were large; the researchers combined census tracts to create areas of a square mile in size, and even larger areas on the city's outskirts. E.H. Sutherland, ‘Delinquency Areas: A Study of the Geographic Distribution of School Truants, Juvenile Delinquents, and Adult Offenders in Chicago. Clifford R. Shaw, Frederick M. Zorbaugh, Henry D. Mckay, Leonard S. Cottrell (Review),’ *American Journal of Sociology* 36, no. 1 (1930).

69. Hull-House was on Halstead, which runs north–south, two grid squares in from the left, just north of the area marked in black/white horizontal stripes, which by this time was covered by railway tracks.

70. Unsurprisingly, Thrasher was familiar with Shaw's work and references some of his texts on delinquency, including 'Delinquency Areas'.


73. Although not central to the discussion here, it is interesting that Thrasher describes gangs themselves as being interstitial in the lifespan of a boy's life, between childhood and maturity (or marriage), supplying activities ideal for the spare time (an interstitial temporality) of an adolescent boy. Thrasher and Short, *The Gang*, pp. 36–7.


78. P. Baudains, A. Braithwaite and S.D. Johnson, ‘Target Choice During Extreme Events: A Discrete Spatial Choice Model of the 2011 London Riots,’ *Criminology* 51, no. 2 (2013). This finding is similar to the space syntax analysis of the riots, which found a large proportion of arrests took place in town centres and within a five-minute walk from social housing estates. B. Hillier, ‘Credible Mechanisms or Spatial Determinism,’ *Cities* 34 (2013).

