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## **The relationship between physical segregation and social marginalisation in the urban environment**

• *Keywords: immigrants, segregation, space syntax, poverty, England*

### **Abstract**

This paper posits a relationship between the urban location of immigrant quarters and the likelihood that the inhabitants of such areas will improve themselves economically. The application of space syntax methods to this research, coupled with the use of primary census data, the Charles Booth maps of Poverty in 19th century London and historical maps of London, Manchester and Leeds, has enabled analysis of street scale data, to study the socio-economic and spatial structure of areas frequently perceived as 'ghettos'.

This paper suggests that some urban areas are especially prone to settlement by impoverished immigrants, due to characteristics that make such areas first, tend to be economically unsuccessful due to their spatial segregation and second, less attractive to those who have the means to move elsewhere. It concludes that such areas are not so much defined by their immigrant constituents, but by their long-standing inhabitants that cannot move elsewhere. Analysis of the relationship between poverty and spatial segregation in such areas, suggests a strong relationship between the physical separation of poverty areas from the economic life of the city, and the lack of potential for the economically marginalized to ultimately integrate into society.

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## Introduction

In 'Against Enclosure', Hillier (1988) states that the effect of modern housing estates on the segmentation of the poor from the life of the city is to create an exaggerated presence of locals, without the "leavening of strangers as found in ordinary streets". What is it about the patterning of "ordinary streets" that enables a more comfortable mixing of rich and poor, immigrant and indigenous population? This paper suggests that the formation of immigrant quarters at the edge of urban business districts is a critical stage in the integration of immigrants into society. In fact, Carter (1983: 188) suggests that "Ethnic areas, where immigrant populations adapted to a new culture and way of life, [become] distinctive sections of the industrial city.'.

This paper suggests that the location of the immigrant quarter close to the city centre is important economically, as it enables access to markets for newcomers, whose economic activities may be otherwise restricted. Moreover, this paper suggests that the intense, layering of activities enabled by a traditional street grid creates the opportunity for the creation of a strong self-supporting immigrant community, which can then venture out to the main streets of the city to start to integrate with the indigenous population. It is argued that this temporal and spatial transition from localised seclusion to larger-scale intermingling is what enables a more comfortable and less polarised segregation of immigrant populations. The research detailed here will further show that the location of immigrant quarters has historically been in the poorest districts of cities. The poverty status is not only relevant to factors such as the availability of cheap housing and casual labour (both of which are important to enable first footings in a new area), but also because poor districts have an additional characteristic, that they typically are spatially and socially areas of transition, where newcomers, aliens and the 'other' can exist on the edge of the heart of the city whilst they literally find their feet in a new culture. As pointed out by Kershen (2004: 262), in the case of the London immigrant quarter, which has been home to refugees for over 200 years, it is...: "a location... adjacent to the City of London, yet free from its restrictions, with a reputation for hosting nonconformity... a magnet for refugees and immigrants seeking economic opportunity and religious freedom." It is argued here that it is not by chance that immigrants prefer to settle in cities, as this is where they can intermingle with the multifarious society that already exists there, but critically, settlement at the edge of the city centre enables the most marginalized to find their means of integration at a slower pace than might otherwise be possible.

This paper starts with a review of the spatial form of immigrant quarters. The next section details research into poverty areas and shows how the persistence of poverty areas is related to their spatial characteristics. The final section reviews the key research findings and includes a theoretical discussion on the phenomenon of immigrant clustering.

## The Spatial Form of Immigrant Quarters

The phenomenon of clustering of minorities, especially that of newly arrived immigrants, is well documented. In one well known text, 'The Ghetto' (Wirth, 1928) it is stated that there is an "unmistakable regularity" in the process of formation of immigrant "slums". The primary causes of clustering by immigrants are normally attributed to exclusion of a minority population caused by prejudice, or to blocks of property being retained for certain labour groups and a preference for some immigrants to work in jobs which allow for sub-contracting, home-working, and particularly, employment within the group. In many cases access to unskilled or semi-skilled jobs will cause immigrants to cluster in a particular location. Immigrants, especially when hired casually, need to live as near sources of employment as possible (see Godley, 2001). In many cases, the long hours of industrial work require workers to live close to workshops.

Many geographers and writers about the city make a connection between the clustering of minority ethnic groups into clusters and the subsequent segregation of those groups, yet a review of literature on immigrant clustering reveals a variety of opinions on the causes of this phenomenon. Carter & Lewis (1983), writing about Irish immigration to Britain, maintains that minority clustering first came about as a result of the massively increased mobility in the nineteenth century, which caused a greater mixing of population, and the development of the concept of 'segregation' (op cit, 189-201). The common association of clustering with segregation is at the core of this paper, which attempts to establish whether immigrant clustering is necessarily related to segregation.

This paper stems from a series of studies by the author (Vaughan, 1999; 1994) of Jewish immigrant settlements in London, Manchester and Leeds in 19th century England. The aim of the studies was to understand the spatial nature of the immigrant quarter, and to understand why it is that supposedly segregating immigrant groups have ultimately succeeded in integrating economically and socially, as well as physically into their host society. Space syntax measures described elsewhere in this issue, were used to establish the spatial separateness of the settlement areas and census data were used in order to add social and economic dimensions to the study. The method entailed creation of a spatially related database comprising the entire population of each of the immigrant quarters (and not just the immigrant population). Unlike other studies of residential segregation, which tend to use area averages to study geographical distribution of populations, the advantage of these methods are their high degree of spatial resolution. In addition, the use of whole population cohorts enables comparisons to be made between immigrants and the people living alongside them within the same area, considering factors such as the economic status of immigrants and UK-born residents of the same area. This method also eliminates sample error, which is a particularly difficult problem when dealing with minority populations (who are invariably unevenly distributed in an area).

The Jewish communities of London, Manchester and Leeds in 1880s, contained the largest Jewish population clusters in England of that period and included both established Jewish families (from previous migration waves) as well as newly arrived immigrants – although of the three, London was the most established and Leeds, the least. During the period leading up to 1881, the cut off point for the studies, the number of Jews in Britain grew from 36,000 to 60,000; an increase that was mainly due to immigration from eastern Europe (Lipman, 1990). The incoming migrants settled in high densities in poor areas in each of the cities: Red Bank in Manchester, Leylands in Leeds and the East End of London. There were smaller settlements in other urban centres around the country. Numerous Jewish charities and organisations were set up by established Jewish communities to provide financial support, but also with the aim of integrating the new immigrants socially and economically into the existing population. Despite this, problems of high density settlement caused crises of unsanitary conditions and overcrowding (Pollins, 1982). Moreover, immigrant living conditions were frequently worse than those of the other inhabitants of the poverty areas. Booth (1902, vol. 4: 46), states that within the generally poor East End of London, the immigrant quarter was distinctive with “overcrowding in all its forms, whether in the close packing of human beings within four walls, or in the filling up of every available building space with dwellings and workshops.... The percentage of persons per acre rises to 227; the highest at the East End.”

An important characteristic of the immigrant quarter is not only its spatial proximity to the economic centre of the city, but the internal spatial organisation of its economic and social life. The nature of many immigrant trades is also their ease of subdivision; notably, subdivision necessitates spatial proximity of one stage of the process to the next – so the button-hole maker needs to live close to the worker in the previous and next stage of the garment making. By the 1880s the Jewish immigrants had moved into a narrow group of trades; in London 34% were in the tailoring trade and 14% in boot and shoemaking (Fishman, 1988: 132) and in Manchester’s Red Bank area (which contained a third of the Jewish population of the city in 1881), the principal trades were tailoring, cap-making, shoe and slipper-making, and glazing. Similarly, the Leylands area of Leeds (which contained 82% of the Jewish population in 1881), was dominated by the tailoring trades (Freedman, 1992). What these trades had in common, was that they were relatively easy to learn, although the more complex procedures such as cloth cutting have always had a high level of skill and therefore better pay associated with them.

#### ***Jewish immigrant settlement patterns: London, Manchester and Leeds***

Space syntax analysis of spatial integration, comparing the immigrant quarters to their urban surroundings, found that the immigrant quarters were significantly more segregated than neighbouring areas, in addition, when considering the measure of depth – the number of street turnings away from the quarters to the city centres, the immigrant quarters were found to be more distant than other inner-city areas. This finding reinforces the comment by Williams (1985: 81) that the area of ‘classic slum’ in Manchester was, physically invisible: “self-contained and shielded from view by the lie of the land and a facade of shops and public buildings, socially barricaded by the railway and industries in the polluted valley of the Irk, and so neglected and ill-lit as to be in a state of ‘perpetual midnight’”. In contrast, the main streets in each of the areas were reasonably well connected to the ‘live centres’ of each of the cities. Thus, the spatial analysis suggest that the interstices of the immigrant quarters were indeed cut off from city life, yet the areas were overall not particularly distant from the city centre and its

economic activities. See figure 1, showing global integration values for Manchester, Leeds and London, with the immigrant quarter highlighted.

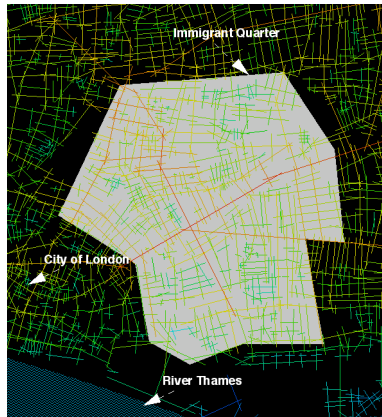


Figure 1a - London: global integration



Figure 1b - Manchester: global integration

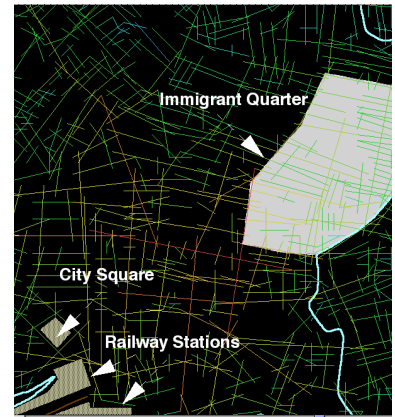
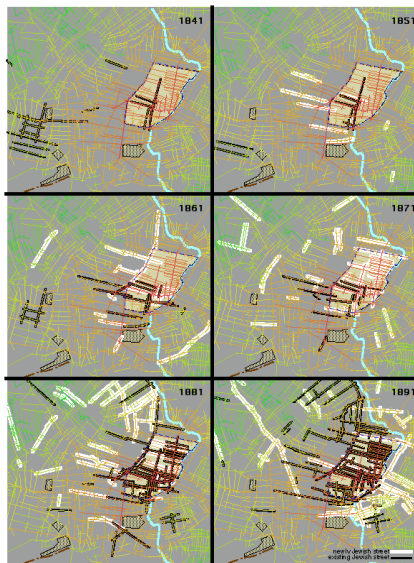


Figure 1c - Leeds: global integration

Another significant finding was the high rate of poverty, not only for the immigrants, but for all the residents of the immigrant quarters, who were clustered in the ‘semi-skilled’ and ‘unskilled’ occupations. Other measures of poverty, such as the proportion of households sub-letting to other families, or renting rooms to lodgers, had a significant rate within the immigrant quarter – with 11% of Jewish households sharing within the quarter and 6% outside of the quarter in the case of Manchester.

Research by the author (Vaughan & Penn, 2001) into the formation of Jewish immigrant settlement in Leeds over the last six decades of the 19<sup>th</sup> century found a clear pattern in the manner in which the immigrant quarter was formed. This is illustrated in figure 2, which shows the location of streets with



Jewish inhabitants in each of the six censuses, colouring up streets new to Jewish settlement (for that census) in pale, thick lines and existing (in the previous census) in thin black lines. This illustration is also overlaid with a map of step depth from the most globally integrated street in Leylands: Hope Street (where the warmer the colour, the closer the street to the point of origin). This plate illustrates the formation of the settlement in Leylands on the one hand and the disappearance of the scattering of single young men in lodgings around the area, which occurred in the first three decades. It is evident that the immigrant quarter, highlighted in grey, initially took place on streets one or two steps away from Hope Street. After this there seems to have been a tendency to infill settlement in the northern part of the district, again in streets one or two steps off. Finally, especially in the 1891 census, we see that settlement starts to occur in short streets more distant from the most globally integrated street. This analysis suggests a pattern, where a core of settlement is established in an area, and newly settled streets tend to be more spatially segregated than existing streets. Streets with

existing members of the immigrant group fill up faster than newly settled streets – leading to a pattern of intensification. Subsequent settlement occurs in more prosperous areas outside of, but close to the area of initial settlement, which allows the immigrants to maintain cultural and social ties with their fellow migrants.

This illustration suggests that rather than spreading out throughout the district, that immigrant families moved into streets already settled by their co-religionists, thus increasing the immigrant settlement density in those streets over others. Historical evidence suggests that in some cases tensions between the host and minority populations led to actual ‘exclusion zones’, with some streets becoming exclusively ‘Jewish’. According to Englander (1994: 64) “in those districts on the edge of the foreign quarter, where street supremacy had not been settled, resistance to Jewish encroachment was most intense... [and] led to the formation of Jewish exclusion zones”. However, there may equally be cases

where immigrants choose to exclude themselves for cultural or religious reasons: Lipman (1962-7) for example, describes how strong rules against intermarriage have created clusters of Jewish settlement beyond initial stages of migration in the UK and Johnston et al (2002: 609), state that south-east Asian immigrants to the UK have done so in order to maintain cultural cohesion and to avoid contact with “what they see as a prejudiced host society”.

One of the key findings of the study of the Leeds settlement was that the process of development of the immigrant quarter, followed measurable patterns of intensification, then dispersal, in the formation of immigrant settlement in a 50-year period, whilst analysis of poverty amongst immigrant and non-immigrants within the same area, found a relationship between greater poverty (measured by several variables including occupation of head of household and household size) and distance from sources of employment at the perimeter of the settlement area. Analysis of the relationship between economic segregation and spatial segregation concluded that the areas of the cities in which immigrants tended to congregate had spatial attributes which made them more prone to poverty, whether the inhabitants were immigrants or not, and that it was the planning of the area itself which contributed to the deprivation of its inhabitants.

The studies described here found that socio-economic factors are also related to the spatial distinctiveness of the area of immigrant settlement, where strong co-dependence is an important factor in enabling the economic viability and social strength of an immigrant group. Co-dependence is a term used by this author to describe the existence of organisations; such as cultural societies, clubs, religious institutions, charities and burial societies set up by an immigrant group to support its members. The research into this phenomenon found that the location of immigrant institutions tends to be on the main local streets of an area, but on streets which do not form part of the global spatial networks of the city Vaughan (1994). Research into contemporary South-Asian immigrants in London has found a similar spatial pattern of local social activities (Aftab et al, 2005).

Research into informal co-dependence: household clusters forming according to country of origin, and shared work and prayer activities, found that these occurred at significantly higher rates in the case of families newer to the country (Vaughan, 1999). Cultural differences between immigrant groups would also cause them to choose to live in households from the same country of origin (see White, 2003: 80). In all cases, there were strong rates of Jews marrying another Jew from the same country of origin. When compared with other immigrant groups, the rate was significantly higher – particularly in the more recently created settlements – up to 89% of Jews in Leylands married spouses from the same country of origin (historical research indicates that this was frequently due to single men ‘sending home’ for a bride from their home town). This strong cultural reinforcement of place of origin clearly must have played a part in strengthening communal ties.

The study by Vaughan (1999) considered the settlement pattern beyond the immigrant quarter. It found that second stage settlement followed a pattern of moving to houses close to the first stage settlement, with consolidation of the settlement in a relatively small area in order to enable the viability of communal institutions. The importance of clustering in the second stage settlement is evident from research by Newman (1985) and Williams (1985), which shows that such a pattern took place in Manchester and London. Moreover, in all three cases presented here, a significant majority of the ethnic group continued to live in the initial areas of settlement for at least 60 years after the initial settlement took place.

### **Immigrant Quarters and the Poverty Area**

Historical evidence indicates that in addition to work, it was the availability of cheap housing, which made such districts as the ones analysed here attractive to the immigrant poor. However, closer inspection is needed to understand the nature of such factors. Just as work availability was shown here to be associated with proximity to the economic centre, housing and economic factors seems to have been linked to spatial integration. A comparison of local integration values within the London immigrant quarter to average values in the district, showed that although the lowest classes as defined by Charles Booth (1889) lived in significantly segregated locations, the trend was such that the classes above the poverty line were close to average, with the higher classes in the area evidently more integrated than average. Thus, except for the classes in the worst deprivation, the streets of the East End, which were perceived to full of the irredeemably poor, in fact contained a variety of classes. As stated by Fishman (1988: 11): “the poor were not a homogeneous class”, but varied in their situation

immigrants, using a 19th century map published in Russell & Lewis (1900) ‘The Jew in London’, showed a distinct pattern of bifurcation between the streets where immigrants were a minority (up to 50%) which become more integrated, the denser they become, and the streets where the immigrants were a majority (50-100%), which become less integrated as density increased. The East End streets with no immigrants at all were the most segregated overall in the case of local integration.

Figure 3 below illustrates this, showing how the majority cluster (streets coloured in shades of blue) was located in a variety of streets ranging from the well connected main streets (where immigrant proportions ranged up to 75%, pale blue) and the poorly connected back streets (where immigrant populations ranged between 75% and 100%, medium and dark blue).

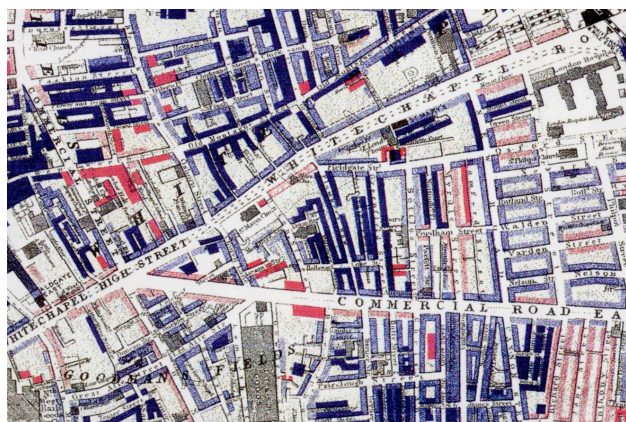


Figure 3 South-western section of ‘Jewish East London: the proportion of the Jewish population to other residents of East London, street by street, in 1899’. Courtesy of London’s Jewish Museum.

Several recent papers have highlighted the significance of poor areas as a growing problem in today’s cities (Lee & Murie, 1997, Power & Wilson, 2000, Spicker, 2003). Research has shown that flight to the suburbs has left behind pockets of ‘hyper deprivation’ that suffer from a greater complexity of problems due to the fact that poor areas can, through their spatial situation, exacerbate social problems. Research by the author into historical poverty areas suggests that the persistence of such areas is related to their fine scale spatial characteristics, and this is described in the following section.

Despite recognition of Charles Booth’s study of poverty in London in the late 19<sup>th</sup> century (Booth, 1892-7; 1902) as the first comprehensive analysis of poverty and the background to contemporary scientific approaches to social analysis, there has been little analysis of the maps created by Booth and his team for the study. The maps indicate the classification of people living on each street across London according to seven classes of occupation and regularity of income – Booth recognised that the regularity of earnings as well as their level is an important factor in poverty. The 1889 maps of ‘descriptive poverty’ were the outcome of information supplied by School Board visitors and surveys by Booth’s research team. The 1899 map was a comprehensive revision of its predecessor: “Every street, court and alley has been visited... changes have been most carefully considered... [most changes are] the result of the natural alternations of ten years of demolitions, rebuilding and expansion involving changes in the character or distribution of the population” (Booth, 1902: 6-7). Figure 4 below shows the key to the 1889 Booth map.

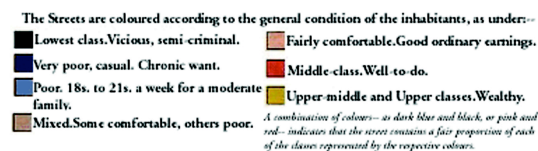


Figure 4: key to Booth 1889 ‘Descriptive map of London poverty’

- **Analysis of social/spatial relations using space syntax**

Reeder (1984) points out how Booth’s map of poverty provides information on how the spatial form of London in the 19th century had an impact on the location of poor areas. He notes that the map “points to the significance especially of the innumerable dead ends, closed up vistas and backwaters in the layout of streets. A glance at the map [see Figure 5] shows how often these cul de sacs were in the

occupation of Booth's semi-criminal classes or those just above them, and a more careful reading indicates how some new addition to the ground plan – a dock or canal, for example, a gas works or waterworks, a railway line, or just the alignment of a new street – seems to have served to reinforce slum tendencies. Booth and his team were repeatedly to draw attention in later volumes to the importance of physical barriers.” Indeed, Booth was acutely aware of the impact the slightest variation in street layout could have on urban form, and subsequently on the urban poor. Examples of this can be found in his description of how the poor were “caught and held in successive railway loops” and “the poor were located in pockets of streets lying between railway and canal in districts cut off from the mainstream of urban life.” (Booth, 1892-7: 137).

Analysis of the East End of London, in the borough of Tower Hamlets, has been the main focus of research into spatial segregation and poverty by the author. This area has for the past 200 years been continuously inhabited by poor and immigrant populations. Figure 5 below shows how axial analysis of the area embedded in its surroundings finds that the main streets of the area are highly integrated (streets coloured red and orange), whilst the back streets are highly segregated (dark and light blue colours). As mentioned above, analysis of the spatial structure found the East End was poorly connected to the rest of London, except for the main streets of the area.

Figure 5 also shows the Booth map of the area, indicating that the well integrated streets corresponded to the streets defined by Booth as ‘Middle class, well-to-do’ (Red) or ‘fairly comfortable’ (Pink).



*Figure 5: Booth map of poverty classes, 1889 sampling a small area of east London and a section of the axial map of the area.*

Further detailed statistical analysis of the data considered at street block level found clear evidence for these observations, with the highest classes located on streets with significantly higher than average integration values, meaning that they are on the most accessible parts of the street network, while the lowest classes resided on streets with significantly lower than average integration values, meaning that they are on the least accessible parts of the street network. These findings are explained by previous space syntax research, which shows that streets with high integration values tend to contain the socially and economically lively activities of the city; that is not to say

that the middle classes preferred to live on busy, noisy streets, but that their occupations – which in this area were predominately in trade and skilled crafts meant they were inclined to live on the main streets of the area. This is confirmed by a business directory from the time (Watson 1914) and Reeder & Hyde (1984) also state that the streets defined by Booth as red, middle class were not the ‘true’, servant-keeping middle class, but the class containing clerks, shopkeepers and a few employers and professional men. Bearing in mind that the main streets of the area provided the overall spatial structure to the area, it is notable that space syntax research suggests that this meant they were linked up to the economically active parts of London overall, a fact which is borne out by historical research into the area (Kershen, 1995).

- ***The spatial form of the poor areas***

One of the important outcomes of Booth's study of the East End of London was to show that it was not a singular morass of poor, criminal streets, but that it contained a variety of classes, with finely differentiated deprivation situations. Space syntax analysis of Booth's poverty classes, ranging from “very poor” to “poor, 18s to 21s a week for a moderate family”, showed that these were located in spatially segregated streets when measured as average. However further analysis of these classes reveals a surprising division, with a proportion of streets more integrated, and some very segregated. The streets with higher integration often appeared in isolation from other poor streets, and tend to be directly tangential to one of the main middle class skeleton streets. This would account for their higher integration values. Another significant finding concerning the lowest class streets was that they were dispersed throughout the area. Because of this dispersal, in some cases, poor streets were surrounded by higher-class streets, although tended to be set behind or perpendicular to them. This has been termed ‘marginal separation, linear integration’ – where the tendency is for street alignments to have a similar

function, whilst if you turn a sharp corner, there tends to be a step change in activity or function (Hillier & Penn, 1996). Figure 6 shows an example of this phenomenon:

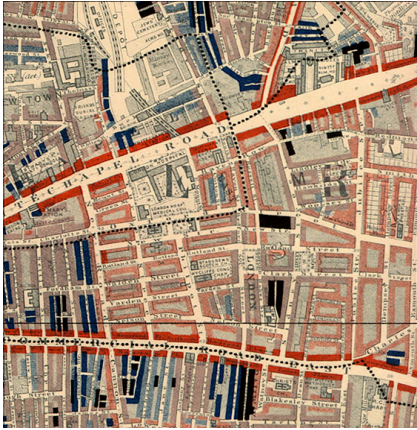


Figure 6: section of Booth, 1889, showing the step-change in class as streets step away from the main, 'middle class' streets of the area (Whitechapel Road and Commercial Road East).

In some cases, hidden behind the relatively prosperous houses of the middle classes, were courtyards and alleyways containing housing of such inferior quality, with inhabitants of such reduced circumstances (and in some cases with such levels of crime), so as to make the housing notorious in the contemporary press. Evans (1997) in 'Rookeries and Model Dwellings' describes how some of these dwellings became overcrowded to such a degree as to engender disease due to the unsanitary conditions. Analysis of change between Booth's maps of 1889 and 1899 showed that the slum clearance programme which has 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. Another more subtle impact was that the areas surrounding the slum clearances had 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 profound impact on the lower classes. Indeed, White (2003) describes how many of the poorest indigenous inhabitants of the area moved out, or were displaced to the adjacent streets of the area at this time, only to be replaced by the slightly less impoverished incoming impoverished immigrants.

Another area of London was chosen to substantiate the findings from the east London study and the area of Soho, in the west end of London was selected due to its striking social and economic differences from its immediate surroundings. Figure 7 illustrates these differences, showing the Soho area of the Booth 1889 map. It is evident that the district, which has traditionally been the place of 'other' within the milieu of the prosperous west end of London, has distinct economic differences from its surroundings – which can be seen from the large number of streets in the poverty tones of black, dark blue and light blue.

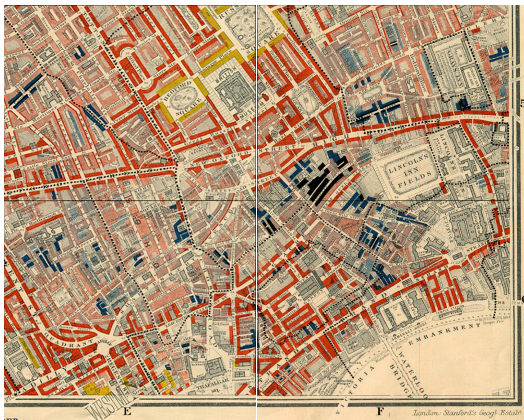


Figure 7: Booth map of poverty in London, 1889, showing the district of Soho



Statistical analysis of the spatial form of Soho, compared with the west end streets to its north showed that the area was distinctively different, with lower rates of spatial integration, with shorter more numerous blocks, and with the same relationship between poverty and segregation found in the east end of London of the same period. A research project carried out with Xiaoling Dai (during her MSc Advanced Architectural Studies at UCL) into the spatial form of Soho over the past 100 years found that the smaller block size of the area helped Soho to become a thriving sub retail centre. It is possible to conclude that the specific morphology of Soho which makes it an area which differs from its surroundings has allowed it to contain a range of marginal social activities and classes which can coexist with the contrasting surrounding areas by virtue of the spatial containment of the district. It is possible that both of these features have contributed to its urban character. These results suggest that poor areas have the potential to form a sub-culture when located as pockets within a relatively prosperous area.

### Summary and Conclusions

The studies summarised here employed a variety of space syntax measures, to shine light on the 'dark ghetto' of immigrant life and suggest that the spatial organisation of immigrant settlement can have an effect on its social structure. Clustering has been shown to be beneficial for mutual support and for setting up niche economic activities within the immigrant group. Clustering also enables the sustenance of minority cultural and religious activities. However this study has also shown the importance of the position of the immigrant cluster in relation to the city as a whole; in all three cases the immigrant quarter was located at the edge of the economic centre of the city, rather than at a distant, spatially segregated location. It has been suggested by research into immigrant and poverty 'ghettos', that the process of dispersal of immigrants after the initial stage of settlement is enabled by successful integration into the host economy – see Carter & Lewis (1983). It seems likely therefore that the location of immigrant settlement close to the economic centres of a city is vital for their successful economic integration into the host society. Indeed, studies of historically successful immigrant groups show that the ability to connect with the economic centre through spatial proximity, coupled with support networks, helps create the foundations for economic activity and ultimately, economic mobility of people living in so called 'ghetto' areas. On the other hand, a pronounced separation from the economic centre can break this virtuous circle and indeed it has been suggested elsewhere that living in 'poverty areas' as opposed to poor streets, can exacerbate social exclusion (Lee & Murie, 1995; Spicker, 2003), whilst other research has identified the persistence of poverty through time and has suggested an underlying spatial effect to this phenomenon - DTLR (2000), Orford, Dorling, et al (2002). Classic research such as that by Young & Willmott (1962) into family and community ties in working-class neighbourhoods has demonstrated the importance of spatial structure in enabling the vital networks of support necessitated by families living on an economic knife-edge. It could be stated that the immigrant poor are in even greater need of a spatial location that enables their own communal ties, as they their lack of relevant skills and language means they are even more reliant on help from family and friends from their country of origin to overcome these disadvantages.

Other recent research has suggested that the notion of 'segregation is bad, integration is good' is a simplistic view of the modern city. The fact that in many cities immigrants and minorities choose to live in localised clusters, yet at the same time maintain a variety of social ties outside of their immediate neighbourhood is growing in recognition. Peach, 1996 for example has pointed out that there are critical differences between voluntary segregation such as that typified by modern European cities and the involuntary segregation that has taken place elsewhere in the world. In agreement with this approach, this paper suggests that there is a greater need for tolerance towards ethnic areas. Moreover, this paper has demonstrated - with the space syntax detailed approach to spatial analysis – that there can be the subtlest differences between streets located in the same area. This paper therefore concludes that both clustering and a reasonably well integrated location are vital for the potential for an immigrant group to make the second stage move to economic and social improvement (or in some cases, economic and social integration). This paper suggests that an understanding of the fine-scale form of spatial structure is important in taking account of the impact of future urban design decisions that are likely to impact on the poor, and on the immigrant poor in particular.

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