

The micro-geography of political meeting places in Manchester and Sheffield c.1780-1860: local built environments as sources of political agency

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Section 1: Introduction

The early Victorian city is often portrayed as a whole, a spatial synecdoche for the impact of disruptive socio-economic and political change across Britain. Maps of the early Victorian city invite macro-scale description on the basis of elementary topographical observations of built form arrangements. Commonly highlighted features include the fragmentation brought about by rapid expansion, invasive transportation infrastructure and the large land parcels appropriated by manufacturing (Dyos and Wolff, 1973). This macro-emphasis is understandable in the light of how formative studies of industrial cities have been motivated by an overwhelming critique of the poor environmental conditions experienced by the working populations. The dominance of this environmental perspective, however, has tended to obscure consideration of the built environment of the industrial city as a resource for, mainly working class, political agency at the micro-scale of the street and neighbourhood. Yet from the late eighteenth century onwards, British industrial cities hosted a profusion of political organizations whose meetings took place across a wide variety of local urban sites. An over-reliance on generalistic macro-descriptions struggles to identify the multiple overlapping scales at where this complex ecology of political meeting emerged. In short, popular political activism was conducted through multiscalar geographies. We need to examine the micro-levels of connection both shaping and shaped by the physical spaces of the city, to understand the nature of national political movements in the nineteenth century.

This proposition is developed in this chapter through a reflection on analytical research involving the mapping of almost a thousand political meeting places in Manchester and Sheffield c.1780-1860. Meetings were a central part of popular activity in this period and were embedded in urban political life. Urban politics was an associational culture, and myriad types of spaces were used for weekly meetings, such as those held by local authorities as well as for extraordinary demonstrations such as at elections. The most common meeting place was the pub or inn, while urbanisation and civic 'improvement' provided a much wider range of sites including theatres, assembly halls, chapels and town halls. Towards the end of the period, the largest social movements had gathered enough capital to construct buildings solely for their own use. Streets and squares also hosted larger public meetings and demonstrations. (Navickas, 2015; Harrison, 1988; Clark, 1988).

Manchester and Sheffield were the 'classic' exemplars of both industrialisation and democratic and trades' movements in this period. How was the emergent popular political culture, particularly the first democratic and working-class movements, represented in spatial terms? How did these differ from more established and elite forms of political association? In examining the locations of regular meeting sites for a wide range of political and associational activity, including weekly meetings as well as extraordinary gatherings and demonstrations, this paper seeks to understand and describe the micro-geographies of the political culture of the industrial city. It deliberately takes a 'bottom-up'

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view of these questions. From this perspective meeting sites sustained what Netto (2017) identifies as the *material condition* of political association, the bodily *enaction* of a semanticised space enabling the communication of collective agendas.

We situate political meetings in specific urban-morphological contexts rather than present them as generic responses to a set of socio-economic determinants. We note a complex historical reality in which generative micro-geographical processes differentiated patterns of political meeting practices within and between the two cities. This emphasis highlights political meeting in Manchester and Sheffield as inseparable from the everyday life of these cities. It shifts the research focus from atypical large-scale political events and the declared aims of political organizations, to local ‘spatial cultures’ of meeting and their capacity to gestate and transmit political ideas from the quotidian built environments of distinctive radical locales such as Ancoats in Manchester, to symbolically significant central locations. It seeks to balance the traditional historiographical focus on the definition of political ideologies (i.e. views generally held) with an emphasis on political agency as a social activity that takes place somewhere. We use close analysis of the siting of political meetings to demonstrate the interactions between urban space and individuals’ choice of location. This was a process involving both material and symbolic considerations, rather than either/or. Our approach also serves as a basis to challenge the usefulness of the category of ‘industrial city’ for historical research, not least by highlighting the distinctive spatial-morphological infrastructure of political meeting places as these developed over the nineteenth century. Such an infrastructure might be expected to be highly adaptive in accommodating fluctuations in the popularity of particular causes and responding to different regimes of social control imposed upon them. The research maps historical political meetings and meeting places in GIS and makes use of space syntax analysis of street networks to give precise quantitative definition to different scales of urban space at which meetings took place in both Manchester and Sheffield (Hillier and Hanson, 1984; Hillier 1996). The locations of meetings place are analysed in time-series corresponding to the early and mid-nineteenth-century extent of the cities. Ancoats, a district to the north of the city centre of Manchester, is analysed in depth to begin the process of exploring the complex interface between different kinds of political meeting places and the public street

Section 2: Political meetings in Manchester and Sheffield in historiographical perspective

The 1790s to the 1840s formed the key period of the rise of popular agitation for democracy and for workers’ rights. Whereas London had been the centre for political movements prior to this period, by the 1840s, other cities in the rest of Britain came to the fore. This shift emerged as a result of a combination of factors, principally rapid urbanisation driven by industrialisation, and the development of a mass working-class democratic movement inspired by the French Revolution that was interpreted into the domestic political and economic situation by local activists. Manchester and Sheffield were two of these active centres for all forms of popular movement. The research for this paper considers the meeting sites of all types of political group, from radical working-class democratic societies from the 1790s to the Chartists in the 1840s; trade unions; Owenite socialist groups; elite loyalist and conservative associations, to single issue campaigns such as the Anti New Poor Law associations and the Anti-Corn Law League in the 1830s (Navickas, 2015).

Manchester is well known as the 'shock city' of industrialisation. In 1801, its population had already grown rapidly to just over 70,000; by 1841, it had reached over 242,000, itself an increase of 100,000 over the previous decade. The first expansion and intensification of industrial and residential areas occurred to the north of the centre at Ancoats and New Town during the 1790s and 1800s, with speculative building of rows of terraces and workshops surrounding the first large steam-powered cotton factories. Engels described the changing topographies of the new working-class districts to the north of the centre thus:

The New Town, known also as Irish Town, stretches up a hill of clay, beyond the Old Town, between the Irk and St George's Road. Here all the features of a city are lost. Single rows of houses or groups of streets stand, here and there, like little villages on the naked, not even grass-grown clay soil ... In the vicinity of St George's Road, the separate groups of buildings approach each other more closely, ending in a continuation of lanes, blind alleys, back lanes and courts, which grow more and more crowded and irregular the nearer they approach the heart of the town. (Engels, 1845; 1999 edn, 66-67).

By the 1820s, the city began to expand southwards beyond the river Medlock and the canals with further factory and warehouse development on a large scale. The new areas followed a gridiron street plan, which contrasted with the denser and variegated street plan of the medieval core around the Collegiate Church and the earlier 18th century 'improved' commercial area around St Ann's Square. (Briggs, 1963, 89). Friedrich Engels recognised the significance of Manchester in his study while resident there, *The Condition of the Working Class in England* (Engels, 1845; 1999 edn). Historians have ever since sought to unpick the socio-economic causes of the rise of class-based movements in these cities (Thompson, 1963). We argue that by reading the micro-geographies identified by Engels not through a class analysis but through spatial forms, we can see how material and spatial patterns of locales shaped political activity within the city.

Sheffield had a similar population in 1801 (c.60, 500), but its pace of expansion was slower (though still considerable compared with other towns) and it reached c.133, 700 in 1841. ([Vision of Britain](#)). In part this expansion was limited by the type of industry – steelworking – which remained in small workshops and forges, and in part because of the influence of the main guild the Cutlers Company, whose power was such that they effectively acted as the main local government. The central street plan and sites of assembly were already established by the late eighteenth century, with the main axis around the parish church, Cutlers' Hall and Paradise Square. Areas of working-class residences densified in 'crofts' of tightly packed courtyards (Belford, 2001, 106).

Griffiths (2017) shows how the 'topological centre' of Sheffield's street network (rather than its geographical or historical centre) identifies a shift in accessibility to the newly constructed grids to the south-west of the early modern centre in the first decades of the nineteenth century. This created a novel situation where the most accessible areas of the city with high movement potential were dominated by manufacturing rather than retail or commercial uses, while traditional sites of assembly stayed in the early-modern centre. This distinctive pattern of accessibility offers a possible explanation for how the city's cutlery industry was able to function effectively as a cluster across an ever larger urban scale despite its complex and decentralized organisation. In a similar spirit we argue that political meetings in Manchester and Sheffield c.1780-1850 emerged as a spatial practice as much as an (aspatial) ideological phenomenon in which collective political agency was assembled piecemeal through the accessibility of meeting places and the doing of meeting *activity*.

Social histories of the early Victorian city have had more difficulty with spatial description. This is in part because they have focused on literary sources and contemporary descriptions influenced by currents of Romanticism, which portrayed the rapid change in urban forms and the social problems engendered as extraordinary, overwhelming and irrational (Briggs, 1963). Topographical observations of these processes of land change frequently inform a critique of the poor environmental conditions experienced by many among the working populations of industrial cities, rather than being offered as considered reflections on urban morphology. This is consistent with the dominant perceptions of the 19th century industrial city as an undifferentiated form with a particular urban character (Dyos and Wolff, 1973). Studies of the urban form of industrial Britain have traditionally been centred in historical geography and demography, with an emphasis on understanding the economic, social and medical problems engendered by the built environment, notably the relationship between cholera epidemics and slum dwellings, an analysis promoted by Victorian statisticians themselves in their search for a solution to social and public health problems (Ward, 1976; Fraser, 1981). Emphasis on the emergence of the ‘slum’ and the factory leads to academic classifications of the map in large semi-homogeneous zones. It remains the case that despite Engels’s pioneering decoding of Manchester’s built environment as a spatial-morphological system for concealing and perpetuating social inequality in the 1840s, the theoretical and evidential basis for a making *explicit* such a connection between urban structure and social outcomes is rarely tested empirically.

In fact in many ways the legacy of Engels’s description has been to emphasize the intrinsic *disorder* of the industrial environment when seen ‘up close’, his descriptions of Manchester make several specific references to its labyrinthine nature (Engels, 1845, chapter 2, ‘The Great Towns’). Here the appalling conditions he witnessed amongst the poorer, particularly Irish, population become translated as a critique of industrial cities in general. The basis for such generalizations of ‘slum’ conditions have since been disputed, for example by industrial anthropologists (Mayne and Murray 2000). Our concern here, however, is not with the standard of living in industrial cities *per se*, rather to note how the industrial city is often applied as a category at a rather abstract or *macro-geographical* level of description. The effect has been to preserve its lack of order as a powerful but essentially reductive image of the profound but elusive social changes wrought by industrializations that works to simplify the more complex historical reality. Taking issue with this we argue that descriptions of industrial cities as fragmented townscapes typically derive from elementary observations of built form arrangements as they appear macroscopically viewed ‘top down’ on historical maps. Such observations struggle to identify the multiple overlapping scales at which the materiality of urban space and urban life was made intelligible ‘bottom-up’ through the micro-geographical spatial practices of its inhabitants, for example through participating in political meetings.

Historians of political movements have sought to understand the relationship between the growth of popular action and the development of the industrial city, but as with studies of health and the poor, the interactions with the spatial layout of urban forms are less well studied. Mark Harrison’s 1988 book *Crowds and History* examined the timing of crowd events within squares and streets, pointing historians to the significance of the built environment in shaping the form of demonstrations (Harrison, 1988). His analysis of the street plans and trends in locations of processions and meetings was somewhat rudimentary, however. Describing the plan of Manchester as ‘amorphous’, and attributing the riotous nature of crowd action in the city to the ‘little opportunity for particular locations to gain particular representational significance’ (Harrison, 1988, 164-5), his analysis shows the difficulty that historians have had with spatial description (see also Bohstedt, 1983, arguing that

the built environment of Manchester engendered a lack of community and therefore riots; counterargued by Charlesworth, 1993).

There has also been much less examination of the locations of indoor political meetings in cities other than London (for metropolitan political geographies see for example Parolin, 2010). The focus has usually been on the extraordinary and the outdoor – the mass demonstration in the street or square - rather than the more day to day business of popular politics that we argue constituted the key form of organisation, especially the weekly committee meeting in a back room of a pub or chapel. This research highlights the role of such indoor and everyday sites in creating and sustaining a popular political culture in the industrial city. It maps these sites to provide a more robust micro-geographical interrogation of patterns of political meetings in relation to the spatial morphology and therefore lived experience (rather than more artificial boundaries created by administrative and political authorities) of two key industrial cities in early Victorian England.

Section 3: Mapping the micro-geographies of 19c political meetings using space syntax

Using space syntax methods to analyse historical spatial data draws on an established record of research in urban history using space syntax (Griffiths and Vaughan 2020 forthcoming). Laura Vaughan's work using space syntax to map Jewish 'ghettos' in later Victorian Manchester and East End of London (Vaughan, 2002, 2005, 2006); Sam Griffiths's work on the spatial culture of the cutlery industry and civic processions in Sheffield (Griffiths, 2016, 2017), and Sophia Psarra's recent study of Venice (2018) are obvious examples. Space syntax is a micro-morphological method of urban description in that its fundamental representation of street networks or the 'axial graph' differentiates urban areas on the basis of the spatial configuration of streets - rather than generalised areal descriptions that correspond to administrative definitions and cultural representations rather than to the spaces inhabited and *practised* by people. As Fran Tonkiss has noted in relation to the approaches of Michel de Certeau and Henri Lefebvre, by focusing on spaces of everyday practice and use, we 'cut through the will to see and to represent urban space that is typical of government and police systems, as it is of architects and planners' (Tonkiss, 2005, 129; de Certeau, 1984, 93). While plans, maps and descriptions engendered from governing authorities lay out the city to view from the main streets, sites of everyday practice by contrast are, according to Lefebvre, 'linked to the clandestine or underground side of social life' (Lefebvre, 1991, 33). But although under the censoring and prohibition against 'illegal' or 'seditious' meetings during the repression of political radicalism during the French revolutionary period meant that many of these spaces were intentionally clandestine, many other sites and meetings were not. And so, like de Certeau, we assign meaning to the quotidian spaces of association and meeting as well as those prohibited by the authorities.

The research presented here draws on an elementary space syntax method referred to as 'axial analysis'. Two historical base maps were chosen from the beginning and end of the period for each city: 1794 Green's map of Manchester; 1797 map of Sheffield; and the two 5 inch to the mile first edition (1849-50) Ordnance Survey maps of both cities. These were traced and converted to axial maps using *ArcGIS* and *Depthmap* software. Cartographic analysis of both cities, using methods from urban morphology and space syntax research, provided a range of formal descriptions of urban spatial structure from the micro-morphological domain of the street-building interface to the street network of entire urban areas. This that can be augmented by linking historical data at the resolution of the street address to the configurational model in a GIS. Space syntax also offers one way to precisely differentiate between different configurations of urban space, for example those of Manchester and

Sheffield, that in other contexts might be grouped together in the category of industrial cities. Three concepts from space syntax theory are important to the interpretation of the analytical phase of the research. For a more systematic introduction to urban scale space syntax theories and methods see Hillier and Vaughan (2007) and Griffiths (2014).

- *Accessibility*: refers to how relatively close one urban space (e.g.) a street or square is to another; that is how *integrated* or *segregated* the space is in relation to all other spaces in the urban system (or a subset of those spaces); the theory proposes that integrated space is more likely to be a movement destination than segregated space
- *Foreground and background networks*: a 'foreground network' refers to the structure of space that connects different subcentres of a city and is associated with higher levels of movement, and encounter, and is in that sense socially 'generative'; a 'background' network refers to residential areas that are embedded in interstices of the foreground network and are said to be 'conservative' of cultural mores.
- *Accessibility is pervasive and relative to definitions of scale*: a spatial element such as a high street may function as an interface between circulatory localised movements and proportionately fewer but more linearised movements at larger scales; understanding how different scales of urban space interface with each other is essential to understanding the spatial cultures of settlements.

The research presented in this chapters uses GIS to map in a two-phase time-series a database of just under one-thousand political meetings and meeting places in Manchester (704 entries) and Sheffield (269 entries) taking place between 1775 and 1850 – much of which was digitally extracted from historic newspapers using text mining methods (Navickas and Crymble, 2017). A total of 185 sites in Manchester and 70 sites in Sheffield were identified and categorised. The majority of sites in both cities were pubs and inns, but they also included squares, fields, assembly rooms, court houses, town halls, streets, theatres, schoolrooms, buildings constructed especially for the particular political groups, and other areas of public gathering. The spatial data produced using space syntax has been joined to the political meetings database in the GIS, allowing analysis of the relationship between the urban built environment and the location of political meetings to be approached through the structure of lived space (i.e. the street network) rather than, for example, being aggregated to administrative boundaries imposed onto this space.

The dataset was split into two time periods correlating with our choice of early and late historical maps to compare the extent of urban development, and also is justifiable from a historical political chronology. The first period is 1780 to 1823, which marked the first movements for democratic reform. The period is historically coherent. There is a natural historical break in agitation from 1823 onwards, only reviving from 1830 onwards with the second major wave of movements beginning with agitation for the parliamentary reform bills, against the New Poor Law welfare changes of 1834 (popular resistance and association against this was particularly active in northern industrial cities) and leading into the Chartist democratic movement of 1837 to 1850 (Navickas, 2015).

Challenges presented by the historical material included categorizing the different types of movements holding meetings and the class of meeting sites. This required detailed historical knowledge of the period and urban building forms. So individual meetings constituted by working-class associations campaigning for parliamentary reform were classified under the category 'radical',

while those meetings constituted by middle-class and more moderate political groups during the period of the 'Reform Bill crisis' of 1830-32 were classified under the category 'reform'. This is consistent with the historical literature that distinguishes between the two types of parliamentary reform movement. Some movements were single-issue campaigns that were particularly distinctive or stand-alone in their organization and membership, so these were categorized separately, notably the Anti-New Poor Law associations of 1834-42 and the Anti-Corn Law League of 1838 to 1846. Buildings and open spaces were classified into broad types, with some historical distinctions between them: for example, 'pub' was classed separately from 'inn/hotel'.

For the Ancoats case study presented in Section 5 we drew inspiration from Laura Vaughan's work on isovists of synagogues in later Victorian Manchester and London. We examine the interface between the building and the street in Ancoats in order to understand more about the embedding of the entrances to political meeting sites at the local level – the extent to which local sites are best understood as part of the 'background' or 'foreground' spatial culture of the city. This begs the question of how far political and social movements that historically required privacy or felt the need for secrecy in fear of repression from the authorities (especially trade unions during the period of their prohibition by the state between 1799 and 1824, and radical democratic groups in the 1790s and 1810s) is identifiable in their choices of meeting places. To explore this polygons were created of buildings in the case study area based on the 1849 Ordnance Survey 5 inch to the mile map, and mapped the isovists of entrances to buildings. This involved using historical research to find some of the entrances as they were listed in street directories or on the Ordnance Survey map. Establishing the accurate street interface of a building is not only essential to a valid analysis in connecting to the right spatial-morphological element but more broadly demands a particular kind of scholarly attention: the historian realizes the complexity and significance of the micro-scale street-building relationship as a field of research while the spatial-morphologist is forced to recognize that generalizing such connections to a given 'best fit' (nearest street) for example – may close down the questions the historian would like to ask. Interdisciplinary dialogue was necessary to tally methods as well as historical context.

Section 4: A tale of (political meetings) in two cities

While accessibility (or axial *integration*²) tends to decrease from centre to edge, it is also *carried* from centre to edge along a number of concatenated 'spokes' that might be referred to as 'access roads' (Hillier, 1997, p.240) and often correspond closely to the structure of the pre-urban historical road network. They describe an emergent process through which growing cities reconcile the systemic tension between high levels of integration at the centre, which provide a focus for internal movement, and the relative segregation of peripheral areas that creates a barrier to the world beyond. As the city grows these centre-to-edge integration 'conduits' are important to sustain the foreground network of smaller centres at more localized scales (the idea of 'pervasive centrality'). Of course cities are all different and what Hillier calls the 'paradox of centrality' is a generic theoretical proposition. It is useful however, in understanding the specific differences between Manchester and Sheffield, not only as the outcome of socio-economic or ideological factors but as arising from distinctive spatial cultures in which social activity emerges at the micro-geographical level of inhabited or lived space.

² Similar to the 'closeness' measure in network science



Figure 1(a-b) represents data from the second phase of the time-series. Axial maps of Manchester and Sheffield are overlaid with sites of political meetings. Axial lines are shaded black to light grey indicating high to low levels of accessibility to urban-scale movement. At first glance these indicate Manchester sites of political meetings appear to be distributed fairly evenly in all directions around the most centrally accessible areas. In Sheffield, on the other hand, there are fewer meeting sites and the majority of these appear located in and to the north the historical centre, away from the ‘topological centre’ – that is most accessible area of the street network – which has extended to the grid developments in the south-west of the city. Although picture is complex we can propose from this starting point that by the mid-nineteenth century political meeting sites in Manchester were ‘following the integration’ of the foreground network to a greater extent than in Sheffield. Given the association of many political meetings during this period with slum conditions of poverty and environmental degradation this is interesting. It suggests that – despite the heightened levels of segregation associated with slum areas in Manchester (Vaughan) and the possible need for secrecy that such segregation naturally supports – people may have chosen to meet in relatively accessible locations for the simple reason that meeting is *social* activity and accessibility expresses that mutuality. Yet why should this not equally be the case in Sheffield? One reason may be because the culture of political meeting, particularly in the second phase of our study (c.1825-1850) appears less varied and dynamic than in Manchester, and overwhelmingly focussed on Chartist activity, which made particular demands on Sheffield’s urban and hinterland spaces.

Table 1: Joining mapped political meetings data to space syntax graphs of historical street networks

case studies		syntactic data			political meetings data		joined data		
City	t _i	date of base map	number of axial lines (% change over time)	total length of axial lines (metres, % change over time)	subset of political meetings	number of political meetings	number of axial lines with political meeting places (% change over time)	% axial lines with political meeting places	ratio axial lines with political meeting places: political meetings
Manchester	1	1794	934	97,278	1780-1823	176	67	7.2%	2.63
Manchester	2	1850	3761 (+403%)	333,859 (+343%)	1824 - c.1850	528 (+300%)	108 (+61%)	2.9%	4.89
Sheffield	1	1797	290	38,409	1780-1823	86	33	11.4%	2.60
Sheffield	2	1850	1172 (404%)	111,903 (+291%)	1824 - c.1850	183 (+213%)	31 (-6%)	2.6%	5.9

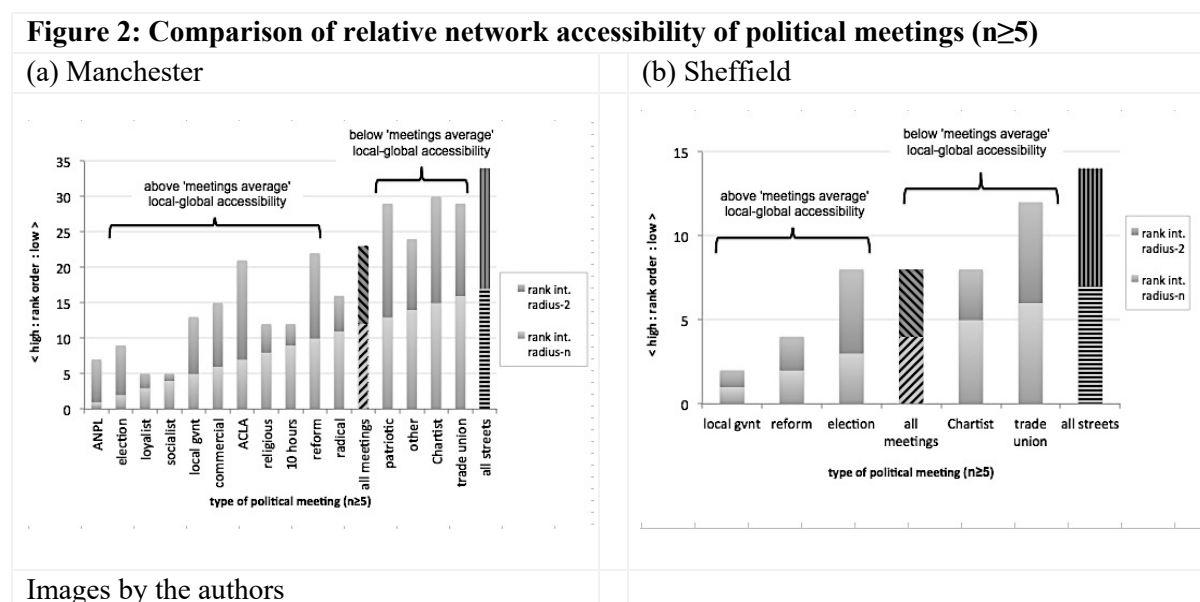
The data summarising the ‘join’ of the spatial and political meetings data is represented in Table 1. It shows how by Manchester increased the number of axial lines hosting sites of political meeting by 61% over a period characterised by intensive growth; whereas in Sheffield the number of axial lines hosting sites of political meeting declined by 6%. Of course these data are incomplete and can only be indicative of the reality but they strongly suggest that in the second quarter of the nineteenth-century sites of political meeting in Sheffield did not develop much beyond the limits of the eighteenth-century city. It supports the proposition that in Manchester sites of political meeting emerged in the newly developed areas of the city. The question then is whether these were located proximate to the high-accessibility ‘spokes’ of the growing city or embedded in new residential neighbourhoods – or possibly, both?

Table 2: Comparing the accessibility of all streets and streets with political meeting places

Case studies	global accessibility radius- <i>n</i> integration			local accessibility radius-2 integration			Local-global accessibility ‘synergy’ (R ² radius-2, radius- <i>n</i> integration)	
	Mean whole system	Mean meeting streets	Significance (p-value)	Mean whole system	Mean meeting streets	Significance (p-value)	Whole system	Meeting streets
M1	1.19	1.40	Yes (<.0001)	2.10	3.20	Yes (<.0001)	0.39	0.6
M2	1.10	1.40	Yes (<.0001)	2.07	3.65	Yes (<.0001)	0.26	0.43
S1	1.04	1.16	Yes (0.0042)	2.21	2.65	Yes (0.007)	0.28	0.41
S2	1.06	1.234	Yes (<.0001)	2.02	2.96	Yes (<.0001)	0.35	0.19

Table 2 compares the average urban-scale accessibility (global integration radius-*n*) and neighbourhood-scale accessibility (i.e. integration calculated within a radius of 2 axial lines) of axial lines hosting meeting places with all axial lines in Manchester and Sheffield, at each stage in the time-series. It finds that in both cities all political meeting sites take place in streets of greater than average global accessibility and greater than average local accessibility. It then compares the r-squared value calculated by the linear correlation of radius-*n* and radius-2 integration for axial lines hosting sites of political meeting with all axial lines. This value, known as ‘synergy’ in space syntax terminology is a measure of local-global accessibility – that is of the extent to which the accessibility of an axial line (street) at the neighbourhood scale indicates the accessibility of that neighbourhood at the urban scale.

The analysis reveals a clear contrast between Manchester and Sheffield. In Manchester the synergy of streets with political meetings is consistently higher than for the system overall – suggesting how political meetings were situated on the principle axes of the foreground network of the city from the neighbourhood to the urban scale. While the overall local-global accessibility of sites of political meeting declined across the time series as Manchester expanded – it did not decline relatively to the local-global structure of the city as a whole, suggesting that ease of urban-scale movement, to an extent, may express more localized fragmentation in the street network (see also Hillier *et al* 2012). In Sheffield the picture is very different by 1850 with analysis suggesting how the local-global accessibility of the city overall ($r^2 = 0.35$) was not well articulated by the pattern of political-meeting sites ($r^2 = 0.19$). This supports the proposition that sites of political meeting in Sheffield themselves became more localized and fragmented in the context of the growing city. Therefore sites of political meeting were less accessible to all urban spaces in Sheffield than they were in Manchester – while bearing in mind that most sites of political meeting were individually located on streets higher than average accessibility.



Using the joined dataset it was possible to spatially profile the accessibility of different kinds of political meeting and sites of political meeting. Figure 2(a-b) presents data on different types of political meeting in Manchester and Sheffield from the second phase of the time-series, where the total number of meetings is at least five. The figures rank individual meetings types on the basis of their radius- n urban-scale accessibility from left (relatively high) to right (relatively low). The bottom bar gives the radius- n ranking, the top bar gives the radius-2 ranking – showing how meeting types were differentially embedded in urban space on the basis of their local-global accessibility. Those political meetings bracketed to the left of the hatched bar representing ‘all meetings’ are said to be above average with regard to local-global accessibility, those to the right to be ‘below average’. Note that in both cases all meetings are to the left of the hatched bars on the far right of the figure which represents the average ‘all streets’ in the two cities.

The diversity of political meetings in Manchester 2 compared to Sheffield is immediately evident for the two Figures with many such as the ANPL (Anti-New Poor Law League), the Anti Corn Law Association (ACLA), the Ten Hours campaign and religious meetings (e.g. pro- and against the Test

and Corporation Acts, 1788 and Catholic Emancipation 1829), for instance, do not figure largely in the dataset for Sheffield. Of historical interest is that the campaign for a ten hour working day in factories was conducted in sites of greater than average accessibility relative to other meetings, likely because of the backing of supportive Tory-Radical manufacturers and merchants who could hire more central locations, though more research is required on this connection (Weaver, 1987).

Allowing for some variability across the time-series (which is why meeting types with fewer than five instances have not been included here) it is possible to draw some general conclusions. Local government meetings (e.g. magistrates, police or vestry meetings open to the general public, usually to support a local act of parliament), took place at locations of greater than average accessibility in both Manchester and Sheffield in both phases of the time-series. Reform meetings (all except M1), commercial (e.g. campaign against the fustian tax, 1788) and loyalist meetings (e.g. meetings of the 'Association for the Protection of Liberty and Property' against radical reformers in the 1790s) (all except S2) were also higher than average on all occasions when they appear in $5 \leq$ instances. Local government meetings and commercial meetings took place in central sites that were used throughout the period, notably court houses and stock exchanges. Meetings about religious matters often took place in the parish church in Sheffield and the Collegiate Church or St Ann's church in Manchester. Reform Bill meetings (1830-2, in which both middle-class and working-class societies campaigned for the extension of the franchise and giving parliamentary representation to industrial towns) took place in a mixture of locations in Manchester combining those of high accessibility of less than average accessibility in Manchester, notably Camp Field open space to the west of the city centre but also the centrally located Town Hall. Significantly, by contrast, this pattern did not apply in Sheffield, where they took place mainly in Paradise Square, a centrally located square.

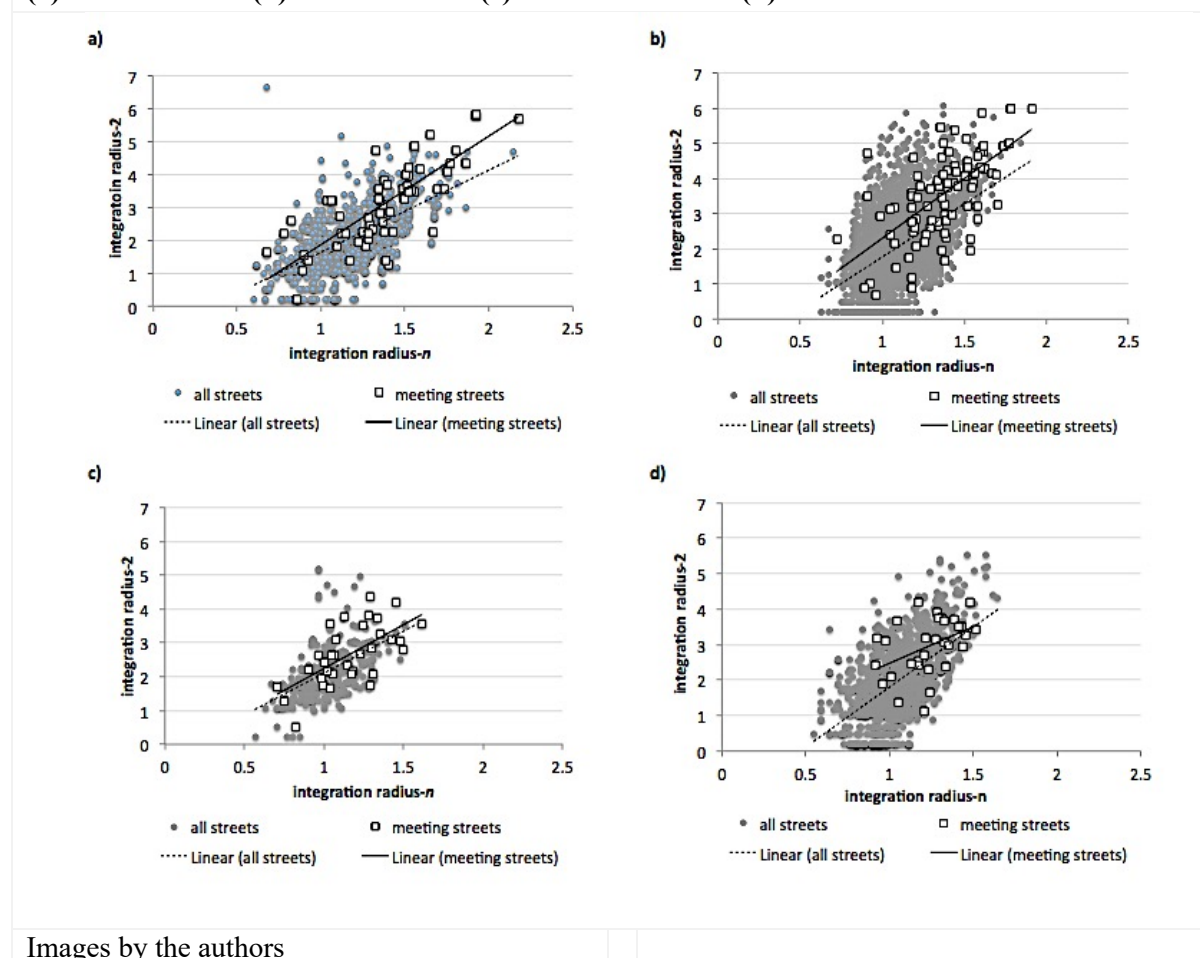
Meetings held during general elections in support of political parties, patriotic meetings such as local authorities drawing up town's addresses in celebration of monarchy or military victories, and meetings held by radical societies to campaign for universal suffrage present a mixed picture. In both Manchester and Sheffield election meetings were located in highly accessible central spaces by the second phase of the time-series but are below average in the first phase. Patriotic meetings in M1 were more prominent in high-accessibility locations than they were in M2 or S1. Radical meetings are well represented in the data (S1, M1, M2) and are located just above or below the average for all meetings. This points to the wide variation of sites of radical meetings where the accessibility of individual sites deviates widely from the average. Radical groups to be globally accessible so chose sites, especially pubs, within their own neighbourhoods rather than exclusively in the city centre - but it is the variety of location that is most striking. Popular meeting places like pubs were used to promote all kinds of causes from mass radical movements like Chartism to patriotic and loyalist causes. Such meeting places are not simply 'small and local' but through their embedding, particularly in Manchester, across all scales of urban space, they offer a structure for news and information to be circulated in different areas of the city.

Meetings consistently taking place at the lower of the accessibility spectrum include Chartist and especially Trades Union meetings. Meetings with below average accessibility often have a proportion of their meetings in open-spaces beyond the built-up areas of the city. For example, military meetings took place on parade grounds or barracks on the outskirts of the town. Trades Union and Chartist meetings often took place at peripheral open spaces, for example on Kersal Moor on the outskirts of Salford and Manchester, and Sky Edge in Sheffield. These locations are indicative of the legally

marginal and need for meetings to be beyond the boundaries of jurisdiction of the town authorities – as well as for venues of sufficient scale. In Manchester, however, the Chartists used a larger variety of sites compared with their Sheffield counterparts.

Chartist meetings in Manchester had a larger number of open spaces and squares in or near the centre of the city than Sheffield had, and often a site was only used for one type of meeting – for example, Stevenson’s square was only used for Chartist meetings from 1837 to 1848. This is a striking contrast with Sheffield where many of the meeting sites were long established and used for multiple purposes. The eighteenth-century site of Paradise Square in early-modern centre of the city, for example, was used by a wide variety of causes throughout the whole period (such as Reform meetings, see above), and was essentially the only square used for such purposes in the city. (Leader, 1901, 191). In Sheffield there is a greater tendency for meetings to cluster around the median integration values with a relatively higher proportion concentrated in central spaces such as Paradise Square and Fig Tree Lane Room, (the two key meeting sites for the Chartists and situated close to each other). This is another example of how the spatial culture of political meeting in Sheffield remained anchored around the historical city centre in contrast to Manchester where by 1850 it had largely accommodated within the enlarged scale of the city. It highlights how the location of political meetings is consistent with different spatial profile of the two cities that emerges across the time series. In Manchester there is greater variation of in the accessibility spectrum of political meetings compared to the average for all streets, and relatively fewer instances of political meetings taking place in highly integrated (central) locations than in Sheffield

Figure 3: Comparison of relative network accessibility of all political meetings (n≥5)
 (a) Sheffield 1797 (b) Sheffield 1850 (c) Manchester 1794 (d) Manchester 1850



To develop the proposition of distinctive spatial profiles of the two cities a little further, it was previously explained how the syntactic measure known as *synergy* correlates local and global axial integration producing an r-squared value (see Table 2). Synergy expresses the accessibility of the foreground network from more segregated (background) locations. In Manchester locations of political meeting sites indicate a structure of local-global accessibility that is consistently higher than that for Manchester overall. In Sheffield, by contrast the synergy of political meeting sites is barely differentiated. This profile can be shown by the scattergrams of radius-n (urban scale) and radius-2 (local) accessibility. The grey dots represent all the axial lines Manchester (Figure 3a-b) and Sheffield (Figure 3c-d) across the time series, the white dots are axial lines that host sites of political meeting. The point here is less the results of the correlation analysis than the clear visual contrast which indicates how a streets hosting political meetings in Manchester create a well-defined spine of meeting local-global accessibility that endures across the time series whereas in Sheffield 1850 (d) key drivers of local-global accessibility host no meetings at all and there is more clustering in the middle range.

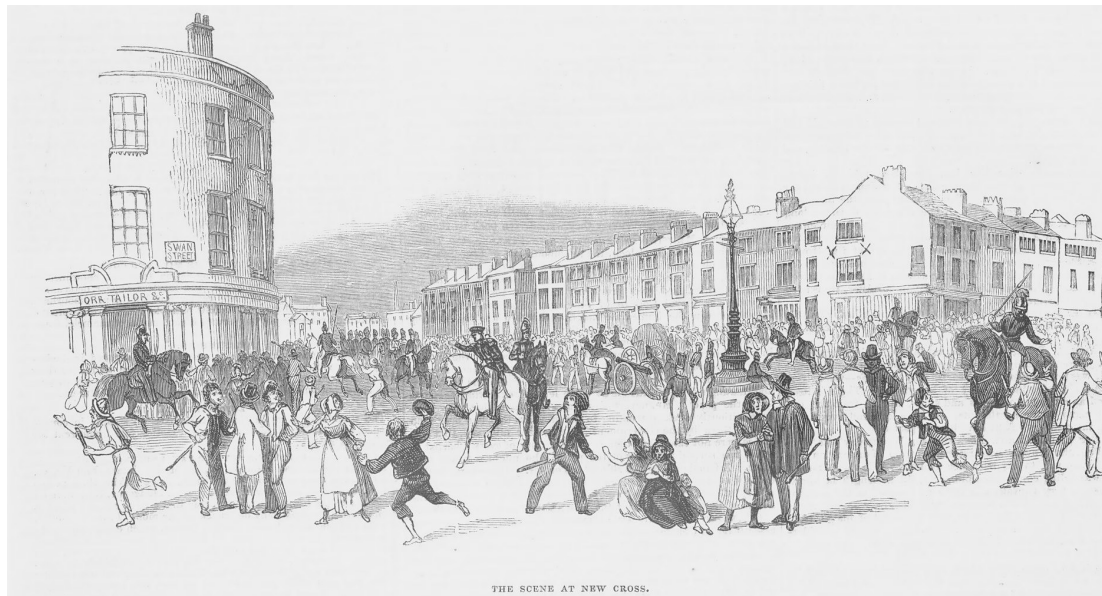
To summarise these findings. In both cities we can say that, overall political meetings and meeting places occupy relatively diverse niches in the global structure of the urban grid. The local accessibility of a political meeting or meeting place is a good guide to its accessibility at larger, urban scales,

indicative of a wide spectrum of accessibility linking relatively segregated to relatively integrated locations. It follows that political meeting and meeting places were accessibly positioned at local-global interfaces across all but the most local scales of urban space. We can propose that people would tend to move from relatively more to less segregated areas to meet.

In Manchester local-global accessibility (synergy) is more strongly defined for political meeting places than for the city as a whole indicating how meeting places have diversified with the development of the city's foreground network. There is greater divergence of specific political meetings and meeting places from mean values – suggesting a more widely distributed culture of political meeting that occupies the foreground network at different urban scales. In Sheffield by contrast the pattern of local-global accessibility for political meeting places poorly articulates the from the structure of the city as a whole – suggesting how meeting sites are remain concentrated in the traditional centre and older areas of the city as it grew in the early nineteenth century.. In general meetings that were more concentrated in the historical central area means there less diversity of meeting places in the urban fabric, making Sheffield – a relatively 'monoscale' meeting culture in comparison with Manchester.

Section 5: political meeting places in Ancoats

We have therefore indicated the differences between meeting site locations in the two cities as a whole. But what happens when we zoom in to a micro-scale? Navickas's historical research has shown the centrality of Ancoats for the emergent democratic and trade union movements, with a high concentration of pubs, chapels, warehouse spaces and private rooms used for political meetings between 1790 and 1848 (Navickas, 2015; Rose, 2011). We sought to test this empirical historical knowledge against analysis of their locations. But defining the remit of the micro-scale is also a process. It requires tempering digital mapping of the *space* (on the GIS layer) with historical geographical knowledge of the place (mutable and based on contemporary perceptions of bounds). The boundaries of Ancoats were defined only when Manchester and Salford were divided into police districts in 1792. The still expanding area covered around 400 acres and a population of around 11,000 in 1801. (Rose, 2011, 8). Yet as contemporary maps and Engels's description illustrated, the administrative boundaries did not map neatly onto the irregular borders of the street plan, where streets often ended in fields or were cut up by canals and later railway lines. Much of the outer built boundary of the cities are porous and composed of some ribbon development and speculatively planned out streets with no buildings yet. So making a decision as to where the 'urban' stops and the 'suburban' or indeed 'rural' begins is a subjective process combined with a more objective decision based on whether outlier points in these liminal areas would skew the overall data.

Figure 4: *The Scene at New Cross* – Ancoats, Manchester 1842

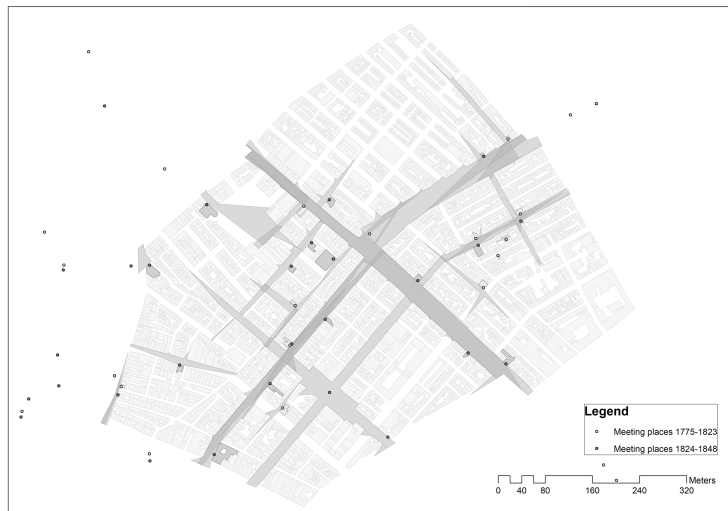
Illustrated London News, 20 August 1842

From the evidence collated from contemporary local newspapers and Home Office sources, a sample resulted in a recorded total of 118 political meetings in this area, in a total of 25 meeting sites (1775-1823: 31 meetings in 15 sites; 1824-1848: 87 meetings in 25 sites. **Note – We only have 30 in the db??**) This is by no means the total number of meetings that ever occurred in this area (and notably only includes public meetings that were openly advertised, so does not include private or secret meetings). The meeting sites were mostly pubs, located in less well integrated streets, and many with entrances in courtyards, not looking out onto the main streets. Meetings of Irish immigrants took place in Manchester on St George's Fields and in a densely populated residential area later known as Irish Town to the north of the town centre, the district that Engels as we have seen identified as groups of streets standing 'here and there like little villages' separated from the rest of the city (Engels, 1845; 1999 edn, 66). The open space, St George's Fields, was used throughout the period by several other types of meeting including Trades Union meetings. In the second time period, the most frequent sites of large public meeting were outdoors, with St George's Fields (25 recorded meetings) and Stevenson's Square (27 recorded public meetings, predominantly by the Chartists between 1838 and 1848).

A micro-morphological analysis of the district of Ancoats reveals interesting patterns of meetings at the neighbourhood and building scale. Meeting places within the Ancoats area have a range of syntactical profiles. Although the area of Ancoats as a whole has residential areas that are relatively segregated within the urban grid of Manchester as a whole **[Vaughan reference – I am not sure]** the streets hosting political meeting sites in Ancoats are highly accessible (mean radius-*n* integration = 1.47, mean radius-2 integration = 3.97) – not only compared to all streets in Manchester but also to all the other meeting streets. The high accessibility of Ancoats as a place of meeting adds a spatial-morphological dimension to understanding how Ancoats persisted as a 'radical locale' within Manchester over the period of this study. Significantly this period encompassed many different forms of political meeting. As a dense, working class, suburban area it had a spatial structure that allowed political meetings to be relatively more accessible than for the city as a whole – and which might

function to overcome the fragmentation of residential areas at the neighbourhood and urban scale. At the local level participating in political meeting activity was not simply a question of ‘going’ but also of ‘seeing’. To what extent did the visibility accessibility of sites of political meeting at the neighbourhood level match or depart from their profile in terms of movement accessibility?

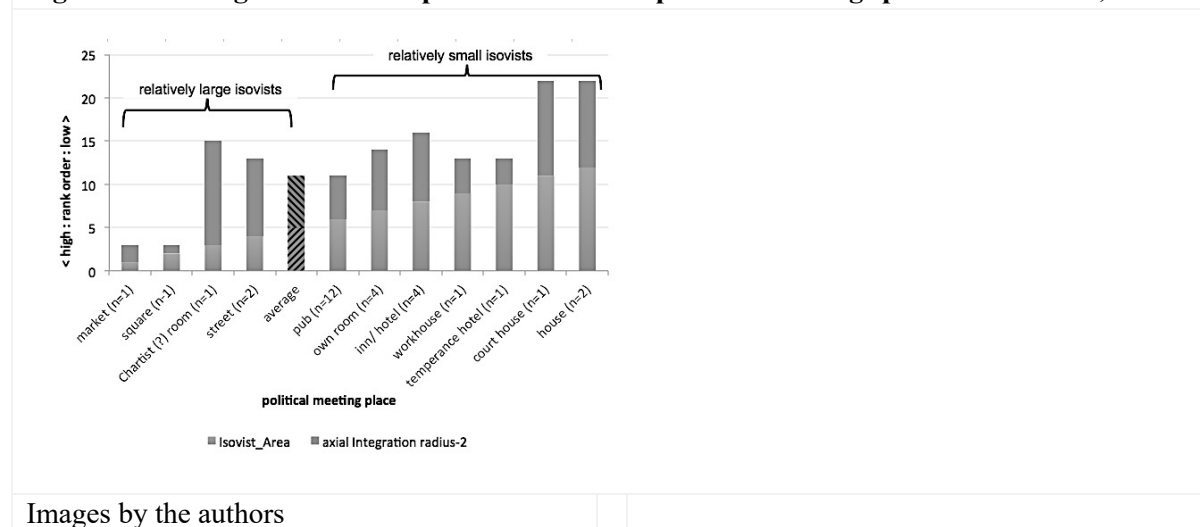
Figure 5: Visual accessibility of Ancoats from entrances to political meetings places



Images by the authors

Figure 5 shows the isovist structure of Ancoats street network as seen from the threshold of all political meeting places across both time-series. Isovists are shaded mid-grey. The isovist representation summarise notional lines of sight from the interface of street and meeting place. Where lines of sight overlap the shading is darker. In order to examine the relationship between the visual field and local movement Figure 5 represents all political meeting sites in Ancoats ranked from left (high) to right (low) in terms of isovist area (size of the visual field). The second bar represents neighbourhood accessibility (radius-2 integration). The hatched bars represent the average of all the meeting places.

Figure 5: Linking visual and haptic dimensions of political meetings places in Ancoats,



Images by the authors

Meetings that took place in urban spaces (market, square, streets) have both the largest visual fields and are the most locally accessible. Conversely pubs, personal rooms and houses have relatively small isovists and occupy less prominent locations (on average) in terms of movement accessibility. The match is far from perfect however. Chartist rooms in Ancoats have a large visual field but over urban space that is relatively less accessible locally while the workhouse and temperance hotels have relatively high accessibility but small visual fields **suggesting location on accessible but narrow local streets.**

Mapping entrances to meeting sites in Ancoats in this way indicates the importance of interior courtyards or less visible doorways to meeting sites as well as open spaces of squares and fields. The newer spaces were ‘spaces of making do’ (Navickas, 2015) that were integrated within the everyday streetscape (residential houses, warehouses, backstreet pubs) and therefore more flexible than more central single-use (and elite-controlled) sites such as town halls or theatres and assembly rooms, or indeed large inns and hotels with entrances on one or more main streets. The overall picture is highly complex but it is the ability of political meeting spaces to transcend domestic space and enable free association with others that makes it political in a bottom up sense (taking advantage of non-specific meeting spaces that the city provided) rather than ideological in a top down sense – as one would associated with the dedicated meeting spaces of a ‘planned city’ – which are only a small part of the picture here. In this historical context even radical political meetings were ‘hiding in plain sight’ with other (cultural) mechanisms more important in controlling access to spaces that were mainly highly accessible – both in terms of movement and visual accessibility.

What does this mean for historians’ understanding of democratic and trades’ movements in this period? Spatialising their meeting sites in relation to each other on the micro scale suggests that political communities formed quickly within a few years of the streets and buildings being laid out. Historical geographers of social movements (notably Featherstone, 2008) have emphasised the significance of what Raymond Williams termed ‘militant particularism’, or the attachment to micro-locality in political and social struggles that led to the formation of national or global movements (Williams, 1989). In short, the local was integral to the functioning of the social movement, however global were its aims and ideologies.

Section 6: Critical reflection

A key question that emerged from our analysis of the meeting sites concerned whether the political culture formed a way of overcoming the environmental intensity caused by speculative development. From a cursory analysis of the visualisations and initial calculations, we are beginning to see patterns in which the choice of location is enacted with reference to spatial and locational factors as well as by political and socio-symbolic considerations. Whereas it is an obvious observation that established and elite groups such as local authorities would use centrally located buildings in well integrated areas, by the time of the Chartists of the 1840s, non-elite political movements were working on different spatial layers, and moving into the foreground of integrated meeting sites while maintaining residence in more segregated areas. The contrast between Manchester and Sheffield is significant in terms of how pre-existing and evolving street plans and building types shaped and were shaped political and social movements; though many of the campaigns and groups shared the same ideologies or goals, their modes of acting spatially, and potentially the sorts of members they attracted or were accessible to, differed and evolved as the cities evolved in size and integration.

The political culture of both industrial cities therefore had a spatial component. The pattern of meetings was not just arbitrary. To an extent, the ability to achieve a degree of political agency was to have access to these meeting places, which should not be seen in isolation from one another. This conclusion shifts the research focus from individual political events to identify a broader spatial culture of political meeting sustained through a wide variety of local places in which to meet. Unlike in smaller towns, the industrial cities enabled a choice of sites that were relatively accessible from each other. The dataset is only an indication of the political sites, recorded in historical evidence, so our conclusions are solely about establishing the distinctive spatial cultures of popular politics. No doubt, from the historic maps it is evident that there are other layers of sites used for other purposes that could also be mapped, such as leisure sites or religious sites, which could have had a different spatial morphology and meaning for the inhabitants who used them.

Yet even from our initial findings, we are challenging the dominant interpretation of the homogeneous ‘industrial city’. A variety of spatial forms and choices are already apparent from the emerging visualisations and comparisons of data. Sheffield remains a classic 18th century ‘civic’ city based on established sites that dated much further back than the new sites of a much wider variety developed in Manchester. Importantly, the non-elite political groups began to choose to build their own buildings by the end of our study period (halls of science, working-men’s halls, Chartist rooms), and the locations of these were usually in well integrated areas (Manchester Hall of Science was on Camp Street off the main road of Deansgate). And particular districts or locales such as Ancoats fostered concentrations of sites that enabled political agency as well as were shaped by it.

The research in this chapter has taken a step towards establishing a much more characterisable culture of meeting and association with reference to the urban form. What we are calling a ‘spatial culture’ of meeting was fuelled by global events and ideas (revolution, democracy, reaction) but at the urban scale, defined and enabled by distinctive street plans and urban development. We see the cities as mutable rather than static or zoned. The geographies of popular politics changed over this period in response to urban expansion but also other factors relating to how accessible or hidden the different movements wanted to be. But importantly, the data shows how the opportunities for such political choice were shaped by the urban form that was different in each city, which in turn fostered different

patterns of spatial practices enacted by the various groups holding political meetings. A key concern, in the application of quantitative mapping methods to historical data, was to develop a better interdisciplinary understanding of what might reasonably be added to the interpretative framework of urban-based protest movements already available to historians of this period. Analysing the structure of a historical street network enables historical research to describe the spatial, as well as the social, relationships of a city; in this case of political meetings. The study also raised productive questions about the role of historical context in the interpretation of spatial data.

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Source data and software:

Depthmap open source software: <https://github.com/varoudis/depthmapX>

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1794 Green's map and 1849 5" to the mile Ordnance Survey maps courtesy of the National Library of Scotland, <https://maps.nls.uk/os/>

Population data and GIS boundary files from

http://www.visionofbritain.org.uk/unit/10076882/cube/TOT_POP

Some of the historical data and links to the text-mining code are available from Navickas, Katrina and the British Library Labs team (2015), www.politicalmeetingsmapper.co.uk