

Our Kind of Town? Critical Cartography and the Struggle for a Just City

In the first of two articles the author considers some of the theoretical and methodological issues raised by critical cartography over the last decade and their bearing on the struggle to build a just city. In this first piece the focus is on different epistemologies of map making. A typology of cartographical genres is outlined, look at how social scientists and visual artists have used the map variously as metaphor or model, and conclude by taking a critical look at Fredric Jameson's theory of cognitive mapping

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En route the reader is encouraged to look at a large number of maps linked to the text which illustrate and provide a running commentary on the argument.

The references to slides are to the slideshow which is available in a separate file on this site.

<http://www.livingmaps.review/journal/index.php/LMR/article/view/14/22>

Pre-amble

In this article I set out to bring a number of disparate topics, belonging to rather different areas of debate into a loose conversation, letting them bounce off each other rather than trying to join them up in a single straight line. I make no apology for this somewhat eccentric procedure because I want to argue that rambling is an extremely useful activity, which may involve trespassing on various academic preserves, but is integral to sustaining the right to roam which is such an important part of the intellectual commons [1]. So if what follows does not conform to the conventional model of the essay plan which neatly pigeon holes ideas as it moves smartly along from point A to point B to point C, as in a strip map, if it tries to return the essay to its original exploratory form of navigation, it is because I also want to make a case for shifting the way we think about cities, and their governance in the same direction and to disconnect mapping technologies from their structural implication in the planification strategies of the State [2].

Part one: Questioning the Cartographic Art

The map maker's work is to make visible
All them things that shouda never exist
In the first place
Like the conquest of pirates, like borders
Like the viral spread of governments
Kei Miller The Cartographer tries to map a way to Zion

It is significant that 'culture' is sometimes described as a *map*. It is the analogy which occurs to an outsider who has to find his way in a foreign landscape and who compensates for his lack of practical mastery, the

prerogative of the native, by the use of a model of all possible routes. The gulf between this potential abstract space, devoid of landmarks or any privileged centre, and the practical space of journeys actually being made can be seen from the difficulty we have in recognising familiar routes on a map or town plan until we are able to bring together the system of axes linked unalterably to our bodies, and carried about with us wherever we go. *Pierre Bourdieu Outline for a theory of practice 1977*

Maps and Territories

Our kind of town tends to be that part of town where we imagine our kind of people to live. That sense of symbolic ownership, of feeling at home, and the locally situated knowledge and sentiment that goes with it all too often support what Hannah Arendt called a nationalism of the neighbourhood [3]. It is redolent of NIMBYism and most recently of a disenchantment and withdrawal from any wider civic engagement, especially from participation in organized politics. At the same time it may create a platform for mobilizing resistance against the impact of market forces and state intervention, for example in relation to processes of gentrification. So perhaps we immediately need to distinguish between ethnic and civic nationalisms of the neighbourhood: the first stakes claims over local amenity and resource on the ground of long established indigeneity and cultural filiation, while the second bases those claims on an assertion of municipal pride, social affiliation and/or legal rights [4]. Two very different political geographies are being implied here.

Frank Sinatra's Chicago is a town where everyone does it their way and lives the American dream, where the Irish and Italian mafia long presided over a city ruled by clientelist precinct machines run by the likes of Mayor Daley. It is also of course the birthplace of monetarism and neoclassical economics which have been exported around the world and today constitute the common sense of contemporary neoliberalism. Boris Johnson may be no Mayor Daley but Sinatra's Chicago clearly has a lot to answer for.

My Chicago is a rather different kind of place. It is where seven German working class immigrants who were also anarchists were put on trial and hanged for a crime they almost certainly did not commit in a wave of popular anti-immigrant feeling, sparking protests by workers organizations around the world. It is where Jane Adams established the Hull House community settlement and pioneered a new form of grass roots politics based on notions of collective self-organization and social justice in the city. It is the birth place of a school of urban ethnography which put the street cultures and everyday lives of the inner city poor and ethnic minorities on the intellectual map [5] and where many years later, David Graeber, now one of the leading theorists of the anti-globalisation movement, came to study and began to make some interesting links between the Marce Mauss's anthropology of gift exchange and ideas of the commons or what he rather mischievously calls actually existing communism [6]. It is also where Walter Cronon carried out his pioneering study in political ecology tracing the growth of the city to an intricate interplay of its natural and cultural resources [7]. Finally it is where, in 1968, hippiedom went political and created a new style of protest as street theatre in its days of rage against the Vietnam War. This Chicago with its libertarian socialist traditions, its radical communitarianism, its locally grounded sense of public sociology and politicized counter culture is one in which some of us could feel more at home and which I think still has quite a few lessons to teach us.

At the very least this example should alert us to the intimate and variable connection between personal and political geographies, even and especially when that link appears to be so fragile and fractured. Elisee Reclus, the great anarchist thinker and pioneer of political ecology insisted that geography is not an immutable thing: 'it is made and remade every day, at every instant, it is modified by the action of man' [8]. This is especially true of children's geographies as Kevin Lynch first showed us in *Image of the City* (MAP 1) and the anarchist town planner, Colin Ward, also demonstrated in his wonderful book *The Child in the City* [9]. One of my favourite maps which illustrates this thesis traces the shrinkage of the exploratory space of childhood over three generations and in passing shows just how effective maps can be in making an argument about processes of change by showing rather than telling (MAP 2).

Under the imprimatur of global capital and its financialisation of urban space the city has become a site of continual transformation in both its physical and social fabric [10]. As anyone who plays Monopoly readily appreciates when landing on the Old Kent Road, now a regeneration hot spot, but marked down as the cheapest of slum sites on the original board. People who live in a metropolitan environment - and that is now most of us - are continually having to modify and update their personal geographies in a way that underlines the proposition made famous by a now largely forgotten Polish American philosopher of science called Alfred Korzybski who coined the phrase 'The Map is not the Territory' [11]. By this he meant that the world which we think we directly know at first hand through our senses is in fact created by our beliefs and language games which come to be embodied in what he called 'the nervous system'. These common sense constructs do not at all correspond to the maps of the material world discovered by the natural sciences. Korzybski thought that this disjuncture between everyday lived experience and the world of scientific reason was as dangerous for human well being as the commonsensical belief that map and territory, words and things, always and already coincide. The word 'sugar' is not sweet and indeed may leave a bitter taste in view of its historical association with the slave trade. Magritte's witty '*Ceci n'est pas une pipe*' graphically illustrates Korzybski's point, especially when it becomes a piece of street art (MAP 3).

But Korzybski was no postmodernist *avant la lettre*, he was a neo-Kantian and what he actually wrote was: 'the map is not the territory it represents, but if correct, it has a similar structure to the territory, which accounts for its usefulness'. So he is no budding Baudrillard who believes there is no there there, that there is no reality outside its representation, and who is likely to have difficulty in dealing with situations in which the real strikes back, perhaps in the form of a lamppost you walk into when you are drunk or immersed in a virtual conversation on your smart phone.

However the utility of the map is not limited to its efficacy as a technical affordance, whether as a mobile centre of calculation or in its capacity to calibrate relevant and reliable scopes and scales. Maps are good to think with precisely because they pose important questions about the nature of scaling and scoping as human activities and their relation to both external and internal realities. And here I think we could do worse than take a leaf out of the book of another neo-Kantian, a contemporary of Korzybski, and today also largely forgotten, Hans Vaihinger [12]. In his book '*The Philosophy of as if*', he wrote:

'Many thought processes appear to be based on consciously false assumptions, which either contradict reality, or are even contradictory in themselves. But they are intentionally thus formed in order to overcome difficulties of thought, and reach the goal of thought by round-about ways. These artificial constructs are called scientific fictions, and distinguished, as conscious creations, by their 'as if' character.'

I think it might be interesting, both theoretically and aesthetically, to explore the possibility of reading maps as scientific fictions of this kind, rather than treating them, as many critical cartographers do, as mystifying ideological constructs or instrumentalities of governance and power. Maps, whether the maps in our heads, or the maps we learn to read and use as navigational devices, serve to create a set of *imaginary correspondences* with the territory they depict, they enable us to act *as if* the structure of the map and the territory were homologous and so enable us to find our way around. It is the 'as ifness' of what I am going to call the 'cartographic pact' and its taken-for-granted character that I am seeking to put in question [13].

For Korzybski, map and territory belong to mutually exclusive realms and he offered a deficit model of their relation: only science can produce adequate knowledge of the material world while common sense entertains a purely phantasmagoric relation to the real as a projection of its own operations. For Cartesian cartography, however, map and territory are two sides of the same mimetic story. Nothing is lacking in either the real or its representation. From this standpoint, the map, like language itself, is always indexical. It mirrors, and ever more accurately records, the terrain it covers. This view underpins the Whig interpretation of cartographic

history as a story of constant technical progress from the primitive non-representational Mappa Mundi of the middle ages to the zoom precision of Google Earth [14].

In one of his short stories J-L Borges exposes the nature of the map as a scientific fiction by pushing the correspondence theory to a *reductio ad absurdum* when the map becomes spatially coextensive with the territory it covers:

‘Let us imagine that a portion of the soil of England has been levelled off perfectly and that on it a cartographer traces a map of England. The job is perfect; there is no detail of the soil of England, no matter how minute, that is not registered on the map; everything has there its correspondence. This map, in such a case, should contain a map of the map, which should contain a map of the map of the map, and so on to infinity’ [15]

Today, Korzybski’s dictum tends to be taken in a rather one sided way, especially by postmodernists for whom the map not only precedes the territory epistemologically but ontologically and indeed can in some instances become its own territory. In *The Desert of the Real* Baudrillard writes:

Today abstraction is no longer that of the map, the double, the mirror, or the concept. Simulation is no longer that of a territory, a referential being or substance. It is the generation by models of a real without origin or reality: A hyper-real. The territory no longer precedes the map, nor does it survive it. It is nevertheless the map that precedes the territory -precession of simulacra- that engenders the territory [16].

In the late 1960’s the dominance of the Cartesian model was challenged by critical cartographers and geographers influenced by the poststructuralist critique of Enlightenment values and scientific rationality. They had little difficulty in deconstructing maps to demonstrate that the history of scientific cartography was inextricably linked to the growth of capitalism, colonialism, and State regulation of civil society [17]. Numerous case studies have showed how the land survey, the plan view or the cadastral map work as practices of inscriptive power to enact the process of dispossession on the ground, from the re-naming of place to the enclosure of space (MAP 4). To paraphrase the complaint of native peoples faced with the advent of the Western map maker which Kei Miller explores in his collection of poems [18]: ‘you had the maps and we had the territory, now we have your maps and you have our territory’. Counter mapping was an important part of the decolonisation process[19]. For example the mapworks of Moshekwa Langa reinstate the textures of place, ritual and social encounter in the everyday lives of black South Africans erased from the public record during the apartheid regime (MAP 5). Today globalisation operates as a form of neo-colonialism and this has given birth to a school of indigenous cartography using state of the art mapping methods to help threatened communities withstand land grabs and validate customary claims over local environmental resource (MAP 6) [20].

Mapping is always an act of translation, and much is inevitably lost in attempting to reduce a three dimensional multisensory landscape to a set of highly selective two dimensional features. But when this process of abstraction is embedded in a wider apparatus of cultural exploitation or political oppression it becomes lethal. This is an issue brilliantly explored by Brien Friel in his aptly named play *Translations*; set in rural Ireland in the mid-19th century. The play features a pragmatic cartographer and a young, idealistic orthographer who are working together on a map for the Ordnance Survey. Much of their work consists in translating local place names from Gaelic into English for purposes of the map: *Poll na gCaorach*, meaning “hole of the sheep” in Irish, becomes Poolkerry in English. While the Irishman, Owen, has no qualms about anglicising the names of places that form part of his heritage, Yolland, the English orthographer who has fallen in love with the country is unhappy with what he perceives as a destruction of the indigenous culture and language. This is their dialogue:

Yolland: I'm not sure. But I'm concerned about the past. It's an eviction of sorts./*Owen*: We're making a six inch map of the country. Is there something sinister in that?/*Yolland*: I'm not sure/*Owen*: And we're taking place names that are riddled with confusion .../*Yolland*: Who's confused? Are the people confused?/*Owen*: And we're standardising these names as accurately and as sensitively as we can/*Yolland*: Something is being eroded [21].

In an attempt to create an alternative cartography liberated from any implication in this kind of thing, the postmodern geographer disembods the map entirely from the territory, so that it becomes its own territory, a self-referential simulacrum, while what used to be the real becomes a mirage of its own representation, the hyper-real. The theory of representation itself is abandoned, in order to establish a new principle of correspondence between the unmappable and the de-territorialised, as equally lacking in any fixed anchorage [22].

This move provoked a riposte from critical cartographers who wanted the map to maintain the significance of the material referents of territory, as a counterpoint or corrective to its function as a social imaginary, whilst at the same time rejecting the principle of mimetic correspondence [23].

The different epistemologies I have been discussing could be illustrated schematically as follows:

Cartesian Cartography (Mimetic adequation: this is there)

Map: territory:: representation : the real

Korzybski Model (structural inadequation or here is never there)

Map: territory: Language /common sense belief/nervous system: material world and its scientific capture

Post Modern Geography (Fictive inadequation or 'there is no there there')

Map: territory: simulacrum: hyper-real

Critical Cartography (fictive concord: or where it was, there we shall be)

Map: territory: the imaginary: the real

Figure 1 Map/Territory Configurations

Clearly there is no single axiomatic version of the map/territory relation. For example in the context of urban planning the map does indeed precede, over determine and largely govern the territory (MAP 7). But in military operations this is rarely the case. Sophisticated aerial mapping technology is no more effective than old fashioned sand tables in dispelling the fog of war (MAP 8/9). Just think of the Charge of the Light Brigade or the 'collateral damage' inflicted by drones. So it seems that here at least territory trumps map. Yet Stanley Spencer's depiction of map reading in the First World War trenches as a kind of cosy camp fire story suggests

otherwise (MAP 10). So too does the renaming by the troops of the front line fortifications after familiar London streets, magically transforming a foreign country of hell into some approximation of home (Map 11). There is no better illustration of Keil Miller's point about counter-mapping: 'We speak to navigate ourselves/Away from dark corners, and we become/Each one of us cartographers' [24].

An equally variegated pattern can be found in other contexts. The action maze maps used as navigational devices in computer games may conform to the postmodern model, but computer generated maps of the world posted from orbiting satellites most certainly do not and indeed represent the most technically advanced version of Cartesian Cartography and its scientific fictions[25] (MAP 12). Finally to bring the argument closer to home, we could not cross the road unless we assumed a good enough match between our cognitive mapping and the environment we are moving through, but as soon as we begin to conjure up the places we see on a map in our imagination or memory, the gap opens up and we may be letting ourselves in for a disappointment when we actually visit or revisit them.

Cartographic Genres

The sheer variety of maps, their different forms, styles, and functions resist being reduced to any simple analytic typology. The terms which professional cartographers use, like the choropleth or thematic map, tend to conflate technical description with social function, as if there could only be one way in which a particular kind of map could be used. Nevertheless there are some distinctions between cartographic genres which can be made, provided that we recognise these are ideal types and many maps are hybrids.

So, for example, we can identify *conceptual* maps, or meta-maps, which may - or may not - take a diagrammatic form (MAP 13/14), and whose aim is to provide a framework for defining a semantic or discursive field. Increasingly conceptual maps are operationalised as part of the toolkit of business planning and used to encourage 'blue sky thinking' (Map 15). The space is primarily theoretical although in some kinds of expository map this may be given a geo-location, for example in explaining the distribution of power, poverty or population. William Bunge's expeditionary geography in Detroit produced maps illustrating the transfer of capital to the suburbs or the traffic accident pattern as white commuters drive through black neighbourhoods on their way home. Here the map is a way of correlating economic and racial patterns in the city in terms of two separate but equally lethal flows (MAP 16/17) [26].

Metaphysical maps are also propositions about the world, albeit ones which usually depict a cosmology that can be configured in topographic terms as in the Christian *paysage moralisee* produced by Victorian evangelists, depicting a pilgrim's progress that follows the narrow, though not always straight, path to salvation (MAP 18). Heaven and Hell are real places for the religious believer and also for their secular counterparts in the contemporary self-improvement industry (MAPS 19/20). Such maps should be distinguished from those which depict explicitly imaginary geographies. Utopias and Dystopias are popular subjects for map making, if only to give a symbolic location to material dreams and nightmares that otherwise might lack credibility or anchorage in the social imagination (MAP 21/22).

Fictional maps come in many different shapes and sizes; some are purely illustrative like Arthur Ransome's maps for his *Swallows and Amazons* series which allow young readers to follow the adventure (MAP 23), while in the case of RL Stevenson's '*Treasure island*' the map itself becomes a key protagonist in the unfolding plot (MAP24). Maps can spell out the geo-politics of 'countries of the mind' and no fantasy novel is complete without its map (MAPS 25/26). Cartography is central to Shuiten and Peeter's graphic novel *The Invisible Frontier*, (MAP 27) while Geoff Dyer has written a short story which is meant to be read like a map (MAP 28) [27]. The literary critic Franco Moretti has analysed the deep maps to be found in the plots of classic Victorian novels as indicative of the social geography of class and race which subliminally shapes the characters actions (MAP 29).

Iconographic maps which give scope to visual artists to create their own territories of meaning may still contain referents to the material world, but are not constrained by them. This shift in the cartographic imaginary from the topographic to the topological is brilliantly accomplished in Julie Mehretu's work (Map 30). She writes:

'The characters in my maps are plotted, journeyed, evolved, and built civilizations. I chart, analyze, and map their experience and development: their cities, their suburbs, their conflicts, and their wars. The paintings occurred in an intangible no-place: a blank terrain, an abstracted map space. By combining many types of architectural plans and drawings I tried to create a metaphoric, tectonic view of historical structures.'

Traditional maps like gazetteers can also furnish props for giving artists or their work a site specific connotation, as in the case of Gilbert and George's tongue-in-cheek portrayal of themselves as iconic figures in East London's cultural landscape (MAP 31), while in Lars Aarenhuis' graphic novel the London A-Z serves to both locate and shape the action (MAP 32).

Genealogical maps, such as family trees or maps which trace the development of a particular phenomenon often draw implicitly on teleological models of history or on shared myths of origin to weave a narrative that connects people and places according to what Wittgenstein called 'family resemblances' between discrete events or environments. This can create a palimpsest effect and such 'over-writing' has become a popular device amongst contemporary artists who are using maps or map like formats to visualise the hidden connections between past and present (MAP 33/34).

Rhetorical maps, maps which are overtly or covertly propagandist and concerned to persuade the reader about a particular state of affairs, often use heraldic devices or iconic landmarks as condensed narratives, like the classic maps of the British Empire (MAP 35). Such maps invite deconstruction and provide a ready reference point for 'detournement' (MAP 36) or satire as in Yaslov Tsvetkos' *Atlas of Prejudice* (MAP 37) [28]. Israel's illegal occupation of Palestinian territory which has been accompanied by much cartographic ingenuity on the part of the authorities has produced some strenuous counter-mapping by artists such as Joshua Neustein exploring the impact of this land grab on the ground (Map 38) [29].

In contrast *narrative* maps proper, in which autobiographical events are indexed to specific locations, and sometimes written directly onto the map use this as a realist device to literally 'authorise' the text and the memoryscape which it unfolds (MAP 39).

The realism of operational maps works in quite a different way. They can be differentiated into two types: navigational and forensic. The role of road maps, military maps, town plans or sea charts is primarily performative, in the sense of enabling the reader to actually traverse the terrain – their 'realism' being an effect, but not a cause of this fact (MAP 40).

Lewis Carroll famously spoofed the scientific fiction of operational maps in *The Hunting of the Snark* in which an unlikely crew who have nothing in common except for their ignorance of nautical matters and the fact that their occupations all begin with B (a Boot maker, a Baker, a Butcher, a Banker etc) set sail for an unknown destination. One of their number, the Bellman is sent off to find a chart (MAP 41):

He had bought a large map representing the sea,
 Without the least vestige of land:
 And the crew were much pleased when they found it to be
 A map they could all understand.

“What’s the good of Mercator’s North Poles and Equators,
 Tropics, Zones, and Meridian Lines?”
 So the Bellman would cry: and the crew would reply
 “They are merely conventional signs!

“Other maps are such shapes, with their islands and capes!
 But we’ve got our brave Captain to thank
 (So the crew would protest) “that he’s bought us the best—
 A perfect and absolute blank!”

Landlubbers of course, do regard the seascape as a blank space, a vast expanse of nothingness on which to write their fear of the unknown, whereas for mariners it is full of significance, densely populated with features, stories and memories. Every sandbank, every channel has its name and with that name a history. Landlubbers looking at a sea chart are quite unable to translate between map and territory. It literally means nothing to them, while sailors who do know how to translate nevertheless have to take into account the specific conditions of wind and tide in order to navigate by it [30]. Even the most operational map, like a maritime sat nav, remains a scientific fiction and cannot substitute itself for the ‘real deal’ – the ability to read and interpret the environment in real time as it happens.

Secondly there are *forensic* maps whose role is to predict, monitor or regulate the phenomena they depict, for example accident or crime ‘hot spot’ maps, weather charts, epidemiological maps. Forensic maps have a long history starting with John Snow’s famous Cholera Map of 1854 (MAP 42) which identified a cluster of polluted water sources in Central London as the source of the outbreak. Today every branch of government routinely issues forensic maps as part of their mission to reassure the public that there is no aspect of civil society in which the State’s writ does not run (MAP 43). The realism of such maps stems as much from their symbolic efficacy as their operational efficiency, in giving the data (viz crime statistics) credibility. Their (disavowed) rhetorical role is to manage dissent and achieve consensual validation of the facticities they present.

These examples underline the fact that the same map may have different readings, some of them greatly at variance from the map maker’s original purpose, and equally that different cartographical genres may be used for the same purpose. Michel Hoellbecq in his novel about the contemporary artworld which draws its inspiration and title from the Korzybski dictum portrays the following cartographic epiphany:

‘Jed bought a ‘Michelin Departments’ road map of the Creuse and Haute-Vienne. It was then, unfolding the map, he had his second great aesthetic revelation. This map was sublime. Never had he contemplated an object as magnificent, as rich in emotion and meaning as this 1:150.000-scale Michelin map. The essence of modernity, of scientific and technological apprehension of the world, was here combined with the essence of animal life. The drawing was complex and beautiful, absolutely clear, using only a small palette of colours. But in each of the hamlets and villages, represented according to their importance, you felt the thrill, the appeal, of human lives, of dozens and hundreds of souls - some destined for damnation, some for eternal life’ [31].

There is a whole subculture of mappies dedicated to the celebration of the Ordinance Survey, many of them ramblers and cyclists for whom the OS did indeed open up a new world; they are likely to turn a deaf ear to

complaints from local historians and environmentalists that these maps ignore whole swathes of rural culture past and present, for example battlefields galore are marked, but you will look in vain for sites of popular protest, like the Kinder Scout Trespass. The meaning of operational maps is always contested, never as fixed and final as it appears, and this is true for all the other genres [32].

Here is a provisional map of the field I have been discussing:

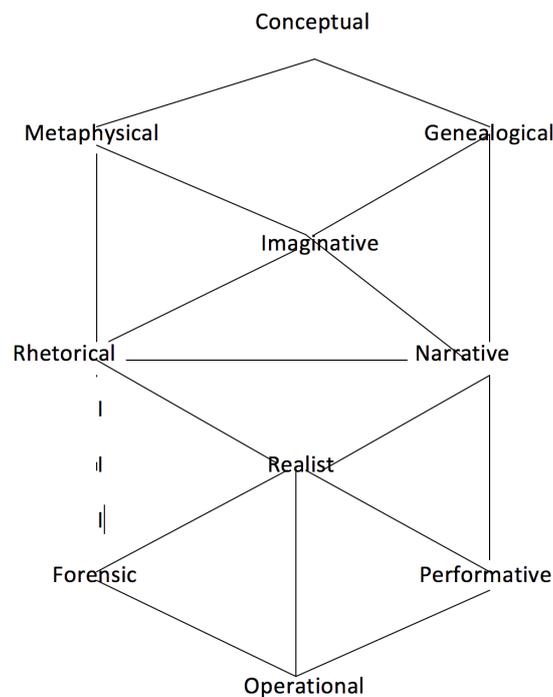


Figure 2. The field of cartographic genres

Models and Metaphors

The artistic avant-garde have long been intrigued by the idea that there is a conceptual and aesthetic no man's land between map and territory waiting to be explored, bridged, tunnelled under, excavated, or built upon by all those, who like them, reject both the dominant codes of common sense and the positivistic protocols of the hard sciences. Urban graffitiists variously influenced by the Surrealists and Situationists have been at the forefront of experiment in this interzone, often using *trompe l'oeil* techniques to explore the 'as ifness' of the cartographic pact and unsettle its fictive concordances (MAP 44).

Visual artists and writers with a humanities background tend to treat maps as metaphors and for obvious reasons focus on the imaginative end of the cartographic spectrum [33]. The maps they create are a way of representing rhetorically, and sometimes counter intuitively, the structures of feeling, phantasy, memory and belief mobilised in our spatial interactions with each other and the world. In contrast scientists, especially those who use maps to visualise big data, concentrate on the realist dimension and tend to treat the map as a *metonym* or *model* in one of three ways:

- A scaled down version or description of the world, or some part of it, which enables people to navigate and make sense of it, which might have predictive or predicative value,
- As a conceptual paradigm for explaining how people arrive at particular spatial understandings of the world,
- As a strategy for animating, visualising and showcasing information of the world which might otherwise remain hidden, or misunderstood.

The human sciences tend to oscillate between metaphorical and metonymic uses of the map, and have increasingly elaborated their own experimental or expository paradigms. Firstly ethologists and evolutionary psychologists posited a territorial imperative which explained to their satisfaction, if no one else's, why nations went to war, and young people ganged up against each other and fought turf wars: it was all down to a primitive instinct for survival originating in hunter gatherer societies and to do with limiting competition for food or mates[34]. Then the neuroscientists came up with a mapping imperative. We are, it seems, hard wired with place cells in the hippocampus which function like a cerebral sat nav and keep track of how our bodies move through space so that we are on auto-pilot most of the time [35]. It was discovered, for example, that London taxi drivers have more place cells than the rest of us and their hippocampus is correspondingly enlarged. Learning the Knowledge has literally made them big headed. Even rats build up a field map of their environment as they negotiate their way through the experimental maze to find lunch. This explains to rat psychologists, if no one else, why we spend most of our time following habitual routes as we move around familiar areas.

Neuroscience may help us understand why sleepwalkers do not fall down stairs, why people with Alzheimer's get lost, or even why people living in urban areas devastated by war or natural catastrophe persist in walking along streets that are no longer there; but it does not, in my view, enable us to appreciate how blind people's accounts of walking from the shops to their homes are more accurate and richly textured than those of sighted people following the same route. Or why some people suffer from agoraphobia or claustrophobia. Or even why we prefer certain routes over others. It seems to me that to understand such phenomena we need to do better than fall back on a 'black box' to account for the interaction between our internal mental mapping processes and our embodied sense of place. 'Cognitive' maps are in any case multi-media in form, and include sounds, smells, and an infinite number of variable scopes and scales. They are time based, and consist of richly imagined layers of information. It is not necessary to posit their evolutionary origin in foraging in hunter gatherer societies (i.e. as a means of locating strategic sites of food and shelter, to recognise that almost everything that is thus registered remains unmappable with the conventional tools of Cartesian cartography).

Cognitive mapping is not just like using a paper map except it is in our heads. As Tim Ingold insists, following Bourdieu's original insight, it involves a process of wayfaring, an embodied performance in which we feel our way towards a goal, drawing on past experience and selectively or progressively integrating new information about the environment as we go [36]. The process of wayfaring, however purposive, also entails elements of phantasy. Take, for example, the commonplace experience of the uncanny or the *déjà vu*, where we imagine that we have already been somewhere that we know we have not, and which Freud links to an unconscious memory of the mother's body [37]. At the very least this suggests that neither a behaviouristic theory of environmental habituation nor a neurologically based cognitivism can satisfactorily explain what is going on as we negotiate the always permeable boundary between the familiar and the strange, the mapped and unmapped. Our mother's body is, after all, the first landscape we explore as infants and it would be surprising if it did not provide, however tacitly, the template for how we navigate the world. If our sense of ontological security and epistemic trust is so bound up with an *imaginary principle* of correspondence between map and territory, it is perhaps because it is rooted in this 'other scene'.

At this point, it is perhaps worth reminding ourselves that reading a paper map is not like reading a book. We do not start at the top left and work our way down to the bottom right and then turn over the page (or vice versa if we are reading an Arabic or Jewish map). Instead we use a compass reading supplemented with direct observation to correlate our position on the map. But fixing our position in terms of longitude and latitude is not the same as knowing where we are. Where we are coming from in reading a paper map is actually quite another space from that offered by a compass or a GPS. When we scan a paper map to get our bearings, we are usually either projecting ourselves into the future – planning the route we want to take – or into the past remembering a journey we have already made. A map always has multiple tenses. When we say

we are 'poring' over a map, we are figuring out the map/territory in one of these time dimensions, getting our bearings by going on a kind of graphic ramble, often in conversation with others (MAP 45).

There are other ways in which a paper map is different from a book. It is not inter-textual, it doesn't refer us to another map and it suffers from hyper-indexicality. There is always an implied there in some kind of relation to a here. Maps are hybrid texts, a rich mix of words, symbols and pictograms, and the balance between these elements may vary significantly between genres; there are maps which are made up almost exclusively of pictures and others in which writing conveys the main message. Our attachment to them as both model and metaphor of our relationship to the world partly stems from this versatility. It remains to be seen whether digital on-line maps inspire the same affection as paper ones. If we upload our personal narratives and photographs to personalize a Google map, do we have the same degree of emotional investment in it as when we draw a memory map, or get out an old battered OS map that has been our trusty companion on many journeys and bears the material marks of its passage through space and time? There is something about paper maps as artefacts that inspires devotion and in this respect alone they are like books. People collect them for the associations they evoke and for their aesthetic properties. Certainly it is hard to imagine people collecting old sat navs, or waxing lyrical about History Pin.

To sum up the argument so far: Map/territory relations are always inter-animated and exist in multiple articulations through three linked practices:

- *navigation*, as we find our way about the world and render the strange familiar
- *inhabitation*, as we dwell and make our home in the world, take risks and venture forth in ways that may make the familiar strange
- *narration*, as we connect the pathways we traverse and the places to which we are attached into a sequential order of utterance: a report of work in progress

The plots of novels, the imaginative geographies spun out by our life stories, the ubiquitous use of the journey as a life historical metaphor, all bear eloquent testimony to the intimate interaction of these three dimensions of social becoming. The practice of Going Walkabout in order to tell stories may have been perfected by native Australians in their dreaming maps (MAP 46), but the rise of performance walks, scenography and site specific work of many kinds shows that even and especially in so-called de-territorialised postmodern times, people from all walks of life make and enjoy very similar 'narrigations'. 'A funny/sad/exciting thing happened on the way to work....' Is this why the old style bus conductors were so popular, enlivening our journeys with a stream of anecdotes?

Mapping Modernity and the Commons after Fredric Jameson

One of the problems with creating analytic typologies is that they are ahistorical and predicated on paradigms abstracted from actual social contexts and conjunctures. Fredric Jameson in his essay on cognitive mapping introduces a properly historical dimension into the debate [38]. He argues that in the spatial economy, created by classic market capitalism, the immediate and locally limited experience of individuals was still able to encompass the real conditions that governed that experience. Map and territory coincided in personal geographies; forms of spatial inequality were relatively transparent and could be more or less adequately read and represented in the maps of the world that people carried around in their heads. In the next historic moment, which he characterises as the moment of late modernity, these two levels drift ever further apart and begin to constitute themselves into the now familiar opposition between the phenomenological truth of lived experience and the wider but hidden truth of structural causality. Only the wearer may know where the shoe pinches but the pain in its very immediacy and intensity precludes any wider understanding of why the shoe was made that way and why a one-size-fits-all policy has been adopted. As Jameson puts it: 'the truth of local experience no longer coincides with the place in which it takes place. The truth of limited daily experience of London lies, rather, in India or Jamaica or Hong Kong'. Another way of putting this is to say that globalisation

makes the local eccentric to itself, and yet finds its only locus there. The old centre/periphery relations of the classical Imperialist phase of geo-politics give way to a more complex polycentric system of disseminated power, whose forms of spatiality are much more difficult to decode and register in personal geography and mental maps. For example in London the easy-to-read centre/periphery relations of West End and East End have given way to a more complex system of projective identifications and trading places [49]. Equally the growth of largely invisible networked infrastructures which regulate the global space of information and commodity flows operates beyond the control of nation states and largely beyond the perception or comprehension of their citizens [40].

Jameson argues that locally situated knowledge simply cannot grasp its global co-ordinates and that cognitive mapping has become an impossible project of totalisation. Google Earth offers us the optical illusion of such a world view, but the real processes of globalisation which make it possible remain hidden within its affordance [41]. Understandably this has become an increasing area of work for counter-mappers concerned to render visible what is rendered invisible by satellite surveillance technology, for example by reversing the optic standpoint (MAP 47).

What Jameson's essay points towards but does not fully explore is the implications of its argument for social cartography itself. Today there is a stark opposition between the overview/top down/outside in account of social phenomena – the totalizing standpoint associated with sociological and scientific cartography and the underview/bottom up/inside out accounts centred on socio-graphics and particularistic structures of knowledge and feeling.

Before we rush to take sides, let us consider the possibility that the problem may really be just that split representation and the way scope and scale is correlated within a fixed hierarchy of spatial significance [42]. In fact many geographers have abandoned mono-scalar models in which the local, the regional, the national and the global are simply nested inside one another, like so many Chinese boxes or Russian dolls, in the fashion of those maps children like to draw in which they position themselves at the heart of a concentric universe as it expands outwards to the great wide unknown. In its place geographers have developed a model of multiscalar spatialities, whether those of the State or the market, capital or labour. Yet in scoping these disparate territorialities, as so many criss-crossing lines drawn on a map of shifting sands, the familiar dichotomies of macro and micro analysis have re-appeared in order to anchor the analysis back on firm ground. Territories are still largely considered in terms of fixed boundaries, defined by strategies of enclosure; maps, conceptual or empirical, as devices to fix them into place. More especially the traditional opposition between 'top down' and 'bottom up' strategies of urban transformation has been conserved. Yet as cultural geographers have shown, this particular anatomy of distinction, between the elevated 'head', centre of rational calculation associated with planning/mapping and the 'bottom' associated the baser instincts of the lower orders and their unruly territorial claims on amenity and resource has been central to the moral economy of the city since Victorian times; it has done much to promote a natural symbolism of the metropolis as an organic body politic - with or without organs, and now re-modelled in machinic code. Even when the signs and values are reversed, when the underlife of the city stakes a counter hegemonic claim against the allocative overview, as in some forms of radical pedestrianism, the fundamental binaries are conserved.

There have been attempts to transcend this dualism by conjuring up some hybridized third space consisting of a conciliatory dialectic or mash up between the two perspectives [43]. It is in this notional third space and its melting pot of ideas that the current culture war between mappies and territorialists is being waged. As we have seen it is an argument between on one side those who argue that the map defines the territory, operating according to its own internal principles of indexicality and on the other, those who insist that the primary process of navigation is accomplished through our embodied relation to the landscape as we move through it, so that the territory generates its own internal organic process of mapping. Mappies accuse territorialists of validating ego or ethnocentric maps, while territorialists accuse mappies of intellectual hubris and complicity

in the imperialism of Western reason. This is a debate that is clearly set to run and run.

It may be, though, that each position is referring to a different ideal type of translation between map and territory which it takes as axiomatic but which may be found empirically in a variety of weak and strong combinations. At any rate, what the debate highlights is a central issue as much for cartographers and planners as for communities on the front lines of urban transformation: the legibility of space or the lack of it. As Denis Cosgrove has argued, the Enlightenment tradition in city planning sees geometry as a prime medium of urban legibility [44]. The city was to be read as a text for its rulers, citizens and visitors. Printed urban maps expressed and reinforced the city's legibility, offering panoramic prospects constructed from a panoptic standpoint and/or a rationalized grid in the form of a street plan, with functionally zoned districts: the central business district, the industrial or commercial area, residential districts, the inner city and suburbs and so on. At the same time cartographic theory and early nautical technologies (quadrants, sextants, log books, marine clocks, rulers) combined with regimes of navigation and surveyance to create standardised protocols so that the map became a stable and transportable source of knowledge about the world, a platform for the planification of civil society by and for a bureaucratic state.

This describes the situation in the early modern period, the period of rapid urbanization and colonialism. But today global and post-colonial cities have a spatial logic of networks and flows that does not readily fit within these traditional grids of representation. Planners now talk of linear and polycentric cities, no one quite knows where London begins and ends, and certainly its administrative boundaries no longer correspond to its gravitation pull. For example, the Thames Gateway Plan which stretched from Inner London to Southend created a complex artificial geography whose development areas were both discontinuous and cut across all kinds of boundaries, requiring a structure of governance of quite Byzantine complexity [45]. Most of the people who lived in the so called 'zones of change' were not even aware of the fact. The need to impose some form of symbolic order and meaning on an increasingly polyvalent and conventionally un-mappable space has been one of the main drivers of current attempts to apply digital mapping technology to crowd sourced data and to involve communities in participatory mapping projects.

One of the key shifts from early to late capitalism is from a scopic regime in which the distinction between public and private space is clearly demarcated and policed to one in which the two are systematically conflated, so that the urban fabric becomes a multi-layered assemblage of signs, technologies and narratives whose decoding cannot be accomplished by simply reading a map [46]. The city is perceived, and indeed celebrated, as one big mash up, a digitalized version of the melting pot thesis. As the public realm becomes increasingly privatised and the most intimate aspects of personal experience are broadcast and become public knowledge via social media, the traditional proxemics of modernity are also overturned. In the age of space/time compression people may interact more closely and intensely with those who live on the other side of the city or the world, than with their next door neighbours. I well remember a shopkeeper on the Isle of Dogs who told me he could skype his family in Bangladesh every day of the week but was frightened to go out of his front door in case he got attacked by a local racist gang.

On the more positive side this disjunction in scope and scale between map and territory has offered many artists a point of entry into a field hitherto dominated by Cartesian cartography. Networks and flows are full of aesthetic possibilities for artists like Philip Guston and Derek Harris who are interested in exploring Paul Klee's insight that a line is a point moving forward, and who see in the shift from topography to topology a means of freeing maps from their mimetic fixity (MAP 48/49). Collections of artist's maps have become increasingly popular and now appear packaged in the format of coffee table books [47]. One of the most interesting recent examples of this new approach is the map of the New East End made by Adam Dant (MAP50). He asked a number of 'scouts' to walk into east London from its outskirts stopping and asking passers-by at random to point them towards where they thought the centre of town must be. His map traces these routes which converge on a rubbish bin in Westfields Shopping Centre. The map itself in its circular design evokes

one of the earliest pre-scientific cartographic forms, as well as indicating a form of spatiality that is neither privatised nor public but belongs to what we might call a *cartographic commons*. But is there more to this than finding new forms of representation?

Hard and Negri who are the great theorists of the contemporary commons rather dodge the issue [48]. Their analysis focuses on de-territorialised forms of commons and emphasise its translocalism. But the contemporary commons are also a means of re-territorialising, reclaiming and re-localising collective spaces that have been expropriated, privatised or regulated in ways that put them out of bounds. Let's take one example of this type of commons and consider how it might be mapped: gay cruising grounds. These are usually located in areas of urban dereliction, edgelands, wastelands, cemeteries, abandoned buildings and also in parklands which are both accessible, offer cover and are difficult to police. Wimbledon Common and Hampstead Heath are such off limits sites in London. Once established their location may be publicised by word of mouth and nowadays through internet sites. Cruising grounds can be regarded as the commons of the gay community and they may also be monitored by the community, for example to encourage safe sex practices. An area establishes a gay reputation, it tends to be avoided by other people who fear lest they may be identified as gay if seen in the vicinity. As the volume of gay activity increases the site may become subject to public complaint and police intervention, and may even be closed down for a time. The political ecology of cruising grounds thus seem to follow the classic Chicago model of invasion-succession-dominance, but their natural history is cyclical not linear and if one is closed down another quickly pops up to replace it somewhere else. One implication of this for mapping practices is that the territory is constantly shifting shape and its boundaries may be highly permeable. The cruising ground map (MAP 51) may be prescriptive, it sends people to particular sites that correspond to their sexual preferences, but these micro territories are subject to change at short notice and so to remain functional the map needs to be constantly updated. And this of course is precisely the advantage on-line digital maps have over the traditional paper format.

Let us note in passing that one person's commons may become someone else's no go area. Let us also note that the association of marginalized groups with unregulated spaces is literally double edged. Their very edginess gives them an aura of radical chic and they find themselves recruited or recuperated for a neo-liberal urbanism anxious to demonstrate that it encourages entrepreneurialism linked to life style innovation, especially amongst young people, for example in the pop up economy, even as it closes down the opportunity for 'generation rent' to achieve any kind of domestic autonomy or workplace security [49].

There are many examples of pop up commons. There are territories based on trajectories of movement rather than fixed locales, such as skateboarders and taggers; the tent cities of rock festivals have a similarly complicated and fluctuating existence. Then there is geo-caching – public treasure hunting for the digital age; bookcrossing, in which books are liberated from their captivity on the shelves of private libraries and distributed out into the 'urban wild' to be shared and found in unlikely places by getting their geo-location on line. The intellectual commons as bibliospace. Meanwhile for computer nerds who don't read there is Ingress and other enhanced reality games, which get young people out of their bedrooms and onto the streets, transforming real landmarks and public buildings into so many virtual portals in a battle to save the city from aliens some of whom might just be the boy or girl next door. And let's not forget that gamers are inveterate map readers as they steer their way through their labyrinthine on-line adventures.

In all these different ways the city is being reclaimed, reinvented as an adventure playground for the adult and the relatively affluent even as it becomes increasingly out of bounds to children and the urban precariat. In part this new activity must be understood as an attempt to re-enchant the public realm in counter movement to the pervasive withdrawal from civic engagement. As the old political culture goes into what seems like irreversible decline and more and more people become politically homeless so a new space emerges which offers a surrogate agora in which issues of self-governance manage to bypass or foreclose wider structural questions of power and privilege. We still have to ask whether this is a way of subverting repressive

systems of social atomisation and regulation - is it a strategy of collective empowerment, or does it actively depoliticize the issues by enhancing purely individualistic solutions and making them seem sexy or therapeutic?

This is a question I will be addressing in the second part of this essay, which will explore its practical implications for developing critical cartography as a platform for radical pedagogy and democratic politics.

Further Reading:

- Hugh Brody *Maps and Dreams: Indians and the British Columbia Frontier*. Douglas and McIntyre 1981
 William Bunge Fitzgerald: *the geography of a revolution*. Schentman 1971
 Keller Easterling *Extra Statecraft: the power of infrastructural space*. Verso 2015
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 Kei Miller *The Cartographer tries to map a way to Zion*. Carcanet 2015
 James C Scott *Seeing like a State*. Yale University Press 1998



LIST OF MAPS AND ILLUSTRATIONS

1. Kevin Lynch Observational Map
2. Children's Changing Geography
3. Magritte Graffitto 'Ceci N'est Pas une Pipe'
4. Cadastral Map
5. Moshekwa Langa
6. Indigenous Mapwork
7. Back a Plan :Gotebord
8. Sigmar Polke: Hunting Al Qaeda
9. Military sand map
10. Stanley Spencer :The Map Reader
11. At home on the western front
12. Laura Kurgan: Satellite Vision
13. The Digital Commons
14. The Global Knowledge Economy
15. Business Plan
16. William Bunge: Money Transfers
17. William Bunge: Traffic Accidents
18. Pilgrim's Progress
19. The Climb to Success
20. Psycho-geography
21. The People's Republic of Cambridge
22. Chicago – my kind of town
23. Arthur Ransome 'Swallows and Amazons'
24. Treasure Island
25. The Fantasy World Map
26. Ursula Le Guin Earthsea
27. Schuiten and Peeters Invisible Frontier
28. Geoff Dyer The Boy out of Cheltenham
29. Franco Moretti: Plotting the novel
30. Julie Mehretu
31. Gilbert and George
32. Lars Aarenhuis A-Z
33. Liverpool People's Map Glass Installation
34. Claire Redelman Pennine Street
35. British Imperial Map
36. John Bull's tentacles
37. Yaskov Tsvetkos Europe according to the USA
38. Joshua Neuestein Contesting the Territory
39. Every map tells a story
40. Sea Chart
41. Lewis Carroll Hunting of the Snark
42. John Smith Cholera map
43. Metropolitan Police: London Street gangs
44. Street Art as Trompe Loeil
45. The Great Outdoors
46. Native Australian Dreaming
47. Aliens in Safari
48. Philip Guston

49. Derek Harris
50. Adam Dant *The New East End*
51. Gay Cruising ground

END NOTES

- [1] See Paul Feyerabend *Against Method* Verso 1993 and John Law *After method: mess in social science* Routledge 2004. On the importance of interdisciplinarity see Michel Serres *The troubadour of knowledge* University of Michigan 1997 and Marilyn Strathern *Commons and Borderlands* Sean Kingston 2004
- [2] James C Scott *Seeing like a State* Yale University Press 1998; also Jordan Branch *The Cartographic State: Maps territory and the origins of sovereignty* Cambridge University Press
- [3] Hannah Arendt *The Origins of Totalitarianism* Deutsch 1986
- [4] On the distinction between ethnic and civic nationalism see Benedict Anderson *Imagined Communities* London Verso 1991; also Anthony Lecours 'Ethnic and Civic Nationalism: towards a new dimension' *Space and Policy* Vol 4 Part 2 2000
- [5] See Carla Capetti *Writing Chicago: modernism, ethnography and the novel* Columbia University press 1993
- [6] David Graeber *Towards an Anthropology of value* Routledge 2002
- [7] Walter Cronon *Nature's metropolis: Chicago and the Great West* (1991)
- [8] Elisee Reclus *Anarchy, Geography, Modernity* PM Press 2013 especially the chapters on the history of cities and on culture and property.
- [9] Kevin Lynch *The Image of the City* (1956); Colin Ward *The Child in the City*. London: Bedford Square 1990
- [10] See Saskia Sassen *The Global City: New York, London, Tokyo* Pine Forge 2012 and *Deciphering the Global: its scales, spaces and subjects* Routledge 2007
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- [18] Kei Miller *The Cartographer tries to map a way to Zion* Carcanet 2015. This collection won the Forward Prize.
- [19] See for example Paul Carter *The Road to Botany Bay* University of Minnesota Press 2010; *Map INIVA*

2000. The Institute of International Visual Art (INIVA) has pioneered the development of an arts based critical cartography in relation to the politics of race and post-colonial studies, with a series of exhibitions and educational projects. For further information see www.iniva.org
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- [23] The most succinct programmatic statement of critical cartography is Dennis Wood *Rethinking the Power of Maps* The Guildford Press 2010
- [24] Another linguistic example of popular counter-mapping from this period is 'Blighty', a term coined by homesick British soldiers to refer nostalgically to England and still used by some expatriate communities. According to the Oxford English Dictionary the word derives from "bilayati", a regional variant of the Urdu word "vilayati", meaning "British", "English" or "European". So here a 'foreign' word used by colonial natives to refer to the English as foreigners is reworked, its significance reversed, so that it becomes a synonym for English attachment to a homeland in which Urdu, and its speech community would undoubtedly be regarded as wholly 'other'. Not all counter-mappings are counter-hegemonic, especially in the area of race.
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- [30] See Bruno Latour et al *Entering Risky territory: space in the age of digital navigation* *Environment and Planning D* Vol 28 2010
- [31] Michel Houellbecq *The Map is not the territory* Cape 2012
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- [35] See Paul Dudchenko *Why People Get Lost: the psychology and neuroscience of spatial cognition* Oxford University Press 2010
- [36] Tim Ingold *Perception of the Environment: essays on livelihood, dwelling and skill*. London: Routledge 2000. See also Pierre Bourdieu *Outline for a theory of practice* Cambridge University Press 1997
- [37] Sigmund Freud *The Uncanny* Penguin 2003; also Anthony Vidler *The Architectural Uncanny* MIT Press 1996
- [38] See Fredric Jameson 'Cognitive Mapping' in C Nelson et al *Marxism and the Interpretation of Culture* University of Illinois Press 1988; for a rejoinder see David Harvey 'Cartographical identities: geographical knowledges under globalization' in *Spaces of Capital: towards a critical geography* Edinburgh University Press 2001. A classic statement of the theory is Roger. M. Downs and David Stea (1977) *Maps in Minds:*

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- [39] Geoff Dench et al *The New East End: kinship, race and conflict* Profile 2006; Tim Butler and Chris Hamnett *The New East End* Routledge 2013; Phil Cohen *On the Wrong Side of the Track: East London and the Post Olympics* Lawrence and Wishart 2013.
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- [41] Laura Kurgan op cit
- [42] This point is made forcibly in Bruno Latour *Re-assembling the social: an introduction to actor-network theory*. Oxford University Press 2005.
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