

Urban ecologies of the contemporary city

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Abstract

The models we use for understanding the city have changed since the early 20th century when the social-spatial researchers of the Chicago School elaborated their idea of 'urban ecologies'. Technological, social and urban changes mean we can no longer understand processes of economy, community, formation and transformation through social and economic networks and ecologies as they were elaborated, and if we wish to understand processes of social formation and transformation in cities today it will be through differently spatialised ecologies. There is an increasing attention today to a 'sociology beyond societies' which understands urban and social processes of formation and transformation as a consequence of multi-scalar mobilities in the horizontal geographical plane. An idea of spatial ecologies of urban and social formation and transformation will be elaborated that begins with spatialities of mobility consisting of horizontal network layers and shows how these may produce, in the relation *between* mobility and communications layers, 'live' centralities of place and emplacement. The idea offers the possibility of a solution to the problem of the commensurability of spaces of connection and flows and spaces of place and emplacement – by giving ontological priority to spaces of connectivity and taking spaces of place to be their product. The solution, while being counter-intuitive, nevertheless opens the possibility of an analytic of place which promises to be highly productive for urban designers and others interested in the making of socially productive and sustaining place.

1 A *produced* space-time of the city

In spite of the volume of words spoken about space and time as a *product* of the processes of the city, it seems still that there is a lack of understanding of the real implications of this notion. The idea of the production of space or the production of space-time has been used as a slogan or a rallying call against positivistic models of the city and its functioning. But the idea has been too often then, and without further thought, put to work to support another ideological position; that of the primacy of the human subject and his or her direct (though sometimes unwitting) involvement in a production of a ostensibly *social* space of the city. The perhaps too quick assumption is that the alternative to a positivist

functional spatial model will necessarily affirm the humanistic (and rather *socially* positivist and functionalist) predilections of the objectors. The human subject is reified in place of an urban functional process and we are not necessarily closer to understanding a space or space-time produced in or by the city and its processes.

Urban space and time is misunderstood, we argue, precisely because we have not considered *the urban* to be a producer of its own space and time. This is not to deny the fact of the city's social inhabitation by humans, nor to deny the importance of the perspective of the human subject in defining urban 'matters of concern'.¹ It is simply to say that the human perspective is not the only one – and that it is not the only one implicated in integrating the world into a form for us. There are large implications for the matter of our being and of our 'being urban' and 'being social' in this last statement – and this is meant to be a practical contribution on urban space and form rather than one on ontology. We take seriously both Latour's re-enrolling of objects (including the object of the city) into our collective of beings with social agency,² and De Landa's insistence that active bodies exist at all scales and consist of all substances.³

The spaces of some of the economic models of our cities come closest to the urban space proposed here. Nevertheless the space we propose has, we propose, socially integrative and formational properties, and is implicated in setting up fields of encounter which powerfully form our understanding of and expectations of what it means to be a social being in urban space. This space is proposed as well as being the producer in its turn of all the variety and specificity of urban place – which becomes formed and variably intelligible by virtue of the fact that it is indexed to this space.

These claims cannot all be elaborated and defended in one paper.⁴ We will attempt here to elaborate some of character of a hybrid urban-social as well as some of the practical effects of this space and its relevance for urban form and design.

2 A space between economies and ecologies

It has been sociology that has been the primary source of ideas about making space in planning and urban design. Planning, or ideas about the spaces and processes of urbanisation, have seldom if ever been ahead of sociology in thinking about what a social urban space might be, and have taken their lead from sociology. The processes of urbanisation themselves have until recently – when these processes have taken on a powerful form – not even been seen as something which may inform planning ideas of urban space; rather they have tended to be seen as something to be resisted as being implicated in a de-humanising metropolitan dynamic.

Space is a matter that is usually dealt with implicitly rather than explicitly in the sociological literature. And when we try to tease out the spaces of the societies of the European sociologists – with the possible exception of Simmel, whose assessment of metropolitan culture owes nothing to medievalism – most if not all of them were strongly influenced by an image of the pre-industrial world of small cities embedded in a matrix of village and region. The critiques of the modern metropolis of Durkheim, Weber and Tönnies, set the metropolis against a happier, supposedly more truly social past in small towns. Mass urbanisation for them was neither progressive nor liberative, but signalled a degeneration of social existence. Already in the work of these early thinkers we see the perennial theme of the loss of community and an urban society and culture in decay.

¹ See: Bruno Latour (2004), 'Why has critique run out of steam?: From matters of fact to matters of concern', in: *Critical Enquiry* 30,2 (Winter 2004) pp. 225-248

² See: Bruno Latour (1993), *We Have Never Been Modern*, trans. Catherine Porter, Harvard University Press, Cambridge Mass.

³ See: Manuel De Landa (2002), *Intensive Science and Virtual Philosophy*, Continuum, London.

⁴ Two books are proposed; the first dealing with urban form and design, the second with movement, form, technology and society.

Urbanisation, and this becomes also a theme of the neo-Marxists, is seen as progressively bankrupt in human terms, and cities are seen as instruments of capitalist and imperialist domination. The process is of the domination of the periphery by the centre. Wealth and the productivity of labour is expropriated from the urban and the global periphery to the centres of the power of the bourgeoisies. A shift away from Marxist processes to an empiricist methodology (of Tönnies for example) was linked to a narrowing of the overview of society to that which experience could directly encompass. With Simmel discussion narrows to the immediate contexts of social association: the individual and her orientation to her own and others social action, become the touchstone of sociological explanation instead of larger-scaled processes such as the 'relations of production'. The notion of experience could encompass a lot, as with Weber, but this limitation of the sociological discussion to the immediate context of experience was to culminate in the localism of the Chicago School's "science of collective behaviour" operating always under the assumptions of the dissolution of traditional mechanisms of social solidarity. In the 'ecology' of the Chicago School, competition and conflict over territories in the urban environment were seen as being governed by similar laws to those operative in plant and animal communities. Wirth's definition of the city as a large, dense and permanent settlement of socially heterogeneous individuals is an ecological conception.⁵ Wirth's community (as is Weber's) is territorially defined; membership of the community of the city and the neighbourhood is on the simple basis of residence in city and neighbourhood, and the dynamics of a 'culture of urbanism' are given in the agonistic and competitive interrelationships of members and communities.

Spatially, whereas Tönnies would ascribe uneven development to antagonism across the borders that separated the town and the country, Marxists and neo-Marxists would relate it to the webs of trade and exchange between national and regional economies, in which urban populations are the intermediaries, and Simmel and eventually the Chicago School substituted a social ecology for the spaces, however conceived, of the urban economy. The spatial differences are clear enough without being particularly explicit as diagrams or models. What is also not particularly openly stated is the fact that all these conceptual spaces are represent radical simplifications and abstractions of social and economic spatial relations. The bounded region and the network represent different models of spatial working – neither of them complete or we would argue adequate in themselves as models of complex spatial processes which themselves *produce* both regions and networks – often both concurrently and at different simultaneous scale levels. What we need to note also is the 'ostensible' nature of social or economic processes in these conceptions; understood as taking place *in* 'the social' or *in* 'the economic' more than in space or as processes of the *production* of space. Space is simply there, as receiving surface for the representation or reflection in another realm of ostensible social or economic processes.

What is particularly interesting in all this is the way an urban-rural or centre-periphery dichotomy tends to emerge strongly from a substitution of the critique of metropolis for the analysis of capitalism. This 'objectification' of the city or the city centre is to colour all further discussion of urbanisation and the form of the city even through, we would argue, to the critique of the 'centre-city' by the 'LA School' in the 1980s and 1990s. Where the Chicago School codified its urban space as a pattern of concentric zones of class and economic function radiating out from the central city, the LA School described a sprawling regional development, "loosely anchored by speculative office-parks, big-box retail and gated residential enclaves"⁶ and shaped by automobility. In spite of the at first sight new de-centred spatial model, discussion of processes in the city continue to have a Chicago School tone. Los Angeles is described by Soja and Scott as having "an ever-widening orbit of attraction"⁷ The city has

⁵ Louis Wirth (1999), 'Urbanism as a way of life', in: R.T. LeGates & F. Stout (eds.), *The City Reader*, Routledge, London.

⁶ Greg Hise (1997), *Magnetic Los Angeles: Planning the Twentieth-Century Metropolis*, Johns Hopkins UP, Baltimore.

⁷ Ed Soja and Allen Scott (1996), 'Introduction to Los Angeles, City and Region', in: Allen Scott and Ed Soja (eds.), *The City: Los Angeles and Urban Theory at the End of the Twentieth Century*, University of California Press, Berkeley, p. 4.

taken on another scale more than another form *per se*; again, according to Soja and Scott, "The metropolis as a whole moved from a period of mass suburbanisation to one of, for want of a better term, mass regional urbanisation."⁸ Even the ecologies of conflict and competition in LA have a surprisingly Chicago ring to them, if a little more violent and extreme: "a landscape filled with violent edges, colliding turfs, unstable boundaries, peculiarly juxtaposed lifespaces, and enclaves of outrageous wealth and despair."⁹

3 Ostensible versus performative spaces

If we consider the space of the city to be produced, this means first that it is *performed*. In contrast to an 'ostensible' social given by classical social theory, we have to provide a 'performative' definition.¹⁰ The classical definition had five characteristics, according to Strum & Latour¹¹: it assumed the *possibility* in principle of detecting the "typical properties of what holds a society together" and held that these principals are *social*; it held that social actors are part of a 'society', which is given and already present and which constrains their actions.

A 'performative' definition however would allow that the social bond can have *extra-social*, that is, heterogeneous properties; and that actors and agents *perform* society and in so doing define what 'the social' is. A 'spatial performative' social theory would "follow the actors".¹² Seen in this way 'the social' is constructed, formed and transformed through the multiple efforts to define it. That is also to say that 'the social', understood as a multiplicity of networks, has an important discursive component. As Law says, "ordering is not possible without representation".¹³ But we also have to be able to acknowledge the actions and agency of objects. The 'actor-network theory' draws on the work by Foucault in concentrating on material/technological micro-technologies as well as the social and discursive aspects of assemblages in social-urban space.

Foucault calls the panopticon, for instance, a 'technology', and a 'machine'.¹⁴ Thus, as Law points out, "Foucault's discourse analysis is concerned not exclusively with language, but with a wide range of different materials. Indeed, it is *precisely* about how those materials (people, architecture, etc.) perform themselves to generate a series of effects".¹⁵ 'The social' is hybrid; it is a gathering into form, a morphogenesis,¹⁶ that consists of discursive and non-discursive, human and non-human elements, which form coherent assemblages. Society is held together through this gathering¹⁷ which happens in an urban 'space of gathering' or 'situation'. This is a matter of 'concrete universals'; categorical universals, assemblies of similars, is not the issue here; what we are talking about are gatherings of

⁸ Soja and Scott (1996), p.6

⁹ Ed Soja (1996), 'Los Angeles, 1965-1992: From Crisis-Generated Restructuring to Restructuring-Generated Crisis', in: Allen Scott and Ed Soja (eds.), *The City: Los Angeles and Urban Theory at the End of the Twentieth Century*, University of California Press, Berkeley.

¹⁰ The main line of argument in this section follows Niels Albertsen and Bülent Diken, 'What is the Social?' (draft), published by the Department of Sociology, Lancaster University at: <http://www.comp.lancs.ac.uk/sociology/soc033bd.html>

¹¹ Strum S.S. & Bruno Latour (1987), "Redefining the Social Link: From Baboons to Humans", in: *Social Science Information* 26(4), pp. 783-802.

¹² Bruno Latour (1996), 'On Interobjectivity', in: *Mind, Culture & Activity*, 3 (4), pp. 228-45.

¹³ See: John Law (1994), *Organizing Modernity*, Blackwell, Oxford, p. 25.

¹⁴ See: Michel Foucault (1991), *Discipline and Punish*, Penguin, London, p. 195-230.

¹⁵ See: Law (1994), p. 25.

¹⁶ See: Stephen Read (2005), 'Questions of form', Paper presented at the 5th Space Syntax Symposium, Delft University of Technology.

¹⁷ See: Latour (1996), p. 238.

heterogeneous elements into situation or place.¹⁸ We do not attempt to fill in the whole surface either with order or with contingency. There is nothing but networks and we do not attempt to fill in what is in between local pockets of order.

A network space of society means therefore a different topology of 'the social': "modern societies cannot be described without recognizing them as having a fibrous, capillary character that is never captured by the notions of layers, territories, spheres, structures, or systems".¹⁹ This new topology recasts issues of far versus close, small scale versus large scale, and inside versus outside. These questions need to be considered more in terms of 'containment' than in terms of relations at a distance. The 'far' or the 'large scaled' comes to be gathered to and *contained* in the 'near' or the 'small scaled' – gathered by way of pathways that are constructed and maintained. Far to close relationships and scale in both social and physical space must be thought of not in terms of metric distance and micro-macro distinctions but in terms of associations supported by networks: "A network is never *bigger* than another one, it is simply *longer* and *more intensely* connected".²⁰ And: "A network is all boundary without inside and outside. The only question one may ask is whether or not a connection is established between two elements."

The crucial point which 'actor-network theory' makes is that, without the inclusion of objects, which gives back to 'the social' its "missing mass",²¹ social theory gets polarized between micro and macro, agency and structure, constructivism and objectivism. The separation of 'the social' and the material produces a separation of action and structure; on the one hand we get human agency and on the other a thing-like, social structure.²² The theory of the actor-network is concerned with a *hybrid* order, showing how what is horizontally and vertically differentiated becomes reintegrated in a stable and consistent way. It a theory of gathering – or of "drawing things together".²³

4 Space types

Mol and Law present an explicit recognition of the fluidity and ambivalence of 'the social' and have introduced the concept of 'fluid' as a complement to 'network': 'The social', according to them, doesn't exist as a single spatial type. Rather, it performs several *kinds of space* in which different 'operations' take place. They propose: first, that there are *regions* in which objects are clustered together and boundaries are drawn around each cluster; second, there are *networks* in which distance is a function of the relations between the elements and difference a matter of relational variety. These are the two topologies with which social theory is already familiar. They propose also however another kind of space, a *fluid*, where neither boundaries nor relations mark the difference between one place and another. In these spaces boundaries may come and go, allow leakage or disappear altogether, while relations transform themselves without fracture.²⁴ Latour proposes that by following circulations we can get more than by defining entities, essences and provinces.

¹⁸ See: Edward Casey (1996), 'How to get from space to place in a fairly short stretch of time', in: Feld S. & K.H. Basso (eds.), *Senses of Place*, School of American Research Press, Santa Fe. See also: Bruno Latour (1996b) "On actor-network theory. A few clarifications". *Soziale Welt* (47), pp. 369-81.

¹⁹ See: Latour (1996b), p. 370.

²⁰ See: Latour (1996b), p. 371

²¹ See: Bruno Latour (1992), 'Where are the missing masses?: Sociology of a few mundane artifacts', in: Wiebe Bijker and John Law (eds.), *Shaping Technology – Building Society; Studies in Sociotechnical Change*, MIT Press, Cambridge Mass.

²² See: Latour (1996)

²³ Bruno Latour (1990), 'Drawing Things Together', in: Lynch, Michael & Woolgar, Steve (eds) *Representations in Scientific Practice*, MIT Press, Cambridge Mass., pp. 19-68

²⁴ Annemarie Mol & John Law (1994), 'Regions, Networks and Fluids: Anaemia and Social Topology', in: *Social Studies of Science*, Vol 24 (4), pp. 641-72.

Also, drawing on Mol & Law's work, John Urry argues that "much of what happens in a 'society' is influenced by flows or fluids",²⁵ and that social theory should pay attention to flows "within but especially beyond the territory of each society.... Moreover, not only people are mobile but so too are many 'objects', as a consequence of diverse global networks and fluid-like flows".²⁶ The mobility of humans and nonhumans must, according to Urry, become part of a society performed.

Rob Shields,²⁷ summarizes the characteristics of social flows as follows: first, they are spatial, temporal, and "beyond merely being processes". They have a content, and are material. Second, they have rhythms, and intensities – 'tones' one may almost say. Third, they have intentionality, built into their vectoral directions, rather than origins or end-points, causes or purposes. They are relational, without being positional or being structures. Fourth, they have viscosity, and speed-related capacities for accommodating and producing shapes and geometries.

5 From spaces to scapes and spatial productivity

Urry adds a fifth point; that flows are channeled within territorial scapes or networks, which also organize in relational terms, and a sixth; that they facilitate diffusion of relations of domination/subordination and the exercise of power through their intersections, so that, seventh; a result of flows and the scapes through which they are channeled, are new forms of social power relations and inequality. Landscapes of flows generate new opportunities, new desires, and at the same time new risks.²⁸

But when we consider the productivity of these flows it becomes today more and more evident that the city is not simply a form which spreads out from within; growing from the inside, as a pattern in the landscape. Rather it emerges for the most part as local 'thickenings' of pre-existent forms of a dynamically constituted 'outside-less' whole whose scope exceeds by orders of magnitude the thing we in the past (and still too often today) hold as being the city. As paths and trails pre-exist the first settlement as an object in the landscape,²⁹ so also the 'object' city today exists in the first instance as thickenings of the wispy traces of stuff passing through – and this thickening, like any conrescence, is a work of production and of alchemy; of the transformation of one kind of energy into another.

The story of the city is therefore, one of the eruption of identifiable stuff out of a plasmic and non-differentiable substrate. Jane Jacobs' obsidian traders tracing pathways over the Anatolian plateau,³⁰ Hanseatic cogs plying the Baltic sea-routes, the silk traders and the spice-laden caravans threading their ways through the mountain passes between the near and far east, all the way through to the 20

²⁵ John Urry (1997) 'The Concept of Society and the Future of Sociology'. Paper presented at the conference *The Future of Sociology*, Aalborg University, October 1997, p. 3

²⁶ John Urry (1997) 'The Concept of Society and the Future of Sociology'. Paper presented at the conference *The Future of Sociology*, Aalborg University, October 1997, p. 8

²⁷ Rob Shields (1997), 'Flow', in: *Space and Culture*, vol 1, pp. 1-8.

²⁸ John Urry (1997) 'The Concept of Society and the Future of Sociology'. Paper presented at the conference *The Future of Sociology*, Aalborg University, October 1997, pp. 6, 8-9

²⁹ See my 'A brief history of flights to the periphery and other movement matters' in: Read & Pinilla (eds.), *Visualising the Invisible*, Techne Press, Amsterdam (2005).

³⁰ Jane Jacobs (1970), *The Economy of Cities*, Vintage Books, New York. The proposal I am making is a speculation built on a speculation, whose veracity, I would argue, is to be determined in its productivity as a model for thinking, rather than in its literal applicability to every settlement form in every historical circumstance. There may have been other types of settlement in the course of history – villages perhaps, towns even, of variable size – conforming to the conventional model which would see 'community' as providing the 'glue' for social aggregation and settlement forming. My argument is that settlement as a product of and as an expression of 'social aggregation' is an inadequate model for understanding *cities* – and this fact becomes all the more clear as cities distribute themselves everywhere and begin to constitute our whole world.

tonne Oshkosh thundering down a transcontinental motorway – all are antecedent to the identifiable location we recognise in actual urban places.

We can today, when the fact begins to force itself on us, see the city for something radically open, integral with what appears to us to be its outside, and with a continuity that gathers a heterogeneous residue. The city can at last be seen as something constructed within dynamics which take place very substantially beyond what we take to be its borders, and which becomes itself according to its own laws. In this view I am outlining the city is ‘machinic’ in the sense Deleuze & Guattari use the term, where the dynamics of the ‘organic’ are conceived ‘not in terms of organs, organisms and species, and their functions, but in terms of affective relationships between heterogeneous bodies ... [A] “body” can be anything – an animal, a body of sounds, a mind or an idea, a social body or collective ... [T]his means that evolution speaks in fact of an involution, that is the dissolution of forms and the indeterminacy of functions, as well as the freeing of times and speeds.’³¹ I would go further here to say that this involution is a progressive generative folding or pleating or ‘space-filling’ at ever finer scales as we zoom in from the ultimate scale of the city which is given by the (ultimately global) limits of its connective and communicative networks and infrastructures.³²

It becomes questionable whether the city could ever have been ‘organic’ in Mumford’s sense. Today there can be no doubt the city and its parts are *points of relay* in variously scaled circuits and that their processes are constrained and ordered for the most part by the networks and infrastructures which constitute and convey them rather than by any bounding limits. The space we will propose presumes firstly therefore, as Jane Jacobs has already done, that a ‘virtual’ first city pre-existed its actualisation on the Neolithic Anatolian plain, and that this ‘virtuality’ consisted in the long-distance trading routes that criss-crossed the sub-continent.

An idea that cities emerge, or just *happen* at the level at which we encounter them – as opposed to one which considers them to be our construction and a reflection of our societies – recognises the difficulty of inventing life forms or social forms out of nothing. The possibility would first have had to be seen to exist, in at least a rudimentary way before it could have occurred to our proto-urban ancestors that *polis* or *civitas* may have been a possibility for social existence. Developed social forms may be therefore a creative addition to, a building upon, a matrix of encounter that is in the first place urban. This could therefore be a story of social becoming at the same time as it is one of urban evolution/involution.

6 Centres in mobilisations

Individual stories of caravans and their masters, the ship fleets and their captains and crews, are largely lost, along with the details of their hardships and their achievements and failures. What *does* remain are the trails they wore, the strings of provisioning posts and trading stops and ports they established. We hear little today of the details of the complex overlapping arrangements and agreements which underwrite the exchanges in commodities, finance and other formal and informal, legitimate and illegitimate business, not to mention the countless movements and exchanges made for reasons of personal attachment or gain. What we do see, and what does remain, are the more systematised flight and train schedules, the seasons and calendars – and the routes which draw together into one movement all the individual stories lost in every way except as another pair of lights in a moving

³¹ See: Keith Ansell-Pierson (1997), *Viroid Life*, Routledge, London.

³² The model presented here begins to become suggestive as regards the idea of ‘omnicausal’ systems (when the whole determines the behaviour of its parts) as opposed to those which are ‘particausal’. See: G.E. Mikhailovsky (1993), ‘Biological time, its organisation, hierarchy and presentation by complex values’, in: *On The Way To Understanding The Time Phenomenon: The Constructions Of Time In Natural Science (Part I)*, edited by A.P. Levich. World Scientific Publishing, London. There is a potentially rich line of investigation here which goes into the purported ‘negentropic’ properties of omnicausal systems.

stream on the freeway, another passenger in a queue at the ticket office or the check-in, another pedestrian in the moving tide on the pavement of the shopping street – or as a particular sequence of pulses in the terabytes of data transmitted down optical cables.³³

Before the city as we know it therefore, before the visible and located city, comes a mobilisation: a mobilisation of material, data and populations – of mobile mass, masses and messages – that is a distribution to all corners. This anonymous population and its movement is the virtual, antecedent to the location or place that is really a *relay*, a passing on of objects that transform the place in their passing.

Virtual or antecedent centrality finds its most visible expression today in the freeway network – an evenly distributed net of pure movement activity. Flying over the urban landscape at night, one of the virtual ‘engines’³⁴ of the city is today perfectly visible, perfectly concrete, but prior to anything we would call an urban place in its developed actuality. The very visibility and intensity of this tracery at this scale points also to a mode of growth of cities. The movements of people, goods, money and information at this *regional* scale were in previous times, ‘outside’ the city as it was then commonly (but mistakenly) understood. Today, there is no question about it; this scale of movement exists ‘inside’ the life of the *metropolitan* city as we commonly think of it. In fact what has happened is that a new layer of movement, a new stratification of infrastructure and the connection it affords has become dominant and imposed itself over what already existed.

But there are multiple virtual centralities existing at different scales and in different modes in the city at the same time – each comprising webs gathering movements into anonymous and distributed mobilisations. Infrastructural webs *stratify* these mobilisations into layers of different ‘resonance’. Time enters this realm of pure quantities as speed or vibration. The impulse of these distributed networks is to distribute, but they also distribute *themselves* as well as the material they are distributing, as they seek to cover every part of the surface they are involved in integrating. A metropolitan freeway network will seek to cover and integrate the metropolitan surface, an urban boulevard network will seek to cover and integrate a functional urban surface, and a global telecommunications network will seek to cover and integrate the global surface. These infrastructures are *built*, they are costly and subject to constraints of economy. In the same way the soap bubble economises by distributing tensions and energy evenly over its surface, these infrastructures tend, other things being equal, to gather and distribute evenly over the surface available to them.³⁵

Urban place – as relay point on multiple stratified movement nets – becomes also a place of combination and of translation and transduction; of the conversion of matter or energy of one sort into another. The urban we know, in its complex and actualised form, emerges at the point where virtual centralities overlap, allowing lives to adhere, to inhere, to become entrained and situated, in points of layered and mutually supportive and dependant connectivity. It is the point where multifarious centralities come together; it is not a coming together in one scale, one speed, one time and one space, rather the coming together is of a variety of times and spaces in a process of combination that creates a complex, rich, and active individuated compound out of multiple ‘preindividuated’ centralities of pure spaces and times. There is a condescence, an alchemy, a real creative moment, which takes place in

³³ See the movie ‘Koyaanisqatsi’ (1983), directed by Godfrey Reggio.

³⁴ This engine is again not that of a system – of a technocratic movement-connective machine – but as part of a ‘machine’ effecting translation and transformation, and the actualisation of urban virtuality or potential. This ‘engine’ produces at the moment of its encounter with another ‘concrete virtualities’, creating a ‘thickness’ of present time (Mikhailovsky). This is a point which will be developed elsewhere. See for a first step: Read & Bruyns (2005), ‘The Urban Machine’ in: Read & Pinilla (eds.), *Visualising the Invisible*, Techne Press, Amsterdam.

³⁵ This assertion needs some qualification of course because at certain moments in history all roads *did* lead to Rome or London or Paris or wherever. Nevertheless today in the time of Negri and Hardt’s ‘Empire’, it seems that this statement is becoming more rather than less true.

these overlaps between virtual centralities, activating situated conditions, enabling individuation; *actualising* the centralities we recognise as such in real urban places.

Locus or place is also the point at which the individual and his or her stories comes back into focus, and the actualisation of urban place is also its becoming as setting for embedded stories of individual everyday lives. The 'non-place',³⁶ the 'concretely preindividuated' simplistically accessible places we more often than not make today, cannot *hold* real lives and stories. It lacks the 'thickness' or 'density' of situation, in a *fabric* of connectivity, as a relay in multiple virtualities. Locus needs layering and overlap with respect to its position within infrastructures; a layering that will allow it to support multiply-folded, complicated, implicated, interaction. Emplaced lives are located within only *somewhat* systematising multiscalar circuits shared with multiple others.

We note this sedimentation of the visible actual urban out of multiple distributed virtual centralities in the variety and particularity of actualised forms and centralities in the city. The global city emerges with its skyline of skyscrapers at the point where global travel routes, communications networks, *and* the multiple other infrastructures which support the processes of global finance and tourism come together. But the global is not, as is sometimes naively imagined, produced directly and automatically out of global connectivity, without a process of alchemy or transduction – it requires appropriation and remaking, and *work* in gathering into and making the local and the everyday. It requires a work of coordination and relay to make the connections and to effect the exchanges which give everyday reality to global business and culture, and even to make actual, in the local, the *idea* of the global. This work will require as much engagement in local and regional webs of interconnectivity as in global webs. The global *is constructed* – *in* the local through work and organisation, and the design, construction, maintenance and provisioning of multiple networks which have to engage and intersect with each other in a particular local time and space.

The global as a product exists *in* the local. The increasing pervasiveness of the global in today's local is a factor of an increasing *connectivity* alongside a simultaneous condition of increasing '*criticality*',³⁷ of the world. This criticality, this preparation of the ground, is a work of maintenance and extension and refinement, but also just of the *evolution* of the city as we see it now, that takes in much of human history. Much of the contemporary discussion of globalisation misses the extent to which the global is in the first event produced and sustained *from* the local, and the way in which this global, even when it is seen to arrive 'from above', has to be appropriated, redrawn and reinvented in the local condition in which it lands.

Bruno Latour in discussing the 'visibilisation' of the city of Paris introduces his notion of the 'oligopticon': "So, 'localizing the global' means to look at the place where you see the whole not as a panopticon, but as an oligopticon ... [T]he operation is very simple: there are centers of command, there are rooms, inside which Paris as a whole is visualized, but it's a local room, it's not a big room. Paris itself is never big, there is no place where Paris as a city exists, it's always localized at some point where some of the engineers or urban planners, or specialists are actually making Paris as a whole visible. ... '[O]ligopticon' means seeing a little, very well, but just a little. And the visibility of a city like the one I've studied here, is made not in a panopticon, not through this sort of excessive paranoia of complete visual space as demonstrated in the famous example of a prison, where the prisoners are completely visible to the gaze of the surveillance manager. The oligopticon actually describes much better the thready character of the whole being built in a city, where you never have actually a whole which is not connected to a small place where the information is gathered.

"I must remind you that information is never actually produced, what we mean by information is always transformation. ... [T]he map is not the territory, a model is not the house - and whenever we

³⁶ See: Marc Augé (1995), , *Non-places: Introduction to an anthropology of supermodernity*, trans. John Howe, Verso, London.

³⁷ Criticality is a notion taken from science in which a material undergoing phase change transmits this condition *locally*. See also: Peter Pesic (2003), *Seeing Double*, MIT Press, Cambridge Mass.

talk about information we forget the price of putting it into form, and the word information we should never forget, means putting something into a form, and the form is very material.”³⁸

This is a story, more than anything else, about urban place and situation, and about how situation is established as a *creation* of the urban and then as a *recreation*. It is a story of the necessarily (and positively open) ‘hybrid’ and ‘alien’ of that urban and the way it generates and produces an ‘extra-human’ and ‘extra-social’ given; an ‘unthought by us’, that we have always appropriated, and continue to appropriate and remake to our own ends. I would speculatively propose that we have, for the most part always constructed and structured our social worlds around and by means of these workings and reworkings of the urban.

In all the talk today about situating practices, we need to not forget that situation itself is always something found and remade, given and constructed; much more than a scenery or a background, it is also an agent and participant in the patterns and visibilities of our living. Our research³⁹ attempts to uncover the variable conditions of contemporary urban centrality and social and experiential visibility and patterning, and the relation of these to the constructions of (and our reconstructions of) the urban and the social. In particular we take on the continuous and generative aspects of the city that most means of urban representation divide.

We do not need to know the city in its details in order to experience it as somewhat coherent – we do not need to know the multifarious stories of the city in order to know the city *well enough* personally. The city choreographs those stories alongside ours in ways which make us socially ‘knowing before knowing’ creatures at the level of the urban everyday. It does this however all the time while hiding from our view much of the means it uses. It is part of the enormous contribution of the city to individual lives that it is available to enable and inform *their* stories – as a participant, as a choreographer. But we need to get ‘on terms’ with this choreographer; take it on at its own scales of working in order to analyse and understand how it does this. The city *as an experience* is not observed or experienced ‘from the outside’; we are immersed within it and we experience its enabling and constraining virtualities within a continuity of experience, directly. These virtualities are absolutely real and absolutely part of our everyday experience. *As an object of study* however, we need to understand how the city we see *emerging*, seen from an ‘extra-human’, ‘extra-terrestrial’ perspective, is a somewhat alien given, within which our experience nevertheless *converges* in ways which profoundly form and inform us as the human and social creatures we are.

7 The form of the pathway

We think far too statically about, and spatialise with simplistic flat horizontal ecologies, the ways that people inhabit the city and the world. If people inhabit pathways before places, and have the power to shift, almost at will between distinct connective infrastructures with different scales, speeds, instantaneities – then the question is one of a dynamic structuring in movement and connection *between* networks, as much as horizontally within them. We have already suggested elsewhere that our primary way of navigating the city involves not so much horizontal movement as a stepping in and out of different vertically-layered strata – these strata corresponding to differently scaled network spaces, simultaneously physical and mental, of mobile emplacement.⁴⁰ In the example of the central city I discussed there, and purely in relation to the two lowest-scaled infrastructural ‘skins’, one is either in the movement grid of the neighbourhood, or one is in the perceptually coherent and ‘marked’

³⁸ The quotation is taken from a transcription of Bruno Latour’s lecture, 26 November, 2001, at The Berlage Institute, Rotterdam; transcribed by Aksel Çoruh. To my knowledge another outline of the idea of the oligopticon by its author does not exist in the English language.

³⁹ In Spacelab.

⁴⁰ See: Luki Budiarto & Stephen Read (2003) ‘Human scales’, paper presented at the 4th Space Syntax Symposium, London, in June 2003.

movement grid of the city (actually one is in both at the same time on the neighbourhood high-street). The question of knowing the city is one of learning these grids. This movement is bodily and embodied *before* being cognitive; our bodies folding activity and intentionality into the structure, and using the structure as an *affordance* rather than as a difficulty to be overcome or a puzzle to be solved. Places are places on the way, points of relay and transfer – which are transformed by one's passing. The question of emplacement or situation therefore becomes referenced to strata of populations in movement. I have suggested that subjects engage – fuse in movement – with the 'population mobilities' of these strata. They become part of a convergence or integration of network and subjectivities in motion. Individual movements in place are indexed to these strata, and the space-times of individuals and the maps we make of them need therefore to be referenced to them. Situation and engagement in the space of the city, framed in these terms, profoundly alter the terms of the question of subjectivity and intentionality, and shift the centres of gravity of both 'structure' and 'agency' to the point where they become not poles apart, but superimposed and overlapping points of view on an integral condition of existence.

The environment is structured in and for movement and into levels which correspond perceptually with affordances for connection and movement. One may become lost anywhere, but a good strategy to become unlost, is to find a stratum at a higher scale. In the local grid that means finding the urban grid, in the urban grid it could mean finding the railway station – or a bus or a taxi which will take one there – or even making a call on one's mobile telephone! Our world is a world in movement and structured in and for movement. We are *emplaced* in movement. We misunderstand and misrepresent the problem of the form of our urban world and its intelligibility when we consider these issues statically.⁴¹

It is clear today that the urban has overflowed the limits of the traditional urban centre. It is even more clear that the instrument by which this overflow has been effected, is in the first instance the infrastructures of movement and communication that have spread themselves over the surfaces of the metropolis, the megacity region, the global region and the world. It is clear once one begins to think about it that the city has always overflowed its limits, and that this overflow is the engine of the city's growth and development.⁴² Underlying the model we have outlined here, is a presumption that both our experience of specific urban places and the nature of the urban object itself are founded in the movements we and others make through it, and the way we encounter other people and things there in interfaces structured in movement. Our preconceptions of what the urban is though have remained static while the urban itself has shifted and adjusted itself to new strata of connective infrastructure and the new dominant movements within those infrastructures. If the city of our preconceptions is no longer the city we inhabit, it is because we see the objects, associate them with a city which produced superficially similar objects, and discount the real relations and dynamics of our lives today.⁴³

⁴¹ See: Maurice Merleau-Ponty (1983), *The Structure of Behaviour*, Duquesne University Press, Pittsburgh Penn.; Gibson, J.J. (1986), *The Ecological Approach to Visual Perception*, LEA Publishers, Hillsdale NJ.

⁴² See: Stephen Read (2005), 'A brief history of flights to the periphery and other movement matters', in, *Visualising the Invisible*, Techne Press, Amsterdam.

⁴³ See: Stephen Read & Gerhard Bruyns (2005), 'The urban machine', in, *Visualising the Invisible*, Techne Press, Amsterdam.

