

>> The Attractor of the Ground

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Abstract

While there are powerful contemporary processes ‘normalising’, ‘institutionalising’ and distributing the global, glocalising places everywhere, the local is not adequately enough theorised that we can begin to understand this process. Part of the problem is the rather embarrassing concreteness and specificity of the local, and we have not yet overcome our habits of generalisation well enough to take on a highly particular becoming of place as the *end* of process. This paper, drawing on our research on the local in central urban fabric, as well as freely on ideas from ‘organic’ or ‘process’ philosophy and the genesis of form in biology, outlines a ‘diagram’ or ‘space’ for thinking urban locality as a *product* of the global and metropolitan and whatever other scales involved in its production (and its transformations). It is a ‘field diagram’ for the articulation of the becoming of particular place in place. Material urban processes, rather than being taken as being bound in place are treated as located within multiple horizontal distributed infrastructural ‘grids’ correlating with horizontal psychological ‘shells’ which hold places in relation to variably scaled ‘regions’ within variably extensive ‘horizons’. These horizontally layered ‘grids’ and ‘shells’, in their specific make-up and overlap return highly specific conditions *vertically* to local place. There is a particular diagram of the local, incorporating a small set of horizons, which generates the well known but thoroughly misunderstood place condition of the typical historically evolved European city centre. This physical, ‘psycho-geographical’ ‘ground’ has an enormous ‘absorbency’ for the higher scales and explains much of the distribution of intensity of public space use (and public space quality) in the contemporary European city.

The global and the local in the city

The difficulty we have with thinking ‘the global’ comes as a product of a misunderstanding of a number of factors. These involve questions of form and space and a difficulty we have in thinking space topologically (or ‘vertically’ as I will explain). A chief product of our misunderstanding is the misconceived idea that the global is ‘large’. ‘The global’ is in fact not so much large as it is *pervasive*, and it is in no way related (nor are ‘the metropolitan’ or any other ‘large’ scales) by a relation of oppositional duality to ‘the local’ – as if it were the ‘big’ to the local’s ‘small’. The local is instead a *production* of the global (and other ‘large’ scales).

What I have just said has a lot of implications, all of which I will not attempt to explore in depth here. It puts a question mark over the ‘space of places-space of flows’ opposition as a way of thinking globality and locality. It also starts to suggest – and I *will* look at this question in this paper – that the critical question as regards the global and a global space is not so much one of *connection* (which is today

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plentiful) as it is one of *grounding* (which is less so). What I will suggest is that the global is *everywhere*, or everywhere that we can get to anyway, but only *somewhere* obviously or usefully where that global is grounded. The process of this grounding is itself in fact the *production of the local* I am referring to. Without this grounding, or with a grounding that does not ground with the required 'vertical layering' or 'depth', we may have a local of sorts, but it will tend to be a local without experiential depth – it will be that 'place' we call 'placeless place' or 'non-place'.¹

These ideas come from research on urban location as a factor in urban design, and have been concerned from the beginning with an articulation of the local rather than that of the global. They have crossed though with a recent shift of sociological and philosophical attention towards the social world as a material and informational flux, and to questions of networks and flow, and we feel that they have something useful to say to research on the global and point up sharply the misapprehensions I mentioned earlier. What I want to do here is to outline the space I am talking about and talk briefly about how it is being used as a way of thinking location in cities differently.

Questions of the urban and urban space

The question of the city and what it is exactly – or perhaps rather, how we as urbanists can most usefully conceive it – is clearly one which has no final and definitive answers. One of the problems we have with dealing with and understanding the city today though comes not so much as a result of a 'proliferation' of cities, or of city concepts, but is due to the fact that we seem to be unable or reluctant to move with agility and dexterity through 'fields of cities' in order to find the ones which deliver answers to pressing urban questions of today. We appear to be stuck in a few rather exclusively and jealously demarcated paradigms, and have particular difficulty understanding and conceptualising *whole* cities – opting almost universally for the uncontroversial and rather timid option of seeing city concepts as in principle partial, and cities as a 'complex' summation or 'layering' of 'social', 'economic', 'cultural', 'psychological' and whatever other 'sectors'. The fact that there are many 'cities' does not also mean that we have to consider their spaces as necessarily indefinite or intractable. Multiple perspectivity does not limit one's grasp on wholeness, because wholenesses are also many. We live after all after Wittgenstein and have abdicated our commitment to an absolute.

I will suggest that what one needs to consider an urban whole is an effective *space*, especially if that space is dynamic, evolutionary and form-generating (morphogenetic). I will consider form and integration and organisation to be the interesting factors and *products* of that space.

Where we should be considering space as *productive* of the urban, we work instead most often on the one hand with ideas of space as a neutral and available surface, and on the other with notions of social 'structure' – which we then translate, rather unthinkingly, into 'spatial structures'. We fail to acknowledge any socially constructive effect of the material city itself. Our research tries to find a way to conceive the whole city as an emergence, which includes an understanding of the social effects of the dynamic workings of the city itself. We try to come to the point where we can devise practically useful strategies of planning and design for guiding the urban world towards futures we desire for it. How do we get beyond a spatial as it is conventionally conceived as a distribution of facilities and events over a surface that is in itself neutral – and approach a spatial that has to do with a modulation of fields, with tendencies to concentration and dispersion and with the orientations and movements these tendencies induce? We are looking for a spatial which can begin to indicate answers to the questions of what the city *itself* (its space and its form) is doing with respect to our social, economic, cultural and psychological lives.

We start at this point then; with the assumption that a dynamical spatial, and a generative form and formation, is fundamentally implicated in producing the conditions of our lives – and our research explores this basic idea to see how far it will get us. I want to specify firstly the *kind* of form we are talking about and then how it works. One thing is clear here and that is that we are not talking in the first instance about architectural form – that is, not about the form of the city as an object. We are not talking exactly either about the form of the city as an organism, interesting as we find the idea of organism to be. We are talking more about the kind of form which refers to the ways ‘bodies’ or ‘body-like things’, at whatever scale, are sustained in their existence through their connections with and dynamical convergences with their surroundings. This is the kind of form Merleau-Ponty referred to when explaining ‘structures of behaviour’.² It is the kind of form that allows us to understand what Whitehead means when he says that the ‘what’ of a thing is its ‘where’.³ It is a kind of form that is both ecological and dynamical and will be about the productive processes of urban formation at the level I was talking about before; that of the ‘production of the local’. This is a kind of form and space which tries to bring a practical kind of ‘field thinking’ to urban thinking – it tries to approach the process of the ‘event’ of Whitehead, of the ‘moment’ of Lefebvre, and perhaps also the ‘oligopticon’ of Latour.

We begin by saying that our conventional conception of form is far too narrow and object oriented. A form is at its simplest level an intelligible something, but when we interrogate our own experience of the city, as users rather than as planners, we have to recognise that the experience of *architectural* form comes rather low down in our everyday priorities as engaged people just getting on with our lives. When people go to work or to their shopping street they don’t go to a configuration of buildings and street furniture; they engage in movement with a particular configuration and intensity of activities. And this is a perfectly intelligible configuration and intensities of activities – it is in fact a form. This form is clearly tied very directly to the lives of the human subjects immersed within it – and it makes those lives intelligible as Merleau-Ponty has already pointed out – but the existence of the form also precedes in a very real and obvious way the experience of our subject. It is not simply that the subject *creates* the form as a ‘mental map’ or representation. The form as perceived is a consequence of his or her activity (as an individual) but this perceived form is a product also of a larger organisation or form which precedes it (as an effect of population).

Individuals and populations

There are two phases to this problem, two different but thoroughly integrated modes, relating to different ways that we as human beings occupy the city. It is not an either-or thing, one where we have to set up ideological camps, put up the barricades and fight it out; this has to do with two ways we are in the city and two points of view on the space we produce in the city – and neither view on its own is enough to explain anything. We inhabit urban space simultaneously as individuals, tracing out our life-worlds as we get on with the things which occupy our time, and as populations, where the summation of all those life-world tracings is absorbed into a fabric of the city and *becomes* the fabric of an immersive, visible-through-time, social city we engage in and experience in our everyday lives. We occupy a social space – but one which cannot be given simply in the tracings we mark on our maps of the world – not that is, unless we map these against another larger and collective mapping of lives. We are gathered into a collective by our own movements, and by the ways these movements weave through and between larger collective movements.

One could say that we create our social urban worlds twice – and one of those worlds satisfies the self-conscious and ego-centric humanist in us, while the other is one which recognises that we are subject to a larger, self-integrating (and perhaps

rather panoptic) political-movement-economy, with a 'mind' and agency of its own distributed in and through the world – and this world satisfies the materialist in us. The city of our human activities and their intensities are a product of both of these realms – we join the throng and participate in it as autonomous individual agents with minds of our own, while on the other hand we find ourselves part of a world, given and immanent, prior to and the *condition* of our participation in it. The two realms exist simultaneously but are not always simultaneously acknowledged – the subject of this contribution is the mostly forgotten space that distributes a population, creating an emergent and particular, immersive, becoming-visible world of sociality. This space is a movement of multitudes towards wholeness – towards a form which is a realisation forever approached, never achieved, in progressions of time and space.

Flows and dynamic form

Material worlds become conceivable as networks of linkages – but it is by no means obvious that we can deal with the astronomical complexity of such a statically conceived relational space in any useful way. What we are looking for is something which in some way *shapes* this complexity in a way which becomes useful to us, which gives form to this relational complexity.

In fact, the set of urban linkages though massively complex, are also real and *performed*, and they are tied in a very concrete way to the material base of the city – especially, in the way I will begin to outline this space here, to the city's movement infrastructures. Flows can be seen as material products of the city's multiplex processes, and flow is also usefully distanced from the overwhelming complexity and the vast numbers involved in the movements and gatherings, the actions and interactions, that are the 'life' of public space. But flow retains enough information, I will suggest, about this 'life' to say something useful about it, while determining in a much looser way the details of subjective lives – effectively eliminating this level of resolution as 'noise'.

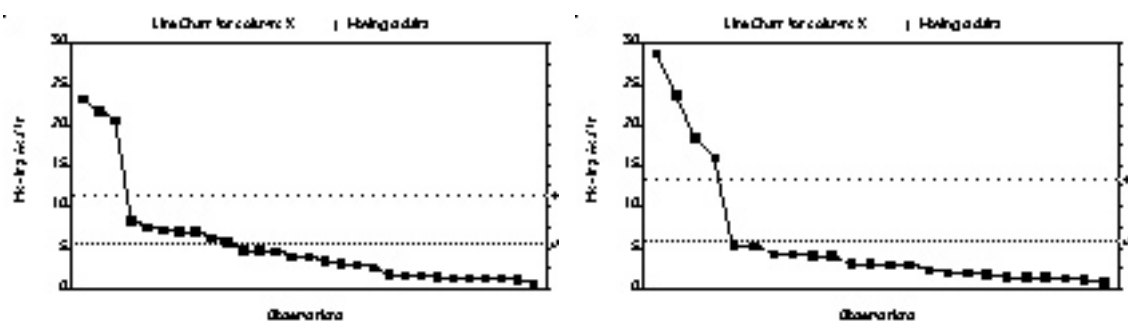
Networks of movement flow are more than simply streams of material constrained rigidly in a 'pipework' between nodes or locations. Especially in the movements in central fabric there is no rigidity in the way the flows are constrained, and yet there is a clear 'stability' in the patterns set up. In the first place flow acts directly on location. Urban location, most usually seen locally and statically in terms of its bounding surfaces and scenery and local identifying significance for particular groups of inhabitants and users, is transformed by the flux which animates it into being a part of a much wider spatial-functional whole. Place-bound activities and significances blur at the borders of places as their rhythms synchronize with those of a fluid but coherent 'body' of moving people and vehicles that connects to the wider surroundings and to the city as a whole. Above all, the view of the city as a complex interlayering of dynamic processes (both within and without public space) and of a massively tangled set of relationships between people and people and people and things is *organised* by the fact that these relationships are performed, and that this performance *en masse* is mediated by concrete real-world networks and infrastructures which carry this flow. These infrastructures have real shapes, real extents, real possibilities for access and use, and real limits – enabling certain linkages, inhibiting and prohibiting others. The flux of activity in the movement networks, is what happens when relation and performance meets the possibilities and constraints of real-world limiting and enabling networks. Flows *form*, and begin to stand as a 'body', extra and apart, neither reducible to nor deducible from 'pure' static or instantaneous relations without consideration of real world flow-conveying infrastructures with which it begins to form a *unity* – an assemblage of elements that become 'stabilised' in circulation, as a dynamic 'body'.

The notion of flow makes it clear that place is never reducible to the purely local qualities of the location itself, but are always connected by ‘material collectivities’ of flow to other places. In fact I will go on to try to show how this flow *produces* the qualities and attributes of particular places and makes the idea of the ‘production’ of local place appear relatively straight-forward. The form or ‘shape of the city’ takes on significance as a social idea when it is taken to mean the way singular lived lives and the unique sequences of everyday events and stories unfold within a substantial, formed, collective dynamic which itself is both the product of their summation, and is at the same time inseparable from and a product of the particular material context.

Flows transform the ‘chaotic’ particularity of life within public space, merging singular vibrating restless elements into an urban body in dynamic but formed equipoise, within and intimately connected to the material networks of the city. This notion of a dynamic stability or form of flow stands I would maintain as an alternative to the static outlines we most often think in when considering the form of the city.

The beginnings of an idea

The spatial idea outlined here had its beginnings in research on the morphology of central urban fabric in cities in the Netherlands.⁴ This research revealed a spatial partition of the fabric of the centre, which has turned out to be characteristic of traditional centres. The studies were on the functionality and public space use patterns of neighbourhood areas and the pattern was first noted in the way public space occupation was distributed in areas. In almost all areas a small group of usually two to five spaces (amongst the sample of 20 to 30) was found which had very significantly higher rates of movement than the others.



15. Observations of moving adults per 100m for Amsterdam Jordaan (left) and Amsterdam southern Grachten.

The ‘eureka’ moment came when it was realised that these better-used spaces, which till this point had been considered in relation to and at the scale of local areas, linked up with each other when the areas were put back together again. These were not independently acting elements and it became clear we were talking of *another* grid, larger than the grid of the street and block pattern, overlaid over the regular fine-grained grid of the centre. This ‘supergrid’ was carrying a different intensity and *speed* of movement than was the regular grid of the local area.

What was found was that the fabric of the centre ‘stratifies’ into two very clearly distinguishable grids of routes, carrying on the one hand ‘faster’, longer range movement, and on the other ‘slower’, more local movement. ‘Fast’ routes through the central city fabric, established and embedded in the fabric through geometries of linearity and continuity, tend to condense and concentrate movement to themselves, establishing a higher scale, ‘faster’ supergrid which carries all or most of medium and longer distance movement. This supergrid itself constitutes a continuous network facilitating this longer distance movement, and coincidentally establishing a relatively

less complicated, relatively more legible and 'mentally mappable' spatial pattern serving the bulk of movement (and orientation) needs of city users. The 'slower' grid layer consists of the regular street and block grid, including all those non-supergrid spaces which include what we think of as the 'interiors' or 'back-streets' of areas.

What starts to appear in fact in the fabric of the central city is the easily recognisable (when it is pointed out) pattern of two clearly separable realms in our experience of being in traditional central-urban fabric: that of the grid of the local area (the back-street experience), and that of a more whole-centre scale supergrid that carries higher scaled movement through a set of spaces far better used than the more typical local area spaces directly connected to them (the high-street and linking-street experience).

Now this is not yet that interesting – when it became interesting was when we realised that if we studied the way the overlap between these grids of the regular street and block grid and the supergrid was made, it became clear that there was a *productive* factor in this overlap. Activity in public space appeared to be *produced* in this form, and we could begin to locate very accurately public space activity levels and types, on the basis of the way this overlap was made. The significance of this finding should not be underestimated – remember that the conventional understanding was (and this had been reinforced by a huge number of failed attempts to find the 'relation' between 'space' and urban activity, and an even larger number of failed neighbourhoods built on the basis of presumed links between these factors) that space could not be designed to produce social effects. All of a sudden we seemed to have a straightforward and reliable link between the two – and in the traditional fabric what's more; in that place that had been marked out for demolition by modernist planning manifestos because of its 'chaos' and 'disorder'.

Of course, if we look carefully at our concepts, and what is really overlapping with what, we find that not only is it not necessarily a simple relation between autonomous domains of 'space' and 'society' we are looking at, but also that we may be looking at an example of a rather more generic 'space of scales' than is immediately suggested by these results. These questions are explored in more depth in two forthcoming books,⁵ but if I confine my concern here to the building out of a space of the traditional central urban fabric to a speculative space of global to local networks stratified by scale, I will have already described how the idea of grounding I propose is neatly exemplified in the way traditional urban fabrics work. It is not a coincidence that many of the most successful *global* places we have today are *historical* centres.

I will be speculatively piling more grids onto the two I have already. The next obvious candidates are the regional and metropolitan freeway network and rail network, and all these grid 'layers' combined together have been very effectively used as a model for partitioning and thinking the city (as a replacement for the centre-periphery partition) in our design studio over the last three years.⁶ PhD work is beginning to deal with higher-scaled grids and with grids of electronic and other 'instantaneous' media.⁷

'Depth' and 'interface'

In order to really understand what is going on here, we need to start *thinking* in the space I am starting to outline. If we think about the environment in terms of the topological notion of 'depth' and 'shallowness', and begin to use this idea in the same way as we usually think of 'proximity' and 'distance' – as the spatial 'frictional' factor – we can see that the impulse to come near to something that is distant needs to be thought of, in a space stratified into supergrid and local grid, as having to do with shifting *up* the strata. This is nothing more than saying that if we want to move

from Amsterdam to Rotterdam, we don't do it by seeking out the back-streets in the fabric of Amsterdam; instead we attempt to move into *shallower* (and larger-scaled) grids from *deeper* (and finer-grained) ones. Urban space (and location) begins to look rather different in this way of thinking, and moving from one place to another suddenly has as much to do with shifting '*vertically*' between deeper and shallower grids as it has to do with simple movement on the *horizontal* plane.

I have already proposed, when talking about the way the supergrid works, that people are going to tend to gravitate from 'deeper' to 'shallower' spaces locally in central fabric.⁸ This is because shallower spaces locally (by definition supergrid spaces in the central city fabric) are better integrated to the larger scales of the city. They carry the topology of places related to the whole-centre image, and they locate the subject more clearly within that configuration of places. They also become in general much better used than local grid spaces. Arriving on a supergrid space allows the subject to know where he or she is more exactly in relation to the central city as a whole because the supergrid is the grid which gathers the central city into a whole. The population and character of the supergrid space would begin also to be significantly affected by the local grid connected to it, and the degree of that influence would depend on a factor of general 'shallowness' of the local grid with respect to the supergrid. In fact in an area that is generally 'shallow' with respect to a supergrid space, the supergrid space would then tend to be used as a *locally* central space, functionally highly integrated with the local area itself; perhaps a shopping street therefore but, because of the fact it is simultaneously on the supergrid network, serving not just the population of the adjacent local area but also people from further away who access it via the supergrid.

I have proposed that this overlap of local and wider-city scales in cases like this is typical of a central urban function and translates as a mix of local and wider city scale custom for the local shopping economy and a mix of local and wider city culture on the high-street. This relationship between supergrid spaces and the more regular local area spaces attached to them is not an abstractly 'representative' one, and the drift of movement that constitutes it, constructs on a very concrete and material level the 'interface', as a copresence on the street, between the 'mobile community' of the neighbourhood, and a 'mobile community' of the wider central city. It creates the conditions where such a typical urban phenomenon as the high-street can serve at the same time as a local shopping street (whose shops' turnovers are supplemented by passing non-locals), as a specialist area in the city as a whole where clusters of bookshops or restaurants or ethnic grocers, or electronic goods stores or what-have-you help to identify the street and the area within the city as a whole, and as a vital cultural place where local people, meet, contribute to, and 'learn' the diverse community of the wider city.⁹ These interfaces produce not only the characters of street and area, but also the viability of shops on street edges and the socialities and local cultures of areas.

The implications for a conceptualisation of centrality are very significant indeed. Instead of centrality being something to do with density and with agglomeration, suddenly it has much more to do with differently scaled strata of movement or connection and the way they 'interface' with each other. In fact in this brief outline I have given here of the production of centrality in the central urban fabric, we can distinguish *two* types of (which are also two stages in the actualisation of) centrality. The first one is the diffuse, distributed intensity of movement spread through movement grids (let's call this 'pure' centrality) and the second is more the centrality we actually experience as such on the street, that centrality which is a product of 'contamination'; of two 'pure' centralities coming together at an 'interface' in one place.

As a first position therefore towards setting up our spatial model as a way of thinking the production of local place, differently scaled, real-world grid layers of backstreets and supergrid (and then other higher-scaled grids) are considered as acting independently of each other. We think of them each as carrying different scales and 'speeds' of movement and connection, of referring to different ranges or scales of the total urban landscape (and here the ultimate urban landscape is seen as global), and as representing different qualities of experience and sense of movement and commitment to the local place. One is, and senses that one is, in the neighbourhood when one is on the local grid; one is, and senses that one is, in the city centre when one is on the supergrid. We then consider the overlaps or 'interfaces' between these grid-strata, and we hypothesise that these 'interfaces' are the productive points, where it is possible to achieve the production of a local place with experiential and functional depth and richness.

Where one is in a space that is simultaneously local grid and supergrid – in both neighbourhood and city centre simultaneously – is exactly where the 'magic' of the traditional fabric that modern planning and environmental thinking has found so difficult to understand, begins.

Spatial 'stratification' and times

Key to the 'socially productive' capacity therefore of the dynamically formed 'urban body', are 'interfaces' between grids working at different and rather clearly 'stratified' scales. The idea originates with patterns found in the public space of the traditional urban fabric where it was noted that one of the effects of traditional neighbourhood layouts was to maintain an *open interface* between the movement scale of the local neighbourhood and that of the wider city. I have speculatively extended this spatial diagram of 'urban spatial productivity' to the scales of metropolitan and global cities and found here, in the idea of 'interface', on the one hand a means of critiquing the place-making efforts of modernist urban planning and design, and on the other a rich source of ideas of possible ways of making place in contemporary urban situations. One clearly open question is *how* the sorting of flows of different scales and 'speeds' into 'stratified' infrastructures or grids happens. I believe, and will argue without fully developing the idea here, that this sorting into strata, which is also the real 'form of the city' I am advocating, is a factor of time.

John Urry attempts in *Sociology Beyond Societies* and in *Global Complexity* to begin to formulate a sociology for a networked dynamic world.¹⁰ Urry also understands place as multiplex, as a gathering and as particular, and also sees it as an outcome of flows conduited through place by way of multiple overlaid 'scapes' (2000, 140). He uses different conceptions of space – drawing on work by Annemarie Mol and John Law, he uses the concept of 'fluid' as a complement to 'network' in recognition of the fluidity and ambivalence of the social. The social, according to Mol and Law, 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, that 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.¹¹

Urry uses regions and fluids as well as networks, whereas I have tried to confine my conceptual apparatus to networks of flow and 'scapes' or 'grids' and the 'vertical' relations between them. I am ostensibly trying to deal with the *public space* of the city

(Urry's concern is ostensibly broader), but I am also trying to suggest, and this will be developed in a future publication, that the social is to a large extent constructed in situ and *on the back of* material urban effects. I am proposing, somewhat speculatively, that the productivity of the stratified networks diagram is such that we may produce 'region' and 'fluid' effects in the interfaces between differently scaled network strata. I am suggesting also – and this also sets a question mark next to the 'space of places' paradigm of Castells¹² – that 'place' itself is a production or effect of a relay of stratified network flows through one point. Organisation – by way of a sorting of flows into different strata which are also speed-consistent, or time-consistent, infrastructures, and their interaction with each other through interfaces – is capable of producing variable 'place-effects'. A relational perspective will, I suggest, explain the still and the contained in terms of the mobile and the connected, and the variably fluid and bounded place we know will be an effect of networks.

Not nearly enough, I suggest, is known about the role of time in the organisation of these 'dynamic stabilities'. Urry discusses time in relation to global networks and time is central to his formulation. It is also clear though that the question of times is by no means resolved. As he says: "Overall then the social sciences continue to employ incorrect models of how time is conceived of within the natural sciences, and they have neglected notions from within 'science' which could well be relevant to a reconfigured sociology seeking to overcome the division between the physical and social worlds."¹³ The role of time, I would also suggest, goes way beyond the 'compression' or the 'overcoming' of space, to one which is much more positively organisational. Some clues about the working of time, and the ways times as well as spaces gather and coalesce into coherent relational 'frames' may be found in concepts used in thinking about biological morphogenesis.¹⁴ Biological systems, according to Michailovsky for example, display more order in their macrostates than in their microstates – they are richer in information at the macro level than in any single micro level. At the transition from micro to macrostates therefore information is not lost but acquired. We have a condition of what the complexity scientists call 'negentropy', a sort of 'vital' organisational principle or force which in this theorisation is about not so much an 'emergence' as a 'convergence' of a massively complex (and apparently highly open) relationality on an organisation (here an organism) that manifests synchronization and spatial integration at its macrostate. The question in bio-morphogenesis, and as it concerns the functioning of biological organisms, is one of the coordination of highly complex, apparently open, and even apparently 'chaotic' at the micro level, systems of relations into organisational wholes in time and space. This coordination or 'convergence' involves processes of development in time, and is known as 'epigenesis'. This question is also linked through this theorisation, to the idea of 'chreods' or 'epigenetic landscapes', proposed in the 1940s by C.H. Waddington,¹⁵ which are ideas that find stability in systems not in their states at any one time, but in their pathways of development.

I cannot develop this beyond a very limited point here, instead I will simply make a speculative proposal that one of the actions of time in the working of the city is to organise flows in a rather particular way; to sort them into commensurable speeds or 'rhythms' or 'vibrations', and that these sortings give a spatial and temporal coherence to the urban macrostate – they *form* the city. I will justify this speculative idea and the speculation of the bit of productive 'magic' that happens in the meetings between these formed layers, on the basis of the evidence of the urban organisation I found in the fabric of the traditional centre. I think it is important to recognise that where we talk about 'complexity' or 'systems' we are talking, at least in our present state of theoretical knowledge, about an empirical as much as a theoretical problem. There is no question of taking 'complexity' or 'systems' theory as an 'approach' and trying to apply it to the city – rather we search for systematics in the dynamics of the city itself. Our research then takes an organisation found at the local and

urban scales and sees if it may also provide a framework for understanding what is happening organisationally at metropolitan and global scales.

The issue of the nature of the working of time remains however highly significant for the way we think about the city because if the proposition about time processes I have made above is valid, we need to be clear that we are probably *not* considering, when we think of the city and its 'complexity', a 'bottom-up' or 'swarming' system (a mistake a great many adventurous and ambitious researchers and students make). Rather we are talking about a system whose elements (in no way tightly determined in their 'micro' states) are subject to an order which manifests most clearly at larger scales. Put very simply, we find that when we are thinking of the city at larger scales, there is more order (more information) at these scales than there is at the scale of the street and its activity – where a lot of what we see can be thought of as (information-poor) 'noise'. The order though will affect the lower scales as a 'tendency' or a 'drift' towards form that may only be clearly seen as such from another perspective. Ours may be somewhat more of a 'panoptic' viewpoint than will be to the taste of the 'swarmers'.¹⁶

This order is then an order consequent on a sorting of times, and imposes a 'convergence' in multiple processes in the fabric of the city which we recognise, sometimes not altogether consciously, as 'co-indexicality' and form. We also, as some of those elements in the city, 'converge' on that form. The possible links with Merleau-Ponty's 'structure of behaviour'¹⁷ and Heidegger's 'knowledge before knowledge' are for me very interesting and a line of on-going research.

There is a great deal of speculation here, especially in what I have just said about time and the 'directions' or 'vectors' in which order works in the city. Frameworks of ideas probably stand or fall more by their usefulness than by their 'truth' – and other frameworks of ideas, better known though they may be, are in principle no less speculative. In Whitehead's words: "the true method of philosophical construction is to frame a scheme of ideas, the best that one can, and unflinchingly to explore the interpretation of experience in terms of that scheme ..." and "... all constructive thought, on the various special topics of scientific interest, is dominated by some such scheme, unacknowledged, but no less influential in guiding the imagination."¹⁸

The city becomes, in this framing, an evolved and developed 'technology of the path', producing a culture of inhabitation in its own right at a level way beyond that of simple movement and connection – just as verbal and media culture may be seen as an evolved and developed 'technology of the word', producing at a level way beyond that of the simple exchange of information. Part of our research agenda as we see it is to develop an understanding of the city as this evolved and developed technology of the path and of movement.

Psycho-geography

There is a very important psychological dimension to this space that needs to be expanded slightly here. In fact I have in other writing used two different words to talk of the strata of networks that form in or constitute our stratified 'space of the global to the local'. I have called the physical network infrastructures which are built in these strata 'grids'. I have also spoken of 'shells' when I am referring more to the ways these strata form as a product of a psychological space.

The important point concerns the scalar resolution of the experience of place. This idea is easiest to understand when considered in relation to common notions of place like 'home' for example, where, depending on our point of view or, depending on *where* we are, these words can mean different things. 'Home' is a particular apartment when I am in my neighbourhood, it is the building or its surroundings when

I am in another part of Amsterdam, and it is Amsterdam when I am in Paris. 'Home' is in other words resolved at a different grain depending on the scale at which one is projecting towards it. Or as Edward Casey might have it; 'home' is resolved between different horizons – and those horizons reflect the scales within which one is acting and thinking. The logic of all this slips so easily past us that we barely notice it – one of those invisibilities that should warn us that we may be dealing with something very interesting indeed as far as the conditions of our experience of the world are concerned. All this suggests in the first place that places are not entirely an 'external' reality; they are not 'objective', sufficient and complete in and of themselves, but are also subjectively constructed and understood.

It suggests also that places are always seen in relation to a context, and in relation to a context of a rather particular, centred-in-the-place-itself sort. In fact, in the world of our experience, we understand the world not as locations in space but rather as networks of places.¹⁹ Edward Casey proposes that places are defined by the movements (and this should include mental as well as physical movements) we make between them. He calls the "area concatenated by peregrinations between the places it connects" a 'region'.²⁰ Places and the regions of which they form a part constitute an indissoluble whole and places reference one another at a scale related to the projection we are making towards that place. In this ecological perspective, place, subject and context come together in a rather special and integral relationship with one another.

Places *gather* the world around them to one point. Their meaning is not given by culturally embedded schemas, as if culture was a layer we impose over them; rather their meaning is given by the way they *particularise* the world by virtue of their unique perspective on it.²¹ A place is, according to Casey, the world seen from one point and from one point of view, and at a practical level that world has an horizon – a breadth and scale which is appropriate to the region in which it is embedded and within which we are acting (or actively thinking).

In fact in the space I am outlining here, place does not stand or fall simply on one region. It is part of the point I am trying to make, and towards which our research is directed, that place can be multiple and multi-layered. This is part of the essence of the 'magic' I was referring to – that a place that is richly enabling can be several places at once. The high-street in my account of central urban fabric is 'place' in relation to the region of the neighbourhood, while it is simultaneously 'place' in relation to the region of the urban centre. In our more recent research we are showing how some urban places (in the commercial and historical centre of Amsterdam for example) relate to regions of the globe, the metropole, the urban centre and the local area simultaneously, while others (in the periphery) may relate only to a region of the metropole.²² It is, in our hypothesis, this experiential layering of 'place' that is part of what peripheral 'non-places' miss. The particularisation of the world that constitutes place then is not simply the gathering of one region to that point, it is the gathering of multiple, differently scaled regions to one point. I may stand in a street in central Amsterdam and just by the way I begin to act or think, or change my actions or thoughts, shift between these regions. I can call a taxi to take me to the airport, I can head towards the station to go by train to Rotterdam, I can get on my bike to go to another place in the configuration of places that constitutes Amsterdam as an urban centre, or I can search for the address I was looking for in the side streets around me. And in each case I orient towards a differently scaled 'shell' of region-place, before I find the exact 'grid-stratum' which will get me there. I can't do much more than get back in my car when I am in the parking lot outside a building in an office park outside Amsterdam.

Networks of region and place, held between differently projected horizons, are defined in a psychological space, but as soon as we begin to perform these spaces, they begin to differentiate *physical* space and networks. They form themselves as separately performed place and region grids as well. Networks of places seen at a global scale are of a different order and a different quality of movement-time experience to networks of places seen at metropolitan or neighbourhood scales, and are maintained as such by the incommensurability of the respective times and rhythms which they produce.

Towards a global movement-economy²³

We see the beginnings of a systematisation of movement and communication patterns around network stratification in infrastructures and routines of movement and connection. At the simplest level, movement (and communications) grids or infrastructures are laid or become laid as a consequence of the tracteries of movement between the places that make up the region involved. The places constituted by a cluster of villages in a particular geographic region become a region by way of the paths and lanes that open up to facilitate movement between them. At a different level of systematisation by way of technical infrastructures, rails may be laid, stations built, schedules formulated, and a rail network established connecting a national or continental network of cities. Or airplanes, airports and so on are built to become one part of a system conveying flows of people, information, goods and finance to make, in Saskia Sassen's account for example, a global region of global cities.²⁴ These network infrastructures tend to spread out – to distribute between the places that constitute their regions.

They tend also to a consistency of movement experience and speed, related to the scale of the region involved. They form, in fact, stratified grids of horizontal connection which I propose are the basic elements of environmental and urban form. They form also, in the *interface* between shells and between grids which concretise and systematise these shells, many of the effects we understand as city. The city becomes therefore in this account, not an *centre-object* but a *centrality-effect* produced by shells and grids and the interactions between them.

Particular located conditions are the product of the 'machine' just outlined; conditions which themselves support very directly the appearance of particular types and concentrations of activity and the street-scenes that go with these activities. Place is produced as a spontaneous '*event*' associated with a '*concrecence*' of activity and shops or other facilities. This production is out of the mobile populations of people, goods, money and information within movement and communications grids – which are themselves concrete and *built*; systematising and constraining what they at the same time produce and enable.

The productive capacity of the grid lies however not just in the way it shapes the communications it enables; it derives also from the fact that movements are not equivalent to simple linkages between nodes, but are bound to pathways and produce effects *on* those pathways. Indeed, in traditional urban fabric, much of the interface *between* grids referred to earlier takes place *on* pathways which are turned into places of high social and economic productivity by virtue of that interface. These places become meaningful by virtue of the processes which form them, and in our traditional centres these conditions have delivered typical urban – or better urban-social – forms, which have inserted themselves into everyday social life and are supportive of those lives. These forms become appropriated into an urban social space and into urban social life but are in the first instance a product of an *urban* machine. Our urban practice today has not thus far been able to add very effectively or creatively to this repertoire of urban-produced and socially supportive forms, which is one of the reasons traditional ones still provide our best public places.

Thus is the built landscape constructed as a psychologically and functionally effective and integrating space – around a technology of the path whose product is a lived culture of movement, connection, encounter and situation. Thus is a form of the environment integral with our own dispositions and inclinations, and the means by which we are integrated with the world. Thus is ‘mind’ and ‘intelligence’ diffused through the environment, and thus are we integrated physically and psychologically with this environment, by way of pathways to the differently scaled horizons which refer to the differently scaled and meaningful places and regions of our lives.

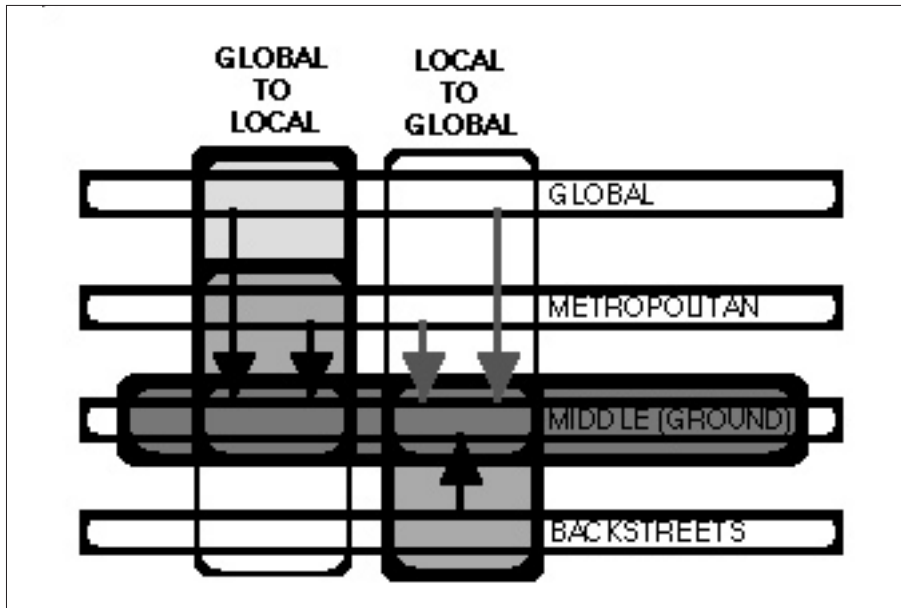
The question of whether we are talking about a mental space or a physical space or a social or economic space arises. I honestly don’t know what to call it, and am not sure that we add anything to the idea by categorising it in this way. It seems to me that this space’s most interesting aspect is precisely its resistance to categorisation in these terms – is precisely in fact its insistent hybridity.

Global ground

In fact none of us these days need, like Marco Polo, to go all the way to the global in order to find it. As another of those at first sight paradoxical anomalies of the phenomenon of the global and of the systematising machine of our global world, we find that the effective factors today in the construction of global places have shifted back to the local. In our by now thoroughly and ubiquitously globalised world, where pathways to the global have been cut to virtually every local place, it is rather the special properties of local places – given by a ‘thickness’ of overlap generated by multiple grids performing multiple shells, in multiple modes, ‘vibrations’ and scales, and a ‘criticality’ this overlap confers on place – that determines and delivers an open *urban* character and vitality and viability from Ankara to Zhengzhou or from Amsterdam to Zwolle. Further, it seems that in our thoroughly globalised and metropolitanised world, effective places today everywhere just *are* global, they *are* metropolitan, and insofar as ‘medieval’ places or ‘small town’ places exist anymore, they exist as forced and staged constructions built on dubious exclusionary presuppositions.

The global and the metropolitan are everywhere today precisely because they are not ‘over there’ in a horizontal relationship of distance to us. The vertically stacked shells of the global and the metropolitan set up grids that penetrate and traverse every viable urban place, and the ‘branch-lines’²⁵ from the global to the local are constructed in these grids. We exist in a *vertical* relationship to all these higher scales – they are stacked up over us and the centralities they generate act simultaneously on all local places. Today then, the qualities and mechanics of the points of meeting of the global, metropolitan and other higher scales, with the local, are the significant factors. We could say better that the issue for today is *how the local is constructed* as a bridge between the global and what we still call the local as if it were (which it is not) the counterpoint and opposite of that global.

A ‘horizontal mapping’ of these relations exists simultaneously with the ‘vertical mapping’: what we do is identify and distinguish in plan the grids constructed in or appropriated to the various shells and their scales – we differentiate for example the boulevard grid from the backstreet grid in Paris – and then work out how the local condition of place is constructed in the overlap between these grids. We work out at the same time way the ‘branch-lines to the local’ are constructed by way of other higher-scaled grids, delivering the global and the metropolitan to place – that delivery of Coca-Cola driving past on the freeway, the copy of the franchise contract in the post from Seoul, the lawyer on the high-speed train on her way to see a client, the school-teacher commuting by car to give his class. We get a very concrete construction in the local depending on and connected to the higher scales, supported in a place which has depth and particular character thanks to its being caught within a cascading of ever finer-grained parochial.



One may legitimately object that most people do not live in such a construction any more, underpinning with a local-particular character a bridge, embedded in a fabric of grids, between that parochial and the higher scales. What is true at the same time though is that a considerable number of people *travel* to these kinds of places or to a more metropolitan-scaled version of the same (the grey arrows in the diagram) to exploit and enjoy the qualities of these places *as places*. What's more, in doing this, these commuters and metropolitan and global nomads of a variety of sorts, add themselves to the diverse 'critical mass' layered into that place, and contribute to the metropolitanisation and globalisation of that place. The contribution of *the place itself* to urban character and function, and the principles of its construction, are simply too little acknowledged or understood.

I don't however wish this to become a plea for 'urban traditionalism': what I want to suggest is simply that there exists an ecology, working simultaneously in psychological and physical space that structures and situates our being in the world. Where we feel that that the fabric of existence and situation is illegible and insubstantial, we will probably find, I will propose, the reasons in the framework I have outlined here. This framework – and the considerable amount of detailed elaboration it still needs – sets the parameters for our continued situated existence in this world, an existence which, when we understand its principles, can take on and assimilate any amount of novelty, design and invention.

Conclusion

Gregory Bateson, drawing his 'organic' and 'ecological' view of the world from philosophers such as Whitehead and Bergson, shared with them a great insight, one that can open a wide way through the dilemmas we face with respect to technological urban cultures and the way these are diffused within our urban territory. He proposed that we engage with and act in a world already formed, physically and psychologically, to ourselves as part of that world. He proposed attempting to understand this world as being continuous, and as continuous with us. In a world whose reality we understand as consisting of bounded domains, we think of invasion, of violation, of rupture, and create a space of defence and partition and fragmentation. I have proposed here a continuous distributed form of the city capable of differentiating without borders – a form that can map over the urban space of our lived experience, and embody (rather than represent) that experience.

The idea that our cognitive and activity structures are diffused through our surroundings is not a new one – we propose in addition that we have actively, if somewhat unknowingly, articulated our world through a subject-centred technology of the path. Through this articulation, the creative and vital of the world may be centred everywhere, and not just in us. We are co-involved in the articulation of urban life, with the extra-human of the human population and I would argue with the habits, memories and residues of that, which we could call ‘the city itself’. This distributed agency doesn’t just work at the level of distributing life and activity through the urban surface – it is also a distributed being and knowing, a *psycho*-geography.

- 1 Augé
- 2 M-P, SB
- 3 Whitehead PR
- 4 Read 1996, 1999
- 5 Read, *Flat City* (2005); Read, *The Urban Body* (2006)
- 6 Read, Pinilla (eds.) *Visualizing the Invisible* (2005); Read, *Flat City* (2005)
- 7 Bruyns, Mendonça, Budiarto
- 8 Productive space (Martine’s research), *Flat City*
- 9 See Sennett, 1970
- 10 Urry
- 11 Annemarie Mol & John Law (1994), ‘Regions, Networks and Fluids: Anaemia and Social Topology’, in: *Social Studies of Science*, Vol 24 (4), pp. 641-72.
- 12 Network Society
- 13 Urry, *SbS* p. 123
- 14 Michailovsky
- 15 Waddington, *Strategy of the Genes*
- 16 We have been working over the last two years with the Hyperbody Studio run by Kas Oosterhuis. The computer environment approaches much more closely the ‘common-sense’ space of neutral extension within which ‘agents’ can be (and are) defined at the level we normally think of as the subjective individual. We have created a Kantian universe (where the world emerges from the subject) by misunderstanding our own and building these misunderstandings into computer environments.
- 17 Structure of Behaviour
- 18 Whitehead PR x
- 19 Casey (1996)
- 20 See: Casey (1996), p. 24.
- 21 See: Ingold (2000), ch. 9.
- 22 Bruyns
- 23 From Hillier
- 24 Saskia Sassen (2001), *The Global City*, Princeton University Press, Princeton NJ.
- 25 Latour (1993)