

>> The Soft Urban Machine: Space-Time and the Production of Urban Place

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Abstract

The expanded scales of the patterns traced by the lives of people have fundamentally altered the conditions of and the experience of everyday life and of urban space. The spatialities of movement these changes have foregrounded force us to rethink the very basis of our urbanism. It is argued that these spatialities of networks and flow are relevant not only for thinking about the new city emerging on the periphery but also about unsolved problems of the local and of place in the traditional centre. The beginnings of a general conjecture about the production of properties and character of urban places as an effect emergent out of overlapped movement networks is outlined and expanded into a sketch outline of the case of the central fabric of Amsterdam. The traditional centre remains a powerful model both for critiquing the qualities of the new urban landscape and for guiding urban design intention, and the need to reproduce some of qualities of this traditional space is widely recognised. The significance of this theoretical work is that it may begin to put the understandings in the hands of designers that will help them to achieve these intentions.

Keywords: public space, movement, networks, urban form, Amsterdam

"In its origin, then, the city is a paradoxical form. The city ground plans take their shape and meaning from the distinctive opposition between city and land or centre and periphery. But this difference is secondary and misleading. Primarily, the city is formed and informed by heterogeneous speeds – by the difference between inertia and traffic. The form of the city is thus, finally, an unstable effect. The city exists then through traffic in all its forms. While the anthropological thesis of differentiation according to defensible territory is not untrue, it is misleading because it suggests the possibility of an autonomous space that receives its quality from itself".

Wim Nijenhuis, from *City Frontiers and their Disappearance*.¹

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1. A man-made world

We live in an artificial world; in an environment which is not in any useful way defined by any pre-existing 'natural' state, but is rather a complete immersive world of our own making. And this is perhaps nowhere more evident than in the Netherlands; a habitat built by hand and machine from almost nothing, an inhospitable swamp transformed into one of the most highly populated regions of the world. The built environment of the Netherlands is a product of necessity in the first instance – of making a dry and habitable place out of a wet and uninhabitable one. Practical problems of water management, mobility and habitation are dealt with in ways which are direct, practical and effective, and in general one can say that issues of experience and of the quality of experience of this constructed thing has not been a major determinant of its shape. However, the critique of this landscape is increasingly expressed in terms of quality of experience; terms that escape the direct technocratic set-up of the planning culture. Planning directives also take up these themes,² while it is also increasingly clear that the outlines and criteria of this quality are difficult to define. The idea of spatial quality first seems obvious, and then increasingly nebulous and empty as it is subjected to scrutiny. Aesthetic issues tend to be handed over to the designers who come up with proposals that either draw from lessons of a subjectively interpreted past, or else break radically with that past and project, again highly subjectively, into sci-fi futures which when built seem strangely familiar and are effortlessly appropriated by dominant and commercial interests. On the other hand notions of urban quality are subsumed into concepts such as 'urban vitality' or 'urbanity' which, while implying more about lived culture and social quality, themselves lack definition as a directive to action. The lack of a precise bridge-work from ideas of experiential quality to the fields of planning and design, becomes even more critical in the light of some emerging crises in relation to the meaning and scope of the city and its relation to contemporary life. The diffusion of the urban entity into a thin metropolitan mass which is sometimes barely recognisable as a city in the old terms: the loss of a sure sense of place: an increasing anomie and sense of dislocation from the environment around us: the loss of environmental distinctiveness and intelligibility. These are the terms of an emerging critique, not just within the Netherlands but also in the rest of the world, of qualitative and experiential aspects of the built environment.

Perhaps though, it is within this laboratory of the artificial, of the purposefully changed and changing, we can get a sharper sense of some of the parameters and outlines of urban quality, of some of the underlying logics of this immersive world of our own making, and the possibilities available to us for enriching the everyday lives we live within it. Here, perhaps as a by-product of this blatant artificiality, there seems to be a sense of there being few inevitabilities about the world we create for ourselves. Where every last inch of earth has been made and re-made, it may seem easier to reflect on the worlds we live in, worlds that are the consequence of our own actions and strategies, as well as on the alternative worlds that may be the outcome of alternative actions and strategies.

2. From space to space-time

There is an obvious connection between urban space as it is lived³ and as it is made, driven by functional necessities and the directedness of organised human action towards the meeting of these necessities. Today, it seems broadly true to say that the city is being made at a regional scale, and that this is a reflection of the dominant ways contemporary urban space is being lived. But the relations between these two spaces, the lived and the made, is not a logical unity. It is mediated most obviously by constraints which include budgetary and policy priorities and so on. But it is mediated also by the field of possibilities as it is seen and understood at that time. We cannot propose what we do not envision or do not understand, and it could be that the possibility for an alternative lived space is passed by because we do not possess all the conceptual equipment necessary to be able to see a path to constructing it. It could be that some of the 'character' of modern urban life is being directed not by the inherent necessities of that life itself, but by the constraints and limitations that we as planners place on the spatialisation of that modern life by the networks we build, and those that we don't.

Lurking behind this proposition is the suspicion that we pay too little attention as designers and planners to the time dimension in thinking about the space and places of the contemporary city. It is becoming increasingly obvious that the order of the city cannot be outlined in terms of the static, and that quality and experience of space and place are linked as powerfully to time as to space itself. It is space-time rather than space that provides the dimensions of the functional order of the city. We need even to consider that the functional and qualitative parameters of *location* itself may be tied to an order which is dynamic. I don't believe that this is something new; urban processes and places have probably always worked like this. We simply now live in a world where the time dimension imposes itself on us with such force that it can no longer be ignored. The rules of thumb we use for marking our place in this world have to be revised to incorporate the dynamic, and it is possible that once we do this, all sorts of the things we didn't know how to order and qualify before, may start to reveal their secrets.

The suggestion that time should be taken as an explicit component of the everyday construction of the urban scene is not primarily driven by an interest in mobility, though it may be seen as being forced by this. Rather it is driven by a realisation that urban space is fundamentally relational, and that the production of the city as a social artefact (or better as a social environment; something we live *in* rather than look *at*) is accomplished through everyday action, interaction and experience. Relational space, when it becomes lived, needs to be *performed*, and this brings in movement and time. The time we are referring to then is not the historic time of the evolution of the city but rather an immediate, in the here-and-now, space-time of the way relations in the city are made and performed in the course of everyday activity and interactivity.

The experience we are referring to in this relational space is also something which lies a little deeper in our everyday social-spatial worlds than the immediate perception of visual fields or attractiveness of environments. It has to do

with our understanding of the society and culture we live in. An idea of a social world constructed within a relational spatial field goes beyond seeing us as beings who carry our cultures and societies around with us, as some kind of mental state, to one where the world we encounter, and our web of relations with the world, *become* our societies and cultures, which are integral with and embedded in the way we live. Society and culture in this view are effects of the processes of everyday life, and social, spatial, cultural, technological variation become not determining, but things which induce modulations in a total social field.⁴ This field is spatial, so that factors of social distribution and social interface can profoundly affect domains of consciousness and intersubjectivity. And the system can be highly open to change as it distributes and balances counteracting forces (to different degrees depending on the system's openness) throughout the field.⁵

The power and persistence of the space-without-time paradigm (especially for designers) has a lot to do with the object of the designer's attention, and that object of attention is determined just as much by what can be 'seen' (conceptualised and viewed) and measured, as by the designers' expressed aims and intentions. Just as certain means to intervene are excluded by blind spots in our understanding of urban space-time processes. Space-without-time relates to, and has its material expression in, the *physical* fabric, which is static, measurable, mappable to high levels of resolution. The time dimension enters here as historical time, mappable also (the contestation of historical interpretation aside) as the sequence of events and processes which produced the material forms we see around us. Of course many of these historical processes are on-going and many useful things can be said about the environment on the basis of this. But the space-time I am talking about here has as its object a different fabric, which while being just as real, just as material, as all that hard static stuff we see around us, is much more difficult to pin down and measure; much more difficult to 'see' – not least because we lack the conceptual equipment to understand what we can do with it. I am talking about a *performative* fabric, appearing as a soft blur between the hard stuff, or as the hum in the cables and wires – the fluxes and flows of multitudes of individual and particular social relations being exercised. The things that move to complete these relations are manifold (people, goods, money, telephonic messages, bytes of information, are some of the most important) and these are, much more than the static surfaces and architecture, the very stuff of urban character and vitality.

And these space-time relations – the active part of the social network – are then mediated by physical networks, networks of communications, the media, and networks of movement. In fact, that great abstraction 'society' can be seen more concretely as an emergent product of an astronomically dense graph of relations set up in and then manipulated and mediated by the networks of the physical world. And many transformations in that society can be seen as emerging out of new possibilities (and new restrictions on) the making of connections and relations in the world we build for ourselves today.⁶

3. Made networks – lived space

My concern here is to show where, in the context of the changes in the range and possibilities of peoples contacts and movements through these networks, issues of place and of the quality and the experience of public space can be located. And, while it is acknowledged that the flood of images and information delivered by the media and the communications networks has changed our lives and cities forever, it is the effect of the everyday bodily exercising of the space-time dimension; the effect of movement and the experience of movement and its products in an immersive urban environment that is my interest. This is in order to try to begin to expand the range of ideas around the relationship between lived and made space, and in order to open up the field of possibilities for the spatialisation of contemporary life.

The city – and its form – enters the equation here both as producer and as product. The form of the city is related, in ways I shall talk about, to the dynamics of movement and social group interface. At the same time the particular social (and small-scale economic) conditions set up at particular points in this dynamic facilitate an accretion of material (including social and cultural) particulars which start to make up the street-scene. These particulars, often insignificant on their own, when arrayed together in context, inform or index each other, creating a rich urban communicative pattern in a way not dissimilar to everyday speech.⁷ This indexing is tied back into the dynamic, which has a strong local to wider-scale logic, so that multiple and diverse overlaid particulars relating to street-level culture and economy become structured around movement patterns and their concentrations and centralities, rendering areas and places coherent with respect to the wider city, while they at the same time maintain their local particularity and distinctiveness.

It is important to emphasise here that though, to our view from our imaginary vantage point above the streets and squares of the city, the blur of this fabric of movement may be soft and difficult to resolve, it is nevertheless material, real, and composed of highly particular elements. In the discussion which follows, the fact that the life in our public spaces may appear fuzzy and empirically impenetrable, should not mislead us into believing that the purpose of public space is to achieve a mixing; a sort of formless, tasteless soup of humanity. The relational graph of society produces just as much formation and distinctiveness (fluid and changeable though it may sometimes be) as it does fluidity and diffusion. Distinctive social groupings may be defined in multitudes of ways, including all the well-known ones like ethnic, lifestyle, age-group, class, etc. One of the important ways this social stuff, this blur of movement, is differentiated here will be by *scale*. People move differently and choose different mobility webs or networks depending on the length of the journey they are undertaking.⁸ A route to the corner-shop will in most cases involve a different set of spaces to a route to the furniture store a mile away. A different set of spaces again and a different movement network will be involved in a journey to the airport. One of the reasons this particular differentiation is interesting and important is because at the lower and middle scales in particular, it maps over the broad social categories of *inhabitant* and *stranger*, and talks about different involvements with and different commit-

ments to particular networks and places. What I will be describing later is the way, at the scales of *neighbourhood* and *quarter*, different scales and speeds of movement (broadly inhabitant and stranger) are systematically interfaced with each other in urban public space. Insofar as these broad categories also correspond with ethnic, class and other differentiations (inhabitants may be of an ethnic-minority, or rich or poor, or student, or worker or yuppie neighbourhood population; strangers will be more diverse, and represent the public of the city at a larger scale), this becomes *the* logic that drives urban social interface (and coincidentally small-scale commercial process) in public space.

One could say that it is this that the city (in and of itself, and as a social apparatus or machine) *does*, and it is in the manipulation of this machine that designers and planners can substantively influence urban experiential and social-functional factors.

Many of the notions I will be proposing come out of a long research into the space of the Dutch city using the grid analysis techniques of space syntax.⁹ And, of course behind this discussion, and behind all these ideas, sits the special presence of the Dutch city, by turns (quite often in the same place), quaint and modern, village and metropolis, tourist trap and *volksbuurt* (people's neighbourhood). But it is nothing if not accommodating, and it is this aspect of urban functional pliancy, malleability and responsiveness to the processes of life which is one of the main ingredients of a well constructed urban space-time.

4. The new regional city

It is clear that there is a new scale in the present-day urban spatial field led by the new dimensions of everyday human activity as these eclipse the physical limits of the old centre. The city today is being made at the regional scale, as the 'outside' quite suddenly disappears from the old 'inside-outside' of urban centre-periphery. The scale and intensity of the flows within the new extended urban field forces us to rethink and redefine what urban space is, as the new urban social-spatial scales and their effects don't limit themselves to the peripheries of old centres. 'Centrality' and 'peripherality' seem increasingly to invade every sector of the urban landscape, weaving through each other, and flipping the old order of urban areas and surfaces on its head; establishing a discordant new space whose collisions are an increasingly familiar part of our everyday lives, but are still surprising when seen in relation to our more familiar spatial habits and static notions of urban order.

In fact a new *centrality* has emerged from the intensity of the mobility dynamic, and not one we are used to thinking about. It is situated within, and takes on the defining characteristics of the new urban space. It becomes slippery, fluid, diffuse; an extensive 'centre' permeating the infrastructural networks of the 'periphery'.¹⁰ This is real centrality, not just 'accessibility'; a dynamic property of urban space, a product of the mobile flux, and it is a property of, and is generated within, the *scale* or *speed* of mobility being considered (as people choose their networks on the basis of the scales and speeds of their movements). This spatiality of flows with its new centrality gives us a clue as

to how we might be able to re-conceptualise centrality in general in the new urban space.

To find the order in all this, we need to move away from a conception of centrality tied to the old spatial orders of surfaces and borders and inside and outside, to one of differently scaled meshes of diffused centrality,—and then see if we can account for the old centrality, with its locatedness and place-like properties, with this new spatial model. The perhaps rather non-intuitive proposition is that there exist multiple centralities in urban space, each diffused and extensive, like the centrality of the freeway network, each permeating and filling their respective scales (or speeds) of network, and that these may interact with each other, where they overlap, to produce effects that we recognise as the kind of centrality and place-ness we are all familiar with. The model requires that one imagine infrastructural webs at different scales, each of them suffused with a dynamic energy (to different degrees in real cases), overlapped with each other, and interacting (again to different degrees) with each other to produce the urban effects we are seeking to explain. This account then tries to outline the way our experience of movement is transmuted into an experience of *place*, through the way different scales (or speeds) interface with each other.

The emergence of the new scales and their foregrounding of the spatialities of flows and of the networks which accommodate them has changed the character of modern life profoundly. But the old places have not disappeared; they have changed certainly, but then it is in the nature of things of flux that they should change. In fact our attention to a different kind of spatiality does not mean we give up all notions of creating place, or that we resort to sterile attempts to preserve place by bounding it and cutting it off from the energies which sustain it. In fact urbanisms of surfaces and borders always worked against the processes of an urban life, and urban space has always been mobile. We can account for the old centrality as an effect of the 'new' spatial order, and in order to elaborate on this and give a flavour of the working of this urban machine, I will look at the production of the old sort of centrality (or place) by movement in the traditional centre.

The lived space-time frame of the centre-on-the-regional-scale is so foreign to the immediate landscape the infrastructure cuts through, that the 'places' carved into this placelessness become attached not to the ground, but to the diffuse floating experience of this extended free-flowing space.¹¹ They become capsules, mobile and static – cars, malls, suburban enclaves – dislocated footholds in this amorphous centrifugal new centre.¹² One could say that the *new* outside is the world outside this encapsulated, conduited experience, different to the old outside in that it exists in such striking and dissonant proximity to the dynamism and energy of this new charged space.

This is the world controlled from the freeway,¹³ the world of the suburbanite whose experience of movement – from the capsule of the socially homogeneous suburb to the capsule of the mall or shopping or business or entertainment 'centre' – is mediated by the personal pod of the automobile. The centrality of the freeway controls access, controls social differences and sup-

ports tendencies to social homogeneity. It is a space without social interface, without edginess, bland and indifferent; the product of a technocratic rationality. It is designed in fact to filter and sort the heterogeneity of the city, and facilitate the desire, in the social groups who are able to make use of it, for autonomy; the desire to make an 'our space' where uncomfortable social contradictions and confrontations can be avoided.¹⁴

Here, the paucity of intermediate-scaled webs between the local and the regional means that contact between localities on the 'periphery', whether that is at a scale of one, ten or a hundred kilometres, is more often than not directly mediated by the diffuse centrality of the regional web. Time spent in motion is dis-located from any situating 'interference' in movement space, while spatial adjacency is de-scaled and equalised. There is nothing to induce the contrasts, conflicts and overlaps that delineate experience the way it does when overlapping centralities interact.

5. Knots in the regional web

In the meantime though, the centralities of the old centre have not disappeared. The centripetal forces generated by the focus of the infrastructure towards the historical core, and by the increasing fineness of the mesh and density of connectivity as one approaches the centre, seems to be if anything stronger for being opposed by this powerful alternative polarity.

The whole system, seen at the regional scale, in any event generates unevennesses; 'edge cities' tied to strategic positions in the regional web. The traditional centres will tend to be strategic positions in this web anyway, but then super-charged by their intense mesh of connectivity at the finer scale, and by the density of embedded lives and interactivity. So the traditional centre, quite different to and seeming to be of an opposite kind to the centrality of the regional network, is also fed by this network. European centres – at least those whose dense connective morphologies have been protected – are stronger, more intensely used than ever they used to be. Their programmatic logic has changed, but the logic of this lies also in the new spatial order; the whole city is no longer a traditional centre of proximities and adjacencies, rather the 'centre' in the traditional sense is a component of an extended networked urbanisation which includes those encapsulated, controlled spaces on the regional network. This configuration has to be considered as a whole if one wants to understand the way other orders, including those of programme and function, not to mention class, power and that of community, are spatialised.

It is clear also that the respective characters of old centre and periphery, each with their own characteristic speeds and scales, don't each remain tidily in their own places. There is, also within the fabric of the traditional centre, a weaving of the orders and scales of activity of each through the other. And this weaving clearly doesn't, as one might perhaps at first expect, lead to an increasing uniformity of the scales and intensities of activity within the urban field. Rather it seems to generate increasing contrasts within an increasingly complex configuration of urban places as the 'new inside' (interiorised and controlled public spaces) *and* the 'new outside' (spaces without clear defini-

tion – disconnected unnamed spaces) of the ‘periphery’ penetrate also into the ‘old inside’ of the traditional centre. While infrastructural connection at the metropolitan and regional scales mean that at these scales connective efficiencies increase, in terms of a matrix of adjacent urban places, spatial and functional fragmentation is more often the character of the new order.¹⁵

The fact is we are only just becoming used to *thinking* the space of the city in a new way; in a way which incorporates the fluidity and provisionality of structure and centrality, and the way present-day functional scales and dynamics are transforming urban forms. While we have assumed these forms to be stable, in fact they were always a product of vectors and flux and liable to shift, and sometimes to shift suddenly and unexpectedly, as scales within the dynamic changed and the system slipped from one equilibrium to another. The mechanics of the machine are a mechanics of flow, and social-spatial forms are emergent out of this; a product of aggregations and condensations of clouds of micro-effects, producing structure which reveals itself not just in patterns of activity, but also in condition and character.

6. The middle-scaled web and the movement-scale machine

The traditional centre is an historically produced fabric of places, characterised in the terms of our conventional understanding of it, as an enormously complex layering of social meaning and significance; a sort of jumbled-up treasure box of collective memory. The paralysis induced by this view in designers who, without access to the dimension of historical time, despair of ever being able to reproduce such a fabric of richness, is in this view quite unnecessary. The adaptability and responsiveness of the central fabric to new times, to new social and functional tendencies and demands, is precisely a product of the way some of the enormous complexity of the relational space of the larger society, is condensed and organised by scale within the webs of public space, constructing meaningful conjunctions, and social (and small-scale economic) interfaces according to rather simple generic movement mechanisms, built around rather simple physical spatial armatures. The argument here is that we may, by understanding how the machine of movement and scale is constructed, still build ‘organic’ places, built into and supported by an extended dynamic space; self-sustaining places, integrating the space-times of local and wider scales, supportive of local everyday lives and cultures and adaptable to changes in the local and larger society.

Research using space syntax has already revealed the fundamental movement logic of the grids of traditional urban centres,¹⁶ and my own research has shown how particular streets, through their simple local connective geometries within the grid pattern, tend to be significantly better connected with respect to local clusterings of streets (figure 2). This is in itself interesting, but what is much more interesting is that these very same streets then start to link up with other locally highly connected streets to form a continuous network at a higher scale level which begins to fairly evenly cover the surface of the centre (figure 1).¹⁷ This higher level network is not all obviously designed for higher scales and higher speeds of movement; these are often in the case of Dutch centres fairly ordinary streets, recognisably part of

the continuous distributed spatial grid, but they are nevertheless very significantly better trafficked than other streets local to them.

So a coherent spatial web is formed in the surface of the traditional city centre (a higher scaled grid within the urban grid as a whole) which comprises highly connected streets at the local scale *while at the same time* becoming the movement network at the next scale up; the *middle*-scaled movement web – between that of the region and that of the local grid – in the city of scaled movement webs. The consequence of this conjunction is that an interface is set up in these streets, between the scale of the local area on the one hand, and the scale at which people get around within the larger central city on the other, which produces powerful conditions supporting street-edge commercial activity on the one hand and social and cultural identification and encounter on the other; local character and culture meets the more diverse mix of the wider city. The high-street is not simply and simplistically a street programmed for shopping, with accessibility added as if it was a neutral effect of the making of linkages; it *becomes* a shopping street because the conditions produced by this effect of different movements support the economic and cultural role of the high-street. This is how it works in Amsterdam, but I suspect it is also a more general scale-interface effect; a generic spatial mechanics of the urban grid which produces those secondary centralities and differentiation in the traditional fabric.¹⁸

We have in effect a fluid-mechanics of the city; like the standing waves and whirls in a flowing river, local conditions are set up and fixed in place by the local physical topography on the one hand and by dynamic flows and forces that arise out of the system as a whole (and the topography of the whole that supports these flows) on the other.

7. The Amsterdam movement-scale machine

What is an even more remarkable consequence of this conjunction – besides the cultural and small-scale economic effects – is the solidity of the experience of place that we know so well in the traditional centre. Here it is that the paradoxical nature of urban place can be understood. The stability and locat- edness of the place experience lulls us into believing that this is something to do with the immediately local; with the forms and textures of the architec- ture, the furniture and the surfaces. In fact the properties of place that locate it most firmly for us are those that are not of the location itself, but those that link the local in a structured way with the wider surroundings. *Place* is no autonomous property of a specific locale, rather it is an *effect* of a structured relation between part and wider whole.

The middle-scaled network is, like the regional network, in principle a cen- trality in its own right and at its own scale which could also, other things being equal, be just as diffuse, slippery and formless as regional centrality, spread- ing itself evenly, without definition, throughout the network. This is not the case however for reasons that relate to the two *separate* centralities, the mid- dle and the local, that suffuse the space of the traditional central city, and play off each other to produce the effects we encounter on the street.

10 The middle-scaled network in the traditional centre has edges – one comes

to the end of the traditional city whereas the regional network tends today to spread itself out continuously, oblivious even to topographical or political borders. Where there are edges there is also a centre – a delimited dynamic loses intensity towards the edges for obvious reasons to do with the syntax of space and flow. So there is in very broad terms, highly modulated by the factor I will shortly discuss, a shading of the intensity of activity from edge to centre of the middle-scaled network. This effect is of the obvious ‘centrality’ of the traditional city, corresponding with our intuitive grasp of mono-nuclearity. However there is another effect which opens the possibility for poly-nuclearity not accounted for by this first effect.

Local-scaled centrality (the diffuse centrality of movement at the scale of the urban grid itself) interacts with the middle-scaled centrality I have talked about already, differently in different places on the middle-scaled network, producing different place-effects on this middle-scaled network; producing as well structured specificity which makes the city intelligible to the immersed subject in motion. It is inadequate therefore to characterise this middle-scaled network as simply an accessibility network. Its primary logic and mechanism is to provide the framework on which place-effects are produced. The way this is done is simplicity itself: particular streets on the middle-scaled network are simultaneously a part of the local-scaled area movement network (the local grid pattern) and the middle-scaled city or quarter movement network. These overlaps have different degrees and different balances of the one scaled network to the other depending on some very obvious factors. One factor is the degree of *constitution* or physical linking of the two networks. For the effect to work best the two grids would be hardly distinguishable from each other when looked at in plan. Another factor is the position in the middle-scaled network in relation to that network’s centre and edges (its mono-nuclearity effect). Other factors play a role but are themselves (as are these two factors already mentioned) all part of the logic of the model and are quite intuitive within the system outlined.

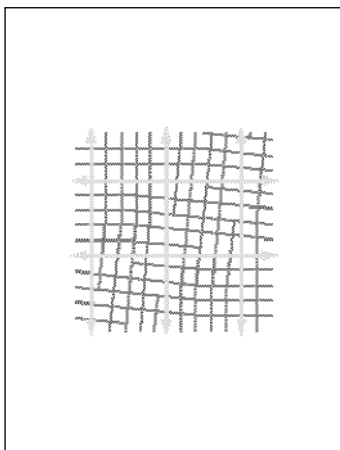


Figure 1.
The local and the middle-scaled networks in the urban grid.

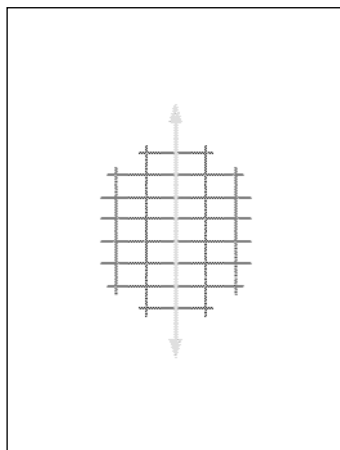


Figure 2.
The local and the middle-scaled network relationship (constitution) in the traditional centre.

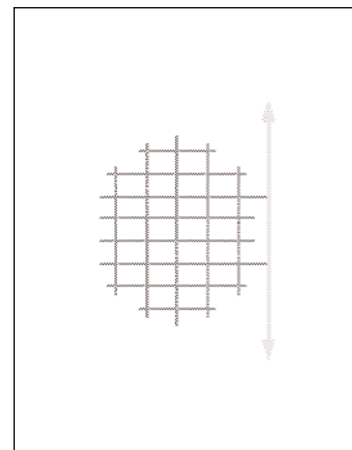


Figure 3.
The local and the middle-scaled network relationship (constitution) on the edge of centre.

There is a simple order here, underlying urban richness and complexity, an order based in the two-part scale hierarchy of movement networks in traditional central urban space. This is the order that links the urban local part to the larger urban whole (or larger part) and this is the order to which urban detail is indexed. This order is inflected and shifted by the influence of the new scales and the centrality of the periphery, and it is occasionally overthrown. It remains however with us today in very many urban situations, indexing complexity, ordering experience, defining place, making the immersive urban tissue coherent, structured and intelligible.

It is interesting to note here a fundamental difference between the ordering of these kinds of traditional urban environments and some of the more designed layouts that are the product of spatial design ideas such as 'neighbourhood unit' or 'urban village'. In the first place, *parts* in the traditional fabric tend to be defined by their centres rather than by their boundaries. These centres are the places where the local to middle scales are interfaced — in other words these centres are as open to the rest of the city as they are to the local area itself.¹⁹ In contrast, the more designed urban layouts tend, through the way they are made, to cut themselves off from the wider city, establishing an own, secured, 'defensible' space which is often under-occupied and beset by problems of monotony, isolation and public space quality. Areas tend to this type in Dutch cities as well, in the more recently developed areas as one approaches the edges of the central city. While older areas tend to be *centred* on the middle-scale web (figure 2), by the time one gets out to later 20th century areas, the middle-scaled web *bounds* the areas (figure 3) and the 'centres' these areas enclose exhibit little trace of the scale and culture of the wider city. These new neighbourhood areas are in fact spatially an inversion of the traditional neighbourhoods that were apparently their inspiration, and are a pre-figuration of the closed, capsular morphologies of the periphery.

This *hardening* of the fabric towards the edge relates very clearly to the factor of constitution; the physical link between the middle-scaled axis and the area is reduced to an efficient minimum defined by the need for accessibility. In more recently designed and built neighbourhoods, local centrality is explicitly removed from the higher scaled movement network as this network is de-constituted and its (middle-scaled) centrality begins to become once more slippery and placeless. It is clear that closer to the centre there is a high level of redundancy as regards simple accessibility; there always being multiple ways to access areas or locations. In fact it seems clear that this redundancy is a prerequisite if we want those field conditions to emerge which support high levels of street-level activity.

Whereas in recent times issues regarding movement and attraction, and the working mechanism and ordering of the city have been subsumed under ideas of *accessibility* and *function-attractor*, (getting around and destination), what I am proposing is that these factors are in the traditional city subsumed under the idea of multiple overlapped *network-centralities* and their *interfaces* (movement-flow-networks and place-effect). The traditional city is set up as a field of relations between the parts and the whole, which is non-specific in

terms of function, delivering instead particularity in terms of conditions of place, and specificity in the effect of the appropriation of these particular conditions.

8. The missing middle scale in the cities we make today

The traditional urban grid is therefore not an even and undifferentiated surface, it is clearly articulated by the vectors it supports and the distribution of its activities, and in a way which significantly determines its experience, legibility and functioning. It is difficult at first sight to see how the grid in the first place came to be as structured as this, but the fact that it is suggests that there is a powerful connection, or at least there was at the time the grid was made, between the spatial logic of development and growth and the spatial logic of movement and activity. Which suggests generic spatial processes tied to the way cities are made. The general necessity for functional movement networks is clear, and one way or another paths are cleared or ways made which relate to a logic of movement. It is also fairly obvious that at any particular time the scales of the dominant movement patterns of the day will relate to the scales of the movement networks constructed. Today's cities generate massive flows at the regional scale and today's cities are being made as infrastructural works at the regional and metropolitan scales. At the time the traditional city was made (and that means for most parts of most traditional cities the second half of the 19th and the early 20th centuries), dominant movement patterns were still for the most part contained within the central city itself. So that the same processes produced connective networks which were made at the scales of district and city as it was at that time defined. It is that rich zone between the scales of the local and that of the metropolitan that are today's forgotten scales, the missing *middle* scales in the made space of the contemporary city.

It may be argued that these middle scales are no longer relevant in a world increasingly influenced by the scale of the global; conditioned by global flows of finance and people, by rapidly expanding mobility, and where the spectacle of urban life is being transformed into the spectacle of the commodity. But what Dutch cities demonstrate is the continuing relevance of places of fine-meshed spatial connectivity in the lives of a culturally and economically diverse, connected and mobile urban residential population, and the continuing viability of such places, where supported by a strong local political process and the local services and infrastructure of a strong public sphere. Such places are no longer the only higher-than-local-scaled places of the city; and may not even be the dominant ones from the point of view of global, or as domicile for the most powerful social groups, but they continue to have a powerful attraction, continue to find new inhabitants, new programmes and creative ways of renewing themselves. Places like this continue to support the leading edge of all manner of cultural change and renewal; lifestyles, entertainment, music, fashion; the spheres of desire and difference. These places offer themselves up for appropriation by maintaining an open structured interface between the part of the city and a wider whole, as they offer locatedness as a product of this structured interface between dif-

ferently scaled movement processes. This all may seem rather abstract, perhaps also difficult because we are dealing with unfamiliar abstractions, but the reality is all very familiar and taken for granted to those who live in such environments. The problem is not in finding such places, the problem has been in reproducing them in the networks we make for ourselves today and it is hoped that the ideas in this paper bring us some way closer to understanding how we may do this.

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Notes

- ¹ p 14, *Architectural Design*, vol 64, no 3/4, 1994.
- ² The *5th National Policy Document on Spatial Planning* identified shortcomings in the attainment of quality objectives in previous documents in spite of broadly effective implementation. Particularly the translation of quality criteria into implementation strategies and policies was identified as having shortcomings. The 5th Nota itself however, in spite of explicitly recognising the importance of the 'network society' and 'network economy', is unable to move beyond vague statements of intent when it came to spatial quality criteria.
- ³ The idea of a 'lived' and 'made' space are borrowed freely from Lefebvre, who proposed that space was 'perceived', 'conceived' and 'lived'; where the perceived is space 'produced' (apparently in all its multiple senses) while the lived is the rather introvert 'real and imagined' space of experienced everyday life. The 'lived' and 'made' spaces of this text try rather to open a 'space' between the social space *produced* by the social actions and interactions of people and the physical space *produced* in the social act of planning and design. They both belong to Lefebvre's 'perceived' space category therefore, though I am proposing that they belong also to the 'conceived' in the case of 'made' space and that the 'lived' spaces overlap with each other. The link between ideas about space and experience is my interest here.
- ⁴ For more on this view, from an anthropological perspective see Ingold (2000), and from a sociological and philosophical perspective Bruno Latour's ideas have been influential – see Mol and Law (1994) and Law (2001).
- ⁵ "We (should) view social life not in statistical terms, as the outcome of a large number of interactions among discrete individuals, but in topological terms as the unfolding of a total generative field. I have used the term 'sociality' to refer to the dynamic properties of this field. ...cultural variation may be expected to induce evolutionary modulations of the social field, but this is not to say that social forms are in any sense genetically or culturally determined." Tim Ingold, in 'An anthropologist looks at biology', *Man* (NS) 25 (1990): pp 208-229.
- ⁶ Hillier (2001)
- ⁷ Boden and Molotch in discussing the persistence of the importance of face to face communication, propose that the copresence of people is 'thick' with meaningful and orientating detail. They argue (p. 259) that the meanings of copresent interactions depend on the way particulars which may seem insignificant on their own, when arrayed together in context, inform or 'index' each other creating a rich communicative pattern. It is argued here that an equivalent structuring in space-time renders the well-functioning urban context 'thick' with intelligible meaning.
- ⁸ At a more abstract and philosophical level it may be better here to distinguish mobility webs not by their scales but rather by their speeds.
- ⁹ Space syntax is a set of topological techniques used to describe urban grids, which are capable of revealing emergent structural effects in extended grid patterns. The comparison of grid descriptions with functional patterns in real cities has begun to teach us something about the relationship between the form of the city and how it works as a system of movement – see Hillier & Hanson (1984).
- ¹⁰ One can see that words are a big part of our problem here, tying places and concepts to particular spatialities which may not be appropriate for the task at hand.
- ¹¹ As in Marc Augé's 'non-places'. I would suggest though that the alternative, his 'anthropological' places, besides being 'socially and historically anchored' are also, and more pertinently as far as we are concerned, *spatially* anchored in a nested layering of movement webs.

- ¹² De Cauter (2001)
- ¹³ As Jonathan Hill points out, in Los Angeles the freeways *are* the centre of the city. Jonathan Hill, p 42 in 'So Real', *Quaderns*, no 217, 1997.
- ¹⁴ Sennett (1992)
- ¹⁵ Boyer (1994)
- ¹⁶ for example; Hillier (1996), Read (1999a)
- ¹⁷ Read (1999b)
- ¹⁸ Other cities are being identified which have two clear scales of movement network between the local and the regional. Paris is a clear example, but parts of Rotterdam also display this pattern.
- ¹⁹ There are of course also places which form centralities locally while not being connected directly to the middle-scaled web. These more secret, intimate places are part of the richness and variety of the urban fabric, and are secret and intimate precisely because they are not of the type outlined here.