

# >> Situated Livelihoods: the street in a social ecology

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## **Abstract**

This paper outlines by way of a specific example the way urban space is implicated in situating a group of urban inhabitants and generating the affordances which are the basis of and stabilise as a 'form' their everyday livelihoods. It builds on research into social and spatial structure using space syntax techniques.

## **A short journey from time, through movement, to urban situation (or place)**

We pay too little attention 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 static distributions and bounded patches on the urban map, and that the experience, functionality and sociality 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 working order of the city; the functional and qualitative parameters of location itself must be seen as tied to an order which is dynamic. This is not 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 is not driven primarily 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, or economically produce) is accomplished through everyday action, interaction and experience. Relational space, when it becomes lived, is performed space, and this brings in move-

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ment 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 being embedded in – situated in – the society and culture we are part of. 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 variations are not determined, but induced by modulations in a social field<sup>1)</sup>. Factors of social distribution and social relation and interface 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.<sup>2)</sup>

### **The 'urban body' built into networks**

The power and persistence of the space-without-time paradigm has a lot to do with the object of attention, and that object of attention is determined just as much by what can be 'seen' (conceptualised and viewed) and measured, as by expressed aims and intentions. 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 some (though not all) 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 performed. The things that move to complete these relations are manifold (people, goods, money, telephonic messages, bytes of information), and these are, I would argue, much more than the static surfaces and architecture, the very stuff of urban character and vitality.

And these performed space-time relations – the active urban fabric (lets call it the 'urban body')<sup>3)</sup> – 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 mediated and modified by the enabling communicative 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.<sup>4)</sup>

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 web facilitate an accretion of material (including social and cultural) particulars which start to make up the material image or street-scene. These particulars, often insignificant on their own, when arrayed together in context, inform or index each other in relation to dynamics within network patterns – creating a rich urban communicative pattern in a way not dissimilar to everyday speech.<sup>5)</sup> This indexing is tied 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, 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 difficult to resolve empirically, 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 (changeable though it may sometimes be) as it does fluidity and diffusion.

### **Spatial culture, Amsterdam**

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 is by scale. People move differently and choose different mobility webs or networks depending on the length of the journey they are undertaking.<sup>6)</sup> 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 commitments to particular networks and places. What I will be describing here – first in relation to the city of Amsterdam<sup>7)</sup> – is the way, at the scales of neighbourhood and quarter, differ-

ent 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 Amsterdam's public space. One could say that it is this that the physical city (in and of itself, and as a social apparatus or machine) does, and it may be in the manipulation of this machine that designers and planners can substantively influence urban experiential and social-functional factors.

The spatial logic of the central urban fabric of Amsterdam, reveals itself as a grid pattern which splits into two distinct networks of 'supergrid' (explained below) and local area (or neighbourhood) (Read, working paper, 2001, 2003). This logic is reflected in the intensity of activity in these respective networks; supergrid spaces carrying very significantly higher levels of activity than local area network spaces local to them. The logic is however given not so much in this distinction with regard to intensity of use, but rather in the scales of movement for which they tend to be used. Local area spaces are used as a local, or neighbourhood, scale movement network, while supergrid spaces typically carry a complex of movement scales. They form on the one hand a coherent movement network at the larger scale of the central city, carrying the movements of people who are travelling at anything above the most local scales, while at the same time, due to the typically direct physical connection between local area networks and the supergrid network, they carry local scaled movement as well. In fact in most cases the function of supergrid spaces at the local scale goes beyond simply constituting a part of the local area movement network; supergrid spaces tend (in Amsterdam at least) to also form centres at the local scale. The consequence of this conjunction of local and wider city scale, is that an interface is set up in these streets 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 (Read, 2001). Street-edge economies are supported by city-scale passing trade at the same time as they become local centres for shopping and gathering. They may also and alternatively become city-oriented clusters of specialist commercial or social-cultural outlets, which are supported simultaneously by the particular populations resident at the local scale.

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



Figure 1  
Amsterdam's  
supergrid network.

which produces those secondary centralities and differentiation in the traditional fabric.<sup>9</sup> 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.

It is these sorts of 'movement products' – the functional patterns and the 'sedimentation' left by the structured overlap of movement flows distinguished by scale – a choreography of people in the movement networks of the city – that deliver the surface character and particular scenography of local high-street type places (Read, 2001). This character and scenography (the visible culture) are a product of the flows and the interaction of those flows, rather than the flows being produced by shops and other facilities acting as attractors. This gives a very different understanding of the urban surface; as a dynamic spatial field, organised around the interaction between movement networks, rather than as a neutral surface on which functional facilities are distributed and then connected. I would argue that it is important to understand the underlying logic of this field if we are to build models of urban centre functioning which are a useful framework for design thinking. It is my contention here that this underlying logic is founded in the movement of people in urban space and that this logic is fundamentally implicated in the production of particular urban cultures.

### **Spatial culture, Jakarta**

The ideas reflected above emerge out of a research on the spatial structure of the city of Amsterdam. It is clear that a lot of what is said may therefore be peculiar to Amsterdam itself and its particular spatial and historical circumstances, while some of what is reflected in Amsterdam may be peculiar to European historically emergent centres. While European cities in general have seen, over the last hundred years or so, a tendency to decentralise, and for whole population groups to tend to leave the centres for the new towns

and the suburbs, in the third world the tendency has been for rural populations to urbanise and for cities to become massively larger, with edges comprising huge rings of informal settlement of those struggling to participate in urban formal and informal economies. Jakarta has grown without a lot of planning intervention and has attained a spread of roughly 70 kilometres of varying density. Budiarto (2003) has looked at the social-spatial structure of Jakarta using the 'Amsterdam model' just outlined as his point of departure. He finds interesting similarities, as well as deviations from this model which can be related back to the different histories and growth patterns of these two very different cities.

In the first place, while at the scale of the whole city a very clear supergrid appears, marked by the positions of almost all the major public and large-scale commercial and institutional functions, this supergrid contains only a very particular part of the total life of the city. While there can be no question that the bulk of the formal social-political and economic power is represented here, many of the street edges are empty of the characteristic buzz of urban exchange and interaction. In the huge sprawl of the city though, coherence and legibility of the whole is maintained through this supergrid – it is the 'front' to the city seen by a traveller from the outside and serves as the primary accessibility network at the metropolitan scale. This 'shallowest' space of primary accessibility becomes appropriated by the sectors of highest, and highest-scaled, power, those of the large-scale formal economy and institutions with their links less to scales of immediate proximity than to scales of the city as a whole and to global and global regional scales way beyond those of the city itself. The relative lack of interaction with the local scale of the immediate vicinity is reflected in an erosion of the degree of 'coincidence' along these spaces. The street edge is lined with consolidated plots of land of increasing dimension, and the place conditions produced here tend to be unsympathetic to local appropriation which might produce street-edge vitality.

Meanwhile, the bulk of less formal economic activity and social interface, and there is an enormous amount of it, is taking place in streets 'behind' this 'first front'. In fact there is another level of supergrid operating in the interstices of the first level of supergrid, at a scale which comes closer to that of the typical supergrid pattern found in Amsterdam. It is here that Budiarto finds more of the spaces supporting the everyday social and economic lives of the majority of the city's inhabitants. These spaces connect, as he shows, local with wider city scales in ways which produce particular conditions which are supportive of particular local economies. They produce places also, related to regions at local and wider city scales, which reflect the spatial strategies of their populations.



Figure 2  
Jakarta's 2-level  
supergrid network.

Budiarto considers three different types of informal settlement or kampung, with their different characteristic economies, and shows how each produce different place conditions, based in different relations between the local and the wider scales.

In the case of the inner-city kampung, with its high involvement in the street-level informal economy, local area spaces maintain a relationship with adjacent second-level supergrid spaces, although often without the high degree of 'coincidence' one sees in the typical inner-city Amsterdam condition. A case of a low-coincidence inner-city kampung will be described in more detail later. The peripheral kampung is of more recent origin, of lower density, and often occupied by people who have been forced to move due to inner-city kampung 'upgrading'. Here informal trade is supplemented by some market gardening or crafts or light industry, making use of enclosed yards attached to inhabitants houses. Inhabitants often travel to their place of usually informal employment, but, in an interesting parallel to 'edge-city' type developments in suburban areas the world over, informal trading may take place on the first level of supergrid close to the area – taking advantage of the large volume of traffic passing this point. The so-called woodland kampung is more rural again and still more removed from the higher-scale networks of the city. The kampung is made up of clusters of dwellings with market-gardening lots, connected together by pathways. Inhabitants survive either by selling their produce locally or travelling with it into the centre, or they travel to their again usually informal employment. 'Coincidence' of local with supergrid spaces is almost non-existent and the local area forms an enclave with respect to supergrid spaces.

### **Street culture and the production of place**

The contrast between the functioning of the street as a factor in everyday life patterns in inner-city Amsterdam and Jakarta is difficult at first sight to reconcile with deeper social necessities. The supergrid is a network of distribution; by its nature a structure facilitating the dispersion of activity. Activity does not tend of itself to concentrate in singular spots within the grid, but on the contrary tends rather to spread itself relatively evenly through the network, in much the same way as the activity on the freeway grid tends to distribute itself

throughout that system. My research in Amsterdam has revealed that places acquire their 'placeness' and stability within this supergrid network space not as a consequence of the functioning of this grid itself therefore, but rather as a consequence of the interaction between the supergrid and the local grid.

Particular streets on the city-scaled supergrid network are, as has already been mentioned, at the same time a part of the local-scaled neighbourhood movement network (the local grid pattern). This overlap delivers different degrees and different balances of the one scaled network to the other, on the supergrid space, depending on some very obvious factors; the most important of which is the degree of constitution or physical linking of the two networks. For the effects resulting from this kind of overlap to work best the two scales of grid should be difficult to distinguish from each other when looked at in plan – only the greater continuities of the supergrid network revealing it for what it is. I have demonstrated elsewhere the mechanics of this effect of constitution (Read, 2003). In brief it is a factor of the direct linking of supergrid spaces with the local, and if we look at the example of the two major high streets in the Pijp neighbourhood in Amsterdam we see, in Figure 3, how close the linkage is in this case. The effect is the mutual interaction of the local and higher-scaled activities of the two grids on the high-street spaces and the production of these high-streets as urban-social forms.

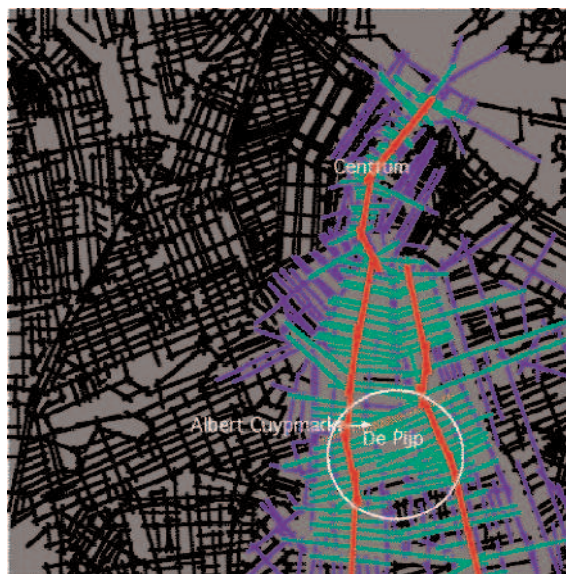


Figure 3.  
The Pijp,  
Amsterdam:  
supergrid spaces  
(red) constituted  
by local spaces  
(green)

The high-streets relate strongly to the local area, while the link with the wider city is also strong; the people on the street and the clientele in the shops are not therefore restricted to people from the local neighbourhood, and this becomes also a popular medium priced shopping area for people from other parts of Amsterdam and even for visitors from out of town.

We see the beginnings of a simple order in the physical movement networks of the city, which supports urban richness and complexity; an order that links the urban local part to the larger urban whole (or larger part) and the order to



Figure 4. The Pijp, Amsterdam: supergrid (high-street) spaces.



Figure 5. The Pijp, Amsterdam: local spaces.

which urban detail is indexed. This order indexes complexity, orders experience, defines 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.<sup>9</sup> In contrast, the more designed urban layouts tend, through the way they are made, to cut themselves off from the wider city, establishing a space which is often under-occupied and, in the European case, beset by problems of monotony, isolation and public space quality. While older neighbourhoods in Dutch cities tend to be centred on the middle-scale web, by the time one gets out to later 20th century areas, the middle-scaled web bounds the areas 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-figurement 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 hard at first sight to recognise the kind of structural effect I have been describing so far, in Jakarta. Indeed it seems that the what we have in Jakarta is a very different structural effect indeed and it will be worth considering the importance to the population of a spatial culture in the two cities being considered, and to try to answer by the end of this paper what the structural differences may mean in the answering of this question. The length of this paper prevents a full outline of this point, but it is not difficult to see that livelihoods which depend on the informal economy are particularly sensitive to this issue of spatial culture. Where spatial necessity in a first world western city may boil down to issues of mobility and accessibility, with spatial culture and place quality becoming, from an economic if not an existential standpoint, the icing on the cake, in a third world situation, and where the informal constitutes the bulk of the economy, spatial culture itself becomes the necessity and a matter of survival for large sectors of the population.

#### **A space of livelihood**

An outline of the economic space of Jakarta needs to go a great deal further than the first level of the supergrid with its globalised commerce and institutions. At the lower scales we find the larger part of the city's population exercising considerable ingenuity in using space for the everyday business of getting by. The continuing migration of rural and small town populations to the metropolitan city is itself testimony to the fact that, despite its overwhelming problems and its hard edges, Jakarta offers a practical advantage, as regards this everyday business, to those who desire to improve their lot.

The first difference affecting the mechanics of the production of an urban spatial culture in Jakarta as compared to Amsterdam is the vast scale of the city. Combine this with a relative paucity of higher-scaled movement infrastructure, and we get massive traffic flows distributed fairly evenly through what-



10 Figure 6. Supergrid streets, Jakarta: with informal trading

ever routes exist to get that traffic around the city. Every way which offers continuity at the larger scales, and this means both the first and the second levels of supergrid, will become busy first and then congested.

This relative inhospitability of supergrid spaces as places of local affordance, combines then with a tendency to deal with space differently to the way it is dealt with in the west. There is an historical tendency to urban social compartmentalisation, reminiscent of guild and extended family systems in European medieval cities, which Budiarto calls 'magersari'.<sup>10)</sup> Large parts of the city originated as kampungs – villages or informal settlements on the principle of magersari – making the city a collection of settlement clusters, and the street grid, in the absence of comprehensive planning, emerged out of an ad hoc connective matrix between these clusters.

This street grid, in the first instance a barely considered by-product of settlement building, nevertheless becomes necessarily the space of the city as a whole – equivalent to, but operating at a much larger scale than, the supergrid in Amsterdam – but without the close interrelationship between the local and the city scales which characterise inner-city Amsterdam.

What we find in most cases are inwardly oriented settlements; in the case of older settlements, often with a considerable social cohesion, their own community structures, religious and community buildings and markets. Such a settlement is the inner-city kampung of Bukit Duri in South Jakarta. The kampung itself has a much greater autonomy and inwardness as a social environment than does the Dutch inner-city neighbourhood, and the character of the settlement retains elements of an agricultural existence, with some market gardening being practised and animals and poultry being kept.

From these heterotopic social clusterings, the kampung inhabitants deal with the larger city as an outside world: food is prepared and wheeled out in barrows or trolleys. Street trading in cigarettes, bottled water or drinks, are also based in the kampungs, as is trading in services and electronic goods. The route to the outside city is often through narrow and winding alleys, and the



11 Figure 7. Bukit Duri, Jakarta: heterotopic kampung space

spot just outside the kampung is usually a more or less permanent stall. The next stop for the mobile merchants is more or less anywhere; the high mobility and the lack of constitution of these supergrid spaces means that one place is usually as good as another and traders seek small advantages related directly to flows of people, whether that is on a traffic-jammed motorway, at the edge of a busy street, at the entrance to a mall, outside or within a railway or bus station, or on a short-cut through a block.

Jakarta delivers its public space properties at a high level of contrast compared to the case of Amsterdam. Local space is much more purely local, and city-scale space is pure city-scale, without the productive overlaps that characterise Amsterdam's city-centre public space. It is clear though that there are also some advantages to this arrangement in the case of Jakarta. The city-scale public space of Jakarta, because of the scales involved, is harsh and choked with traffic; it does on the other hand offer immense possibilities to the opportunist trader. Against this harsh environment, the enclosed and socially dense space of the kampung offers a protective and cooperative environment for the production end of the trading process, and for social reproduction.

### **An urban ecology**

It is the 'ecologies of presence' implicated in life patterns (and the productive and consumptive practices associated with them), rather than the economics of the formal sector, which are the key features underpinning urban social sustainability under these conditions. Once we replace the idea of the city as a territorial surface with an understanding of cities as sites in spatially stretched social and economic relations, a rich ecology of urban life opens up for consideration. This ecology is supported by structured urban dynamics and circulatory flows, which however, never quite return the city as a social or economic unit. The city breaks down as a place of simple local interdependencies, as a site of social and cultural goods, and opens up as a layering of both 'light' and substantive relations that support cultural life.

Cities then are not local social or cultural systems, rather they support living cultures through specific urban practices that involve both 'sturdy', formally constituted, institutions and relations as well as so-called 'petty' institutions of no formal constitution such as informal networks of social relation and opportunistic economic exchange. Both are institutions of translation, not of territorial embedding: relay points for dispersed network spaces, not sites of social, cultural or economic containment.

Included in the category of 'petty' institutions, and underpinning some of the levels of the ecologies of presence of urban life are the economies of space and time that usually fall under the heading of 'public space'; seen as a space of everyday access, mobility and consumption and exploited in the micro-economic sector of trading, shop-keeping and hawking. Public space is normally dealt with in the discourse on the economic role of cities as a gener-

alised site value feeding city image and global competitiveness; seeing the city from a highly restricted and aestheticised perspective understood at the scales of globalised business and tourism. This is a perspective which is inadequate given this revision of bottom-line meaning of the city, in that it overlooks large segments of the city in its more everyday totality. The motive of this contribution is to begin to understand the role of urban place as site in scaled distantiated networks and as the effect of particular spatialities and temporalities in the circuits of everyday movement and contact.

It is far clearer when viewing the social and cultural life of the city from this perspective that the social, cultural and economic lives of urban inhabitants are founded in an urban ecology in which the city itself plays a crucial role. The city is never a neutral surface on which the lives of urban subjects play themselves out. The understanding of the role of the city in this ecology is revealed through an understanding of the structure of the city as a sorter of movement flows. It turns out that the city of Jakarta has a movement structure which is very simple indeed, brutal even, missing some of the complex subtleties of our base-line case of Amsterdam. There is nevertheless a very direct involvement of the people of the kampung we studied in this structure, and while life for them in Jakarta is often harsh and unforgiving, the structure for them is an enabling one, generating a livelihood which would otherwise not be there. Any attempt to affect the lives of the kampung dwellers positively will have to recognise the role of both the nurturing local environment inside and the hard but productive street outside, in establishing the conditions of this livelihood.

It needs to be noted that I have in this contribution concentrated on the typical, more or less generic, situation of Jakarta, and have in the process not done justice to the enormous variety and opportunity of the city. There exist many places where supergrid streets become more or less constituted; many places as well where the rudimentary two layer dynamic is modified or tends to become modified into a more complex structure. Nevertheless we see the problem of Jakarta and its particular urban ecology – an ecology that returns in other Asian cities – as being one which needs to be tackled at a fundamental level. The question of livelihoods and their spatial constraints needs to be seen as primary in the discussion of urban structure and restructuring. The problem is not insurmountable – nor is the solution likely to come from more and more precise analysis of the problem, though analysis is necessary to understand the problem in the first place. This paper is intended to state a starting position for research on the design of solutions for the spatial structures of Asian cities which will deliver more generally enabling and socially productive environments. The Spacelab laboratory continues this research into the productive possibilities of both European and Asian cities understood as ecologies.

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- 1) 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).
- 2) “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.
- 3) What we have is a ‘body’ formulated and understood at the level of the population rather than at that of the individual. Theories of complex self-generative systems tell us that different levels in functionally layered and nested systems may have their own laws which do not refer to the level below. The laws of the dynamic ‘body’ at the population level are something else than the laws of the moving body at the individual level.
- 4) Hillier (2001)
- 5) 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.
- 6) 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.
- 7) These ideas emerge out of a research beginning with space syntax techniques of the of the movement patterns of the Dutch city. 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). See Read (1996), Read (1999).
- 8) 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.
- 9) There are of course also places in European cities 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.
- 10) The word, from ‘*mager*’ and ‘*sari*’ in Sanskrit, literally means ‘framing the essence’. In Indonesia, this concept was applied in the formation of a settlement in which the residence of the local chief was encircled by followers and civilians. At the abstract level *magersari* indicates settlement in which ‘warmness’ and ‘friendliness’ can be felt. In Java everybody has the right and the obligation to secure a social bond to which they are attached. In daily life social gathering is an regarded as a primary need.