THE FORM OF A METROPOLITAN TERRITORY: 
the case of Amsterdam and its periphery

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Abstract
The Flat City space syntax model (Read, 2005) has been developed to extend the functionality of the space syntax method into the periphery of the contemporary metropolitan city, and to provide a method for describing and evaluating the form of contemporary urban landscapes. The Flat City model proposes that the built environment is structured into layers of ‘place-regions’, each layer with its own definitive scale and each with its own connective network enabling the movement which ties that level of ‘places’ together into a ‘region’. A detailed empirical study of the spatial distribution of street-edge commercial functions in the metropolitan territory around Amsterdam is presented here in the terms of this model. This distribution is understood as form and it will be proposed that different formations appear in the territory as ‘emergent’ products of processes of connection and movement within their respective ‘place-region’ layers, and of their local ‘grounding’ within layers at lower scale-levels. Detailed data of visible street-edge commercial function was collected for the entire landscape region and classed according to the scales of spread of their customer-bases. This data was mapped against their corresponding scales of movement ‘grids’ of the ‘place-region’ layers to locate them and to trace their generation as urbanization patterns in the metropolitan surface. A formation process appears to follow a clear logic of scale, functions locating themselves in relation to the movement grid which corresponds to the scale of spread of their customer base, while exact ‘content’ varies. But a process of ‘grounding’ appears to give many of these patterns their characteristic forms. Final settlement form depends very often on a process of the ‘grounding’ of higher-scaled functions in lower-scaled movement grids in a relation of ‘co-orientation’ with the higher-scaled movement grids. A provisional classification schema of metropolitan urbanization form is proposed on the basis of this one case and the method is briefly critically evaluated against other descriptions of metropolitan territorial form including those of Boeri, Lanzani and Marini, Oswald and Baccini, and De Boeck and De Geyter.

The Amsterdam Region Seen Through the Flat City Model
Amsterdam, like almost every city in the world, has come in the course of the 20th century through a time of profound change. Dutch cities missed some of the urban changes 19th century industrialization brought to other European cities and what large-scale industrialization there was in the Netherlands by the end of the 19th century had taken

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place clearly outside of Amsterdam. At the beginning of the last century, the central city had only just broken out of its 17th century walls, and at first the morphological growth of the city followed a concentric outwelling, as fabric was added at the edges of the city’s dense mass. But by mid-century the so-called ‘explosion’ of the city into its periphery had begun (Wright & Stewart). Since then this ‘explosion’ has transformed the landscape around Amsterdam, as it has transformed landscapes between cities worldwide, and led most urbanists to accept that the functional unit of the city has become the metropolitan (or even megacity) region (Geddes, Gottmann). Even in the case of Amsterdam, where Dutch planning has ameliorated a lot of the negative aesthetic effects of this scattered urban growth in the periphery, the nature and functionality of the periphery has been fundamentally transformed as it has become part of an urban functional unity not just with Amsterdam, but arguably also with the whole cluster of cities known as the Randstad (Hall).

The Flat City model of the urban surface has been derived from exploratory work on urban movement systems in space syntax (Read, 2005). We all use simple spatial models to imagine cities and their processes of growth and change, and we can begin to be clear about the nature of the Flat City model right here by pointing out how this spatial model changes our view of the nature of the ‘explosion’ of the city into the periphery. A center-periphery model finds in urban growth the (positive) mass of the city welling out into the (negative) ‘void’ of the periphery, and reference to the periphery as ‘void’ is in fact common today in urban morphological studies (Boeri ea, De Geyter). What we propose in the model we use is that urban mass and density (the positive factor in the center-periphery model) is an epiphenomenon of circulation and that in order to understand the formation of the city as mass, we need to model circulation and understand the conditions of circulation under which mass forms and comes into being. Circulation is, in our model, structured into distinct ‘layers’, and one could imagine these different stratified circulations and their infrastructural grids being distinguished from each other by their speeds. What we have are different grids of circulation, each conveying a reasonably consistent speed, which are layered over each other in order to produce, in their individual and joint working, the mass of the thing we call ‘city’. This paper will expand what we have just said. The ‘explosion’ for us then was a coming to dominance of another grid of movement (the freeway system is its most obvious manifestation) operating at a longer movement range and a higher speed. The growth of the contemporary city in the periphery then is not an explosion from the center, but rather a spontaneous emergence of urban mass on this newly dominant grid whose coming to dominance had of course everything to do with increasing mobilities and connectivities in the second half of the 20th century that have been well discussed in the literature on urban change (Graham & Marvin).

One of the intentions behind the development of the ‘Flat City’ model was to make space syntax capable of dealing more effectively with metropolitan urban fabrics rather than with just central urban fabrics. The basis of the idea is that urban movement is structured into differently scaled movement grids, layered over each other, and that these grids, and the movements they convey, each draw functional elements of the urban landscape into relations of orientation with themselves, drawing the shape of this functional breakdown into a correlated structure of movement and functional patterns organized by scale. Neighborhood-scaled functions (baker, supermarket, corner-shop, for example) are drawn into co-relation with movement particular to the neighborhood-scaled movement grid; city-center-
scaled functions (clusters of computer shops, carpet and flooring shops, employment agencies, for example) are drawn into co-relation with movement particular to the city-center-scaled movement grid; metropolitan-scaled functions (head-office clusters and the services associated with them, industrial parks and agri-industry, residential dormitory neighborhoods, villages and suburbs, for example) are drawn into co-relation with movement particular to the metropolitan-scaled grid or grids. One of the, at first sight, surprising things about this layering of grids is the degree of regularity and order in it: in the Amsterdam metropolitan region, one can, with little difficulty, break the entire land-bound movement grid (including rail networks) into three quite coherent scales of working. These may constitute more than three systems – the rail system and the freeway system for example work independently of each other – but these systems taken together can be coherently mapped at three different scales that are significant for the form we will try to articulate here.

This systematization of urban movement into these layers appears as something found in the landscape and that just exists in the case we are elaborating here. Further cases and their similarities and differences to this case will be presented in future publications. The systematization clearly owes something to planning practices and especially traffic planning practices and norms. But we believe it may also owe something to a human structuring of the world into ‘regions’ of identifiable and ‘isotopic’ (equal-place) ‘places’, which involves us in a logic of knowing and identifying the world in movement, and an evolution of movement pattern through history that has become today a technological systematization of movement. The organizing principle may be the ‘place-region’ of Heidegger, who proposed that landscapes are constituted into fields of ‘places’ by means of the conceptual construct of the ‘place-region’ (Heidegger, Casey). Knowable ‘places’ can only be in relation to other ‘places’, and those other ‘places’ which participate in the constitution of a ‘place’ are called its ‘region’. We will see these ‘place-regions’ as ‘space-time frames’ that organize functional ‘worlds’ whose primary expressions for us here are the movement infrastructures or grids that convey particular scales of circulation and the functions that orient on them. The thesis of this paper is therefore that these movement-grid systems can be seen as coherently ‘integrating’ or ‘centering’ functional and perceptual worlds defined in different scales, and that we can posit a form of the metropolitan city on this basis. A following paper will attempt to demonstrate the usefulness of this form for understanding and assessing the functionality and ‘viability’ of urban plans (Read, Bruyns ea, 2007).

**Resolving the Amsterdam Region into Scaled Layers**

As has been suggested above, we can, with little difficulty, separate the entire land-bound movement network of a section of the Amsterdam region into three scale-levels. This separability appears to the researcher as a ‘natural’ proclivity of the total movement system. In other words the movement system appears to be *already structured* in this way, and what we see is that the work of separation or ‘delamination’ is helped rather than hindered by the fact that we seldom encounter situations where there is confusion about whether a part of the total grid belongs to one scale-level rather than another, and where there is this is resolved by empirical observation. There are also many cases, especially at the ‘neighborhood’ and ‘city-center’ scale-levels where we can say that a part of the movement grid belongs to more than one scale-level at the same time. This factor will become significant later on when we talk about the functionality of the urban surface.
We resolve in this way the total movement grid into three scale-levels, represented in three maps (figure 1). These maps represent respectively the ‘neighborhood’ or ‘local’ grid, the ‘city-scaled’ or ‘middle-scaled’ grid (also known as the ‘supergrid’ from previous space syntax work on European cities), and the ‘metropolitan’ grid. This empirical work of the identification of the separate laminar grids is conducted alongside an empirical street-edge recording of the visible commercial functions of the study region. These functions are classified according to the scales of movements of their customers; shops and other businesses serving the neighborhood scale (like bakers, supermarkets etc.) being distinguished from shops and other businesses (computer and electric goods, home decoration, etc.) serving the scale of the city-center and the equivalent out-of-town scale, and shops and other businesses (car dealerships, office suppliers etc.) serving the metropolitan scale. Again, in most cases there is little confusion about the scale to which a business or shop is primarily oriented, but where there is, the situation is resolved by interviewing the proprietor.

We also encountered a cluster of functions clearly oriented to the European and global tourist industry, as well as a scattering of businesses whose orientation in terms of their dominant functional relations and transactions could only be understood in relation to a global or global-regional scale (examples are corporate head-office functions and high-value specialized agricultural products for export – see top left of figure 2). On the ‘place-region’ principle already outlined, the scale of the ‘grids’ corresponding to these functions would have to be global or global-regional – in other words connecting cities at a global or global-regional scale. The logic of the presence of these functions in lower-scaled grids will become clearer as we outline later the way higher-scaled functions ‘ground’ themselves in lower-scaled grids as part of the process of the formation of the territory. We will return to this point later.

Space is for the most part understood in empirical research as a matrix of place-holders or containers which either locates or bounds and holds attributes across a flat and neutral cartographic surface.
Here, rather than using space in this way, it is reduced in the first place to a congruent simultaneity in co-relation of a grid conveying movement of a particular scale, and the functions that depend on that grid for their ‘customer base’. What we are doing here is relating two, already ostensibly related, factors to one another formally in order to establish a ‘spatial datum’ on a concrete arrangement of movement infrastructure (we could perhaps call it a ‘device’ or ‘apparatus’ acknowledging the purposefully constructed nature of movement infrastructures and their role in technologically ordering collective social dynamics), which integrates and ‘centers’ particular ‘worlds’ of movement and function.

These ‘spatial data’ could be also, as we have said, be seen as space-time (and movement-functional) ‘worlds’ centered on movement infrastructural grids which draw those ‘worlds’ together into a certain ‘internal’ functional coherence. We take seriously the idea that the urban surface is a ‘differential’ with respect to space-time, and we follow Lefebvre and others in believing that ‘events’ or ‘moments’ in the urban surface generate their own space-time horizons, and occur within appropriate space-time horizons (Lefebvre). We postulate an integration of multitudinous ‘events’ or ‘moments’ within the space-time ‘worlds’ attached to these layered movement-functional “devices”.

Figure 2:
Horizontal layers of movement grids and their related functions: metropolitan-scaled grid and ‘global’ functions; metropolitan-scaled grid and related functions: middle-scaled grid or supergrid and related functions; local-scaled grid and related functions

We set up horizontal layers of movement grids and their related functions on this basis (figure 2) and will go on to find a process of formation in these layers and in their ‘vertical’ relations with each other. We will now take a more detailed look at these layers and the way they participate in the formation of a continuous metropolitan landscape. We consider firstly whether the coherence we postulate for these individual movement-function complexes or space-time data is plausible. Then we will layer these movement-function complexes over each other so that we can begin to also examine relations between layers (figure 3). The features of these relationships as conditions of formation in a continuous metropolitan landscape will then be described and examined.
A ‘Coming to Form’ of the Metropolitan Landscape in Movement-Function Complexes

The fundamental postulate in all of this is that materialized urban form is an emergent product of its situation in a continuous urban surface. Those conditions are differentiated by structured layers of movement grids: movement, structured by scale, becomes the virtual urban which supports and forms the actual of what appears in its materialized state. We are not talking about the city as a composition of functional and circulation elements, with the planner (or planning team) as sole and autonomous agent in a process of form-making. What we are talking about is a ‘coming to form’ or formation of the city to an order that is its own, and at the simplest level we need to see a plausible co-relation between the movement grids and the functions at each respective scale-level.

In many situations this relationship is direct, and at the local and middle-scale levels for example (figure 4) we see most often a simple coincidence between movement grid and functions as functions locate directly on the movement grid. In other cases, as we most often see at the metropolitan scale, direct coincidence is not possible and there are various ways these co-relations are made up (figure 5). At the local scale, functions are practically always directly located on local-scaled grids; at the middle scale, functions are usually located on middle-scaled grids, but are also often located on the local grid where that is directly attached to the middle-scaled grid; at the metropolitan scale functions are practically never located on metropolitan-scaled grids, but are located on middle-scaled and local-scaled grids that are more or less directly attached to the metropolitan-scaled grid. The degree of ‘tightness’ or ‘looseness’ of this attachment can be related to mode of transport so that metropolitan-scaled functions that are accessed by car are less closely bound to the metropolitan-scaled grid than if they are accessed by foot – as they might be close to a railway station for example (figure 6).
Grounding

The proposal that we now want to make and try to confirm is that the co-relation of movement and function involves also a factor of 'grounding' and that this is vital for the process of formation of structures and elements in the landscape. What we mean at the simplest level is (and this is most obviously demonstrated in the relation between movement and function on the metropolitan grid) that the pure accessibility of the movement grid is not enough to allow the establishment of a function. Certain demands of 'facilitation' need to be met (parking, servicing, building, etc.) which in practice means a 'contact with the ground' is required at lower scale-levels.

At a less simple level, we also note that grounding may become more than just a factor of facilitation – it may become more positively formative, as if it is part of a spontaneous growth and a ‘self-organization’ of structures and elements in the landscape. We see the most conspicuous case of grounding in the Amsterdam region happening in the fabric around Central Station in the center of Amsterdam. There we see the fabric facilitating the establishment of mainly tourist, regional shopping and metropolitan-scaled functions in a direct relation to the station itself. In fact we can demonstrate that ‘global’-scaled (tourist and regional shoppers and metropolitan and global business) functions trace out a pattern around the station which is related by visibility and distance to Central Station itself (figure 6). A traffic of people arriving at Central Station on the metropolitan rail system, lands in a ‘ground’ of lower-scaled grids that is already structured for movement at lower speeds and scale-levels. A metropolitan ‘world’ of high-speed movement is substituted at the station platform for a more local lower-speed one, but that lower-speed ‘world’ has become co-opted as ‘ground’ to a certain topological distance (tending to a relation of direct visibility) from the station for metropolitan and ‘global’-scaled functions. We see in this case quite clearly that where the functions associated with a higher-scaled movement grid ground themselves in a lower-scaled movement grid, they do so according to a logic of ‘gradient’ from the higher-scaled grid into the lower. This corresponds with a logic of ‘point-depth’ in conventional space syntax.
We should note that there are a considerable number of truly global visitors to Amsterdam’s center and that this smudge of ‘global’ functions spreading into the fabric from Central Station also represents a grounding of the ‘global grid’ (which touches down at Schiphol Airport and is directly connected to Central Station by rail). There are also 2 international trains (though not yet high-speed) that arrive at Central Station every hour from the European high-speed rail network.

What we notice also though is that this lower-speed ‘world’ that the metropolitan traveler steps out into at Central Station is also one that is now (at least potentially) shared with people who originate in another (city-scaled or middle-scaled) ‘world’ (whose grid is given by the black lines in figure 7). We can even begin to measure how far this potential sharing is real by noting how many of the functions on the street are oriented directly to middle-scaled movement in the fabric of middle-scaled and local grids around the station, and how much is oriented to the ‘global’ and metropolitan scales introduced by way of Central Station. We may even begin to track the fortunes of the place itself as part of a more local middle-scaled or city-scaled space and as part of a metropolitan-scaled space, as we note the relative dominance of the one or the other in the street-edge functions we find there.

We enter an agonistic drama of competition for a limited street-frontage and the attention of a passing public, played out with aggressive marketing, garish or stylish shop-front displays, increasing shop-floor rentals and price-wars. But we see emerging also an agonism of different affiliations and belongings in the populations that occupy the streets. We see the place become (at least potentially) simultaneously part of a ‘world’ of people who regard the center to be ‘theirs’ and a centralizing figure in their own understanding of their own city, and at the same time part of the ‘worlds’ of other people who come from elsewhere and have a much less committed involvement with it. For them this is just one of multiple isotopic centers in either a metropolitan space of weekend entertainment and shopping, or a global space of tourism. In the end we see these differently scaled ‘worlds’ break down further into different populations with different class, ethnic, lifestyle and age-group make-ups; each with different and sometimes conflicting affiliations to the place. We see these differences (beginning though in an urban structural difference of scale-level) begin to make of that place something dense and rich and multiple with layered meanings (Arendt, Sennett). We see the
street-edge commerce of the city responding to these layers of meanings (sometimes doubling or trebling their advantage by their exposure to different populations in one place) and can begin to imagine how 'difference itself', and the dynamic that sustains it, can begin to be seen as a productive force driving real urban formation and the urban vitality associated with it (Read, 2005).

We note that metropolitan and ‘global’ functions ground themselves in a ‘ready-made’ and ‘appropriated’ grid of a lower scale with productive and form-giving effects, and will not later in the examples how metropolitan and middle-scaled functions ground themselves also in ‘ready-made’ lower scaled grids with (potentially) productive ‘public space’ generating effects.

Another very obvious grounding and overlap of ‘worlds’ occurs on the middle-scaled grid in an open exchange between populations moving in the middle-scaled or city-scaled grid and those moving on the local-scaled grid. This is the dynamic that supports the ordinary street life and commerce of the inner-city neighborhood. In fact a large part of the inner-urban fabric of Amsterdam is structured around the relationship between what we are calling the middle-scaled grid and the local grid, and suggests the possibility of a generic structure of the European inner-city neighborhood that has already been much discussed (Read, 2001a; Read, 2001b; Read, 2003). This structure is expressed in a concentration of functions serving the middle-scale and the local-scale directly on or in a relation to the middle-scaled grid (figure 4). It is expressed also in the distribution of a modest local public space which supports the everyday workings of the generic neighborhood. We find reasonably clear indications as to how the relationship between these grids works to promote a vital street-life and viable street-edge commerce: the first is that we note that where there is a dense and simple overlap of the local grid and the middle-scaled grid – where in other words we see a high density of local grid roads crossing the middle-scaled grid and where the local grid is simple, open and orthogonal – higher concentrations of street-edge commerce and street activity appear. We see the spontaneous formation of an apparently generic (all historically evolved Dutch centers display this pattern) neighborhood centered on its shopping street or high-street.

This indication is corroborated by the fact that the range of the middle-scaled grid densely covered by middle-scaled and local-scaled functions is also roughly the range of high ‘area integration’ values (see Read, 2005) in the space syntax axial map representation of the central fabric (figure 9). As has already been argued (Read, 2005), high ‘area integration’ will tend strongly towards high mean connectivity and highly orthogonal grids will tend to display high mean connectivity by definition – and therefore also high ‘area integration’. We see a part of the dense central fabric of Amsterdam (that part closest to the ‘center of gravity’ of the center and that part that is roughly pre-1920), producing this distinctive pattern at its clearest – though this is not the only place the pattern emerges. Post-1920, spatial design practices became concerned with reinforcing a separation of the ‘inside’ and ‘outside’ of neighborhoods and it achieved this by limiting the degree of openness of the relation between the middle-scaled and local-scaled neighborhood grids. It seems most likely therefore that the emergence of this pattern has to do with the design of the connection between the middle-scaled and local-scaled grids.

Picking up the theme of grounding again, we note that middle-scaled functions will tend to establish themselves at highest densities on the middle-scaled grid where those functions can ground themselves
simultaneously in a local-scaled grid. The grounding factor is again beginning to determine the exact form of the settlement pattern we see emerging.

A Classification of Metropolitan Urban Formations

We have established now enough background with regard to mechanisms of formation, and what we do now is scan the surveyed section of the metropolitan region for clear formations, which we will then classify by type in order to begin an inventory of urban formations of the contemporary urban landscape in the terms of the Flat City model.

Formations which simply reflect the co-relation and attachment of a particularly scaled function to the same-scaled movement grid will be called ‘simple formations’. Many formations will reflect an overlap of movement grids or a process of grounding of higher-scaled functions in lower-scaled movement grids. These lower-scaled grids will affect and even determine the process of formation, but these groundings can be more or less ‘open’ or ‘closed’. If there is a functional engagement with the lower-scaled grid (as in the case of the generic neighborhood process described above), then the formation is ‘open’ and achieves a crossing between the ‘world’ of the one grid and that of the other. A ‘world boundary’ is crossed and we get an open exchange between the ‘worlds’ of the higher and lower-scaled grids. If there is no or very little functional engagement with the lower-scaled grid, the formation is ‘closed’ and achieves no or very little crossing into the lower-scaled ‘world’: the ‘world boundary’ is maintained and
there is little or no exchange between ‘worlds’. We will expect in this case that the effect on the local is unlikely to be positive or productive in terms of any spontaneous generation of public space or place-quality. ‘Open’ grounded formations will be called ‘complex formations’ while ‘closed’ formations will remain ‘simple formations’. We have already suggested that if higher-scaled activity and functions ground themselves in lower-scaled movement grids which already carry lower-scaled activity and functions, they may generate qualities of ‘public space’ and relatively high intensities of public space use. We work on the hypothesis that genuine crossings between ‘worlds’ may produce form and public space activity spontaneously, and should see these processes wherever we talk of ‘complex formations’.

**Closed formations**

We find some simple ‘closed’ formations in the section of the metropolitan region surveyed.

1. **Global-metro transferia:**


   The airport reflects in fact a grounding of the global air transport grid in the metropolitan rail and freeway grids. There is certainly much crossing from the global grid to the metropolitan-scaled grid but this potential meeting of ‘worlds’ is tightly monitored and the productivity of this crossing of ‘worlds’ is secured almost entirely within the airport complex. The volume of shopping in contemporary airports has been well discussed but it is questionable whether any productive effect is allowed to escape into any lower-scaled grid. Seen from the metropolitan grid it looks not much different to any other large closed function, its interesting complexities hidden behind a screen of security. Global travelers pass through the metropolitan-scaled grid quickly in order to attain another (the metropolitan center) and the effect in the metropolitan grid could hardly be called productive or formative. We have to conclude that for the bulk of the human traffic that passes through airports, grounding occurs in the complexly overlaid open structures of urban metropolitan centers which afford massively more than any closed formation on the metropolitan grid. There are very limited effects on traffic or settlement on middle-scaled grids in the vicinity of the airport.

2. **Metro-capsules:** This group of elements are simple attachments to the metropolitan grid with no real or effective link with any other scale.


Typically attached to the freeway network with no or very few connections with any lower-scaled grid. No complex formative or self-forming processes. No, or very limited, effects on traffic or settlement on middle-scaled grids in its vicinity.

Typically attached to the freeway network on the Amsterdam ring road and ostensibly connected with the middle-scaled grid as well. Office complexes of this type may be embedded in or close to low-income housing areas and may not be centrally located with respect to the middle-scaled grid. Actual engagement with the middle-scale grid tends to be very limited and the function is effectively ‘closed’ with respect to its immediate surroundings. Indeed it will act as a deadening feature in the surroundings due to the blank walls it throws up against its immediate local context, having no positive effects on traffic or settlement on middle-scaled grids in the wider vicinity. Where functions of this type are more centrally located with respect to the middle-scaled grid and/or where they are located closer to high-income housing areas, they enjoy a higher market status but not much higher actual engagement with the surroundings (for example: World Trade Center).


Typically a globally oriented business or research institute which locates itself in rural or semi-rural surroundings to which it has a very limited functional relationship. This is where the looseness of connection with the associated grid enabled by use of the private car and executive airport shuttle reaches its extreme. Presumably some global organizations require so little contact with the non-global world, that for them the dream of the withdrawal from the city to a suburban or Arcadian work environment is possible. Location only really matters as an issue of view and work-environment.

Figure 10:
Metro-capsules. For example: metro office complexes

Semi-closed formations

We find some more interesting ‘semi-closed’ formations:

3. Metro-villages: The Metro-village is a small historical settlement that has been appropriated by metropolitan scales and functions – usually becoming a commuter neighborhood with some metropolitan and global institutional, business, and industrial functions. While the
middle and local grids and the associated real-estate may become almost totally appropriated by the metropolitan involvement in the local, which is treated as a holding area for metropolitan functions which are simply visited and left, may be small. There is often very little complimentarity between larger metropolitan functions at middle-scale level but there may nevertheless be a local culture of small-scale entrepreneurship, services and industry which enjoys the simultaneous 'distance' and contact of the relation of the local with the metropolitan, and itself becomes more vibrant and complimentary at the local level. Occasionally complimentarity can be found as in Noordwijk and Katwijk, between conference and tourist facilities and weekend 'drive-by' tourism. There is sometimes a remnant of a traditional local village culture supported by the local grid and movement structure which itself may become part of a local 'café life' of the settlement.


This type will tend to be highly seasonal. Alongside the tourist apartments and facilities are a range of meeting and conference facilities and restaurants which also attract metropolitan visitors in season.


The combination of large scale agri-industry, commuters, metropolitan car-dealerships, office-suppliers, and locally based (but working at the
metropolitan scale) small businesses and services, makes Aalsmeer exemplary of a new urban form in the Dutch landscape. Metropolitan functions of all scales ground themselves opportunistically in the finer scale of the historically evolved fabric. We see the occasional emergence of small-scale complimentarity and a local ‘café-life’.

4. **Metro-intrusions**: The closed or semi-closed metropolitan may ‘intrude’ into sensitive lower-scaled fabrics in ways that have negative effects in that fabric. We could see the potential here for a productive formational relation between fabrics that is yet to be realized but have to acknowledge often that this ‘productivity’ is negative and any positive potential will be very difficult to realize.


Realistically a closed metro-capsule, this type is typically attached to the freeway network on the Amsterdam ring road and ostensibly connected with the middle-scaled grid as well. Office complexes of this type may be embedded in or close to low-income housing areas and may not be centrally located with respect to the middle-scaled grid. Actual engagement with the middle-scale grid tends to be very limited and the function is effectively ‘closed’ with respect to its immediate surroundings. Indeed it will act as a deadening feature in the surroundings due to the blank walls it throws up against its immediate local context, having no positive effects on traffic or settlement on middle-scaled grids in the wider vicinity. Where functions of this type are more centrally located with respect to the middle-scaled grid and/or where they are located closer to high-income housing areas, they enjoy a higher market status but not much higher actual engagement with the surroundings (for example: World Trade Center).

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**Figure 12:**

Metro-intrusions. For example: Wibautas (b.) Up to now no effort of planning or design has succeeded in establishing the complimentarity needed across the scales.

The Wibautas (ostensibly an urban boulevard but operating at the metropolitan scale) has been a problem in the planning portfolio of the Amsterdam spatial planning department for many years. It is clear to see in our model what the problem is as metropolitan functions and metropolitan speeds generate conditions which do not relate to the life in the middle and local scales of the fabric. Metropolitan functions remain oriented rather exclusively to the metro-urban boulevard and create a dead zone along the boulevard from the perspective of the middle and local scales. Up to now no effort of planning or design has succeeded in establishing the complimentarily needed.

**Open formations**

We find a number of interesting open formations in the section of the metropolitan region surveyed.

5. Metro-center: The metro-center is what we think of when we think of the typical contemporary European commercial and historical core. It is historically evolved but in principle it is a thing whose working is not so much due to an historical accumulation as rather to a daily, weekly, monthly and yearly turning of an urban process which is founded in circulation. If we wish to find out how to plan or design this thing, we need to study how history has generated a structure which facilitates this rhythmical process.

5a. The ordinary metro-center (example: Amsterdam center) Two-way co-relation with metropolitan grid and middle grid.

The dominant open relationship here is between the ‘worlds’ of the metropolitan and middle-scaled grids. More interest is added by the fact that many of the people who arrive out of the metropolitan ‘world’ are actually global travelers. Still more interest is added by the fact that there are local residents for whom the center is a neighborhood. All this makes for a great richness and a productivity of place and public space which has already been discussed in this paper. Note that the middle-scale becomes also metropolitan as the potentials of the metropolitan scale ‘appropriate’ and ground themselves in a whole urban environment rather than just orientating a cluster of metropolitan functions. We have considered some of these issues in relation to the model and design further in a following paper (Read ea, 2007).
6. **Urban-neighborhood-center**: The working together of the ‘worlds’ of the middle and local scale grids generates a process which is the ordinary inner-urban neighborhood we recognize as typical of the European city.


The process of the ordinary urban-neighborhood-center rests on the continuous grounding of the potentials of the middle-scale in the ‘world’ of the local grid. This process has been discussed already in this and other papers.


In an analogous way to the metropolitan in the metro-center we looked at earlier, the middle-scale may ‘appropriate’ the local grid, turning the whole local neighborhood into one which serves the ‘world’ of the middle-scale. Neighborhoods which perform in this way are also especially susceptible we believe, the right connections being available, to being ‘appropriated’ in their turn by the metropolitan scale. We discuss the potential ‘becoming metropolitan’ (and therefore the ‘becoming metro-center’) of the Pijp neighborhood in another paper (Read ea., 2007).

**Figure 14:**
Urban-neighborhood-centers. For example: Indischebuurt (a.), the Pijp (b.). An open relationship between the ‘worlds’ of the metropolitan and middle-scaled grids.
urban landscape shows that though there may be formations that superficially resemble formations of the past, these are made fundamentally different by virtue of the fact that they are supported by and participate in processes which tend to draw the metropolitan landscape into a functional unity. All formations are drawn into the orbit of the urban-metropolitan, and all formations in the periphery which we are led by our expectations to think of as ‘local’ or ‘village’ or ‘rural’, are in fact metropolitan. On the other hand the local at the same time plays a crucial formative role, making of the urban landscape a visceral tissue, creating a continuous variation of conditions, which sustains differences and opens potentially multiple local niches for inhabitation in full contact with the global.

The strength of this system of territorial description is that it concentrates not on the outward appearance of territorial elements but on their functional character and formational processes. In comparison the territorial descriptive method of Boeri, Lanzani and Marini approaches the morphology of the landscape as physical characteristics and configuration. Their typological nomenclature enforces urban formal descriptions, and a logic of program and architecture. The territorial descriptive method of Oswald and Baccini on the other hand deals more with process but lacks instruments for understanding the force of the local and underconsiders the local as a formative productivity in the metropolitan territory. The method of De Boeck and De Geyter is architectural and design oriented and lacks the analysis to fully understand what their design works on. Their work accepts the presumption that the city is architecture and reflects on the difference between the physical city and the void.

If the production of viable, productive and socially lively places in the city depends to the extent we have outlined on lower speed and scale connective matrices, and if as conjectured public space liveliness and quality depend also on a relation between high-scaled ‘connective’ and lower-scaled ‘grounding’ movement networks, then we need to consider far more closely the role of the lower movement scales in generating and regenerating our cities as places that sustain prosperity, sociality, and a diverse ‘public’. We have attempted here to outline some of the mechanisms of complex urban formative processes and some of the typical elements generated in these processes in the new urban landscape in and around Amsterdam. We believe that a viable future for our cities rests in understanding the way urban landscapes are a result of a continuous ‘self-generation’ which captures and involves the multitudinous everyday public actions and transactions of the city’s citizens. We need to consider how we can plan and design whole urban landscapes applying these principles in order to support viable and sustainable and self-sustaining urban environments.

References


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i. Note that some of our common (and for the most part hidden) presuppositions about human movement originating in the local and progressing outwards towards the non-local in an ‘overcoming’ of distance are strangely reversed.