
Metropolitan form and landscape urbanism

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Do we know how to design a metropolitan region, the now-ubiquitous urbanized territory sprawling fifty or one hundred miles without a break? Can we even conceive of it as a place with its own identity? Even if we can imagine ways to conceptualize design ideas at the metropolitan scale, can we imagine a level of control that still corresponds to our traditional idea of “design”?

Much of the contemporary urban landscape is a loose, flat, agglomerated field, interspersed with natural landscape, large industrial uses, airports, shopping malls, high schools with enormous sports facilities, stadiums, office parks, subdivisions and a vast, flattened landscape devoted to parking. Most commentators decry it as formless sprawl: without structure and too amorphous to have identity.

Even describing this landscape is difficult. Although the notions of concentric rings of “center, suburb, and periphery” are clearly obsolete, urban designers have not coalesced around a conceptual framework of metropolitan form that embraces both its scale and its physical diversity.

Robert Lang (2003) postulates two formal conceptions. One is the idea that the metropolis is (or could be) multi-centered, with the “ur-center” of the historic downtown, and a distributed set of mini-downtowns. These are imagined as mixed use centers with higher density

than the usual suburban development, preferably connected by transportation networks. The second conception is that of a non-centered metropolis, or, as Lang puts it, “edgeless” city, where business land uses (for example) do not coalesce in significant centers, and do not coincide with higher density housing or with mixed uses, since this is not a necessary condition in an auto-centered metropolis. (Lang 2003: 10).

Drawing on the first conception, a frequently suggested metropolitan design strategy is to propose more, higher density urban centers (Ewing *et al.* 2008) to absorb growth and offer greater potential for sustainability. Dunham Jones and Williams (2008) note an increasing suburban trend to redevelop large malls and other derelict sites into mixed use housing and retail, which they consider a significant first step in creating dispersed centers.

But even those who firmly support the multi-centric strategy concede that the metropolitan landscape cannot be substantially reconfigured into something resembling a traditional urban setting. Even if we stopped adding territory to metropolitan areas tomorrow (which is unlikely), what has already been built is difficult to reshape. Highways, low-density housing, and the corresponding vast extent of the metropolis will remain the dominant urban form in the US for many decades.

In fact, after twenty years of promotion, compact mixed use projects still constitute less than half of 1 percent of the urbanized land area – trailer parks are more prolific (Wheeler 2008: 406–407).

Complicating our ability to conceptualize the metropolitan landscape is the significant change in how we inhabit and understand this kind of city. In traditional cities, the center was a necessary place of shared economic, cultural and social experiences. The central city's key monuments and public spaces were inhabited and understood by all residents. Today, the distributed form and uses of the metropolis make it unnecessary to inhabit or even visit the center of a large metropolis. Robert Fishman suggests that our idea of “urban” – a place of common understanding and coming together, simply does not apply anymore. He suggests that a reordering of our perceptions has already occurred: the “center” of a metropolis is now the individual household, not a shared place (Fishman 1990). Each household develops a distinct perception of the urban landscape, circumscribed by its daily trips and choices. My Starbucks, my job, my movie theater, my daycare – these tend to be located in a limited orbit, which may be a substantially different orbit than my neighbors', and is likely to have very little overlap with a person living five or twenty miles from me.

Urban design has traditionally involved shaping the public realm as a series of outdoor rooms or axial spaces defined by built form and cultivated landscape. Urban designers cannot apply these concepts to the metropolitan scale, with its characteristic lack of central focus and low density. The urban designer's obsession with pedestrian scale also loses meaning in a city where speed and vastness are characteristic. Problematic, too, is the pervasive idea of urban design as designing a “product” – a large project conceived and built as a whole, which is impractical at the scale of the extended metropolis. Are there other

ways to think of urban design that could have more impact on the metropolitan landscape?

Ecological urbanism

Charles Waldheim (2006) has written, “Landscape Urbanism describes disciplinary realignment currently underway in which landscape replaces architecture as the basic building block of urbanism.” Although it goes by many names (urban ecology, landscape urbanism, landscape ecology), this reinvigorated movement is potentially a very powerful response to the problems created by metropolitan form (see also chapter by Spirn). Waldheim (2006) calls upon the groundbreaking work of landscape architect James Corner (Corner and MacLean 2000), as well as drawing on much earlier principles of landscape ecology developed under traditional urban configurations.

In 1984, Michael Hough proposed that ecological processes be used as a principle and model of urban design. Hough was only the latest in a series of important landscape architects and planners to foreground the natural setting as a key component of urban form. For centuries, the dominant conception of urban form was architectural – the ideal city consisted of buildings, streets and civic spaces, and the countryside was its treasured opposite: a place of natural repose or bucolic productivity. When Patrick Geddes first set about defining modern planning in the nineteenth century, he specifically turned to biological conceptions and analogies to articulate the relationship between a city, its inhabitants, and its corresponding countryside (Welter 2002).

In the mid-twentieth century, Ian McHarg reinvigorated the notion that urban design and planning should account for the natural environment. In his highly influential, *Design with Nature* (1969),

he proposed to selectively limit urban development by directing it away from fragile, beautiful, or critically important natural ecologies, especially in areas that were in the path of urban expansion. Natural areas thus preserved could serve as an outlet for city dwellers. McHarg's invention of the layered mapping system of analysis led directly to today's computerized mapping GIS tools.

Hough's ideas took him in a different direction. He explicitly rejected the conceptual separation of nature and city, insisting that the city exists within an important natural landscape and has reciprocal and critical effects on it. He particularly disdained the high-energy cultivated urban landscape (lawns and streetscape) for its unnecessary lack of ecological diversity and productivity. He imagined a city that was designed to mimic natural processes by waste re-use, species diversification, water collection and recharge, food production,

and wildlife support. He also firmly supported an enlightenment ideal, popularized by Frederick Law Olmsted, that contact with the natural environment was a necessary, civilizing force for society.

In recent years, urban ecology has once again been invoked as a potential design approach. The global warming crisis is certainly one provocation, but the extensive loss of the countryside to development has effectively distanced all city dwellers from the natural landscape.

Landscape urbanism specifically references the metropolitan sprawl that now physically characterizes the city (Figure 46.1). In this design conception, landscape is both an analogue of the city and its description. The analogue suggests how the city has become like a landscape, an endless and boundless territory of diverse fields and flows, both natural and human-made. This conceptualization sees the city as, necessarily, an ecosystem, but one that has



Figure 46.1 Aerial Image of Texas Stadium.

dependencies on imported energy and human-made intervention that can overwhelm natural systems. The urban landscape contains surfaces, areas and systems that overlap, collide, and shift. It is characterized by a wide variety of urban typologies, not analogous to plant communities. Some are named and well described, like office parks and subdivisions, freeway intersections and airports, but some are nearly invisible or lack identity, like vehicle storage lots, utility corridors and edgeless corridors of single office buildings.

The “city as landscape” analogy suggests that the city can have common ground with nature: it invokes ideas of evolution, rapid and incremental change, interdependency of parts (ecology), and the productive reuse of waste.

Another conceptualization of the “city as landscape” is the nature of the physical situation of the city itself: broad and without boundaries, the city lies within a natural landscape and is defined and limited by it in ways that have not been important in a hundred years. Rejecting the dichotomous concept of “city” as a place of vertical density opposed by the “country,” a relatively natural setting, the urban landscape is neither. Instead, it is everywhere both at once, ideally using the framework of the regional landscape as an important urban design element and motivator of change. For this expanded role, the term “landscape” must escape the confines of green formal lawns, gardens or parks and regain McHarg’s concept as the space of potential and realized urban development, with the resultant dependencies and intermingling of natural and human-made systems and architecture.

Landscape urbanism’s most pervasive design idea is to emphasize the natural systems that already exist in the metropolis, recovering them and foregrounding them as shapers of metropolitan image. Topographic changes, waterways, and natural landscapes are interpreted and expressed

as a way of regional differentiation. The geography of the place is not only an aesthetic component. It is intimately tied to the historic and economic foundation of all places and remains a powerful determinant of urban form, shaping culture and identity. Living in concert with the landscape, while broadly and widely inhabiting it, is different from thinking of landscape as an element of design in contrast to architecture.

The natural systems also become a stepping off point for imitating natural processes. The ideal is to model the city as a self-sustaining dynamic system: recycling its own waste, producing its own energy, and otherwise balancing inputs and outputs. To even begin this task requires looking holistically at urban processes and accepting the idea that waste, for example, might become a resource (Figure 46.2) (Berger 2006). The city also contains reciprocal and responsive conditions, which are rarely accounted for in urban design. (Lerup 1995) For example, disordered strip centers are the necessary resultant and the support system of the orderly subdivisions behind them. Outside the boundaries of exclusively residential neighborhoods are the gas stations, storage lockers and big box theaters that serve the residents of these neighborhoods, but are not allowed in. (Scheer 2007). Every shop lining an urban street generates multiple shipping containers stored in a rail yard or loaded on a truck.

In all the ideas of urban ecology, the metropolitan landscape is not considered a static object, but a living and growing system. Like a forest, it is complicated and has elements that change on many different time scales. The current form of the city is a palimpsest of modern functionalist buildings and parking, superimposed upon and securely bounded by the property lines of former farms and small towns, nestled in ancient valleys that are fed by streams that are captured and controlled over generations



Figure 46.2 High Line park in New York City.

(Scheer 2001). This is a solid representation of the time and scale in the shaping of a metropolis: from ancient landform to tomorrow's new construction.

Like any evolving system, the urban landscape requires flexibility and elasticity to accommodate change. Kevin Lynch (1981) proposed that the ability to change was essential to the definition of good city form, but despite this early warning, the static "master plan" is still the *sine qua non* of traditional urban design.

By contrast, landscape urbanism takes explicit account of change and has developed several strategies to accommodate continuous evolution. The first is to design and privilege open systems of physical infrastructure, rather than a full and specific architectural plan. The city's infrastructure defines important systems of order for designers. Infrastructure includes streets, transit, highway interchanges, but also water distribution and importantly,

energy networks. Infrastructure can also include air terminals and routes, interstate trading networks, and communications networks. "Infrastructure" can also refer to ownership and political subdivisions that structure land and limit its uses.

Importantly, infrastructure systems are resistant to rapid large-scale change, unlike buildings or land uses which are relatively impermanent and short-lived (Scheer 2001). The potentials and limitations of the infrastructure are thus critical tools for the urban designer, easily as important as individual buildings or the codes that shape them, and with greater influence over longer periods of time. Location and design of infrastructure, which is the relatively static component of the city, provides a rigid framework that allows land use, architecture, and landscape to remain flexible but orderly and defined.

Another strategy for dealing with change is the planned obsolescence of particular

uses or forms. A temporary use, including a landscape or building, can be cycled out in phases. Landscape has particular potential for short-term healing of abused places, or as a placeholder for the next planned cycle of more intense use. Designed landscapes or natural areas thus become a healing mechanism, especially in concert with built form. For example, devastated inner cities can be revived as landscape temporarily replacing vacant lots, as in proposals for Detroit (Shane 2004) or Brooklyn (Brown and Morrish 1994).

Because of the fluid and dynamic nature of the metropolitan form, urban design as landscape urbanism requires a critical balance between control and flexibility. Limited control of the field of design distinguishes landscape urbanism ideas from the “big architecture” camp of urban design – plans for large scale projects that describe every building and every open space and require large scale ownership or heavy-handed political control.

Individuals actively working in this vein are commonly some combination of ecologist, landscape architect, politician, urban designer, planner, scientist, engineer, or architect. Designers, broadly defined, may or not may not work for a “client” in the traditional sense of having a discrete task (master plan or building design), a site, a time scale, and a contract. Frequently, the designer instigates the work or advocates for it or simply carries it out and leads a change in direction (Berger 2006). Organizations like *Envision Utah*, which identifies and funds its own design projects, and then markets the recommendations to constituents and agencies, provide a template for this kind of design. In the absence of regional government, civic and advocacy groups may provide the only possible method of implementation (Yaro 2000).

In these roles designers act more as researchers or activists, seeking support for propositions and experiments, testing ideas and theories. This alternative approach and

cross-disciplinary participation yields ideas and plans which are fragmented, incomplete, suggestive, loose, and yet distinctive (see examples of projects in Czerniak and Hargreaves 2007). Partial completion is often the norm, since the “design” may not be much more than setting up a series of strong frameworks (including natural systems) and effective processes for managing transformation. It may be necessary to imagine and design a cross-boundary “authority” to carry out the plan. A metropolitan landscape strategy may also require public relations, branding and promotion of the central idea so that the “summoning up” of the metropolitan perception has life outside specific designs for “projects” (Healey 2007).

Metropolitan scale and urban design

What would be a successful metropolitan design? Our goal as urban designers is always to improve the daily life and sensibility of the inhabitants and visitors, to bring greater access and opportunity to all, to create places for people to come together, and of course, to assist with the great project of making a more sustainable world. In addition to these traditions, metropolitan design would need to account for all typologies of place, not just traditional centers. It would need to distinguish and create places within the metropolitan landscape. It would recognize speed and movement and the variable daily circuits of household life. It would recognize the need for flexibility and different rates of change. It would celebrate the diversity of the metropolitan landscape and conserve its resources. Finally, it would need to operate within the values of democracy, entrepreneurship, local control and individualism that shape the fabric of this kind of city.

The struggle to design at the regional scale began as early as the late nineteenth century

with Ebenezer Howard's ideas of a central city surrounded by reserved open spaces and smaller satellite settlements. Early twentieth-century planning advocates like Lewis Mumford, Benton MacKaye, and Clarence Stein moved expeditiously to import this regionalism to the fast growing cities of the east coast, by proposing dispersed centers or corridors and associated green belts. These ideas, which separated nature and settlements, were frustrated by the lack of a regional governing mechanism and the low-density sprawl that subsequently consumed the countryside (Fishman 2000).

These same frustrations exist today, but the problem is compounded by actual artifacts on the ground – existing networks, sprawling subdivisions, suburban typologies – and the urgent need to conserve resources. At the scale of the region, it is tempting to work on technical solutions (transit, drainage, air pollution, land use, governance) without taking account of the regional, aesthetic “sensibility” issues identified by Lynch (1976).

At the metropolitan scale, our sense of the city is not immediate and graspable in a pictorial way, like the common picture of a downtown street or a riverfront park, which a person or a group can literally grasp in its entirety by being there. As we have seen, a metropolitan sense is shaped by a series of experiences so that the metropolitan form is created as an abstract in the mind of each individual.

Creating a collective metropolitan sense would seem to be one important order of business for designers. This collective sense could aid in the perception of the region's unique character, its accessibility and diversity, and in the protection and enhancement of valued places. If the metropolitan form continues to be seen as hopelessly disordered, there may be a tendency to overlook the potential for large-scale design in favor of small-scale interventions that leave most of the urban landscape without guidance of any kind.

The first step in recognizing the scale and scope of the metropolitan design problem is a reordering of design priorities, which is well underway. It is not too difficult to imagine a time soon when interpreting, reviving, and integrating natural systems is the very first order of business for the urban designer. These systems are all-encompassing, historically significant, uniquely beautiful, and critical to the ecological functioning of the region. Landscape urbanism, with its emphasis on large and small natural systems, a multi-layered physical infrastructure, cradle-to-cradle ideals, and a flexible level of development control, offers a way of managing urban design at a metropolitan scale.

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