Constructed Ground: Questions of Scale

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FIG. 1 Linda Pollak, Sheila Kennedy, and Franco Violich, "Drawing on Site," 1990; aerial view of installation

The discipline of landscape urbanism has emerged primarily from within landscape architecture, widening its focus on processes to include those that are cultural and historical as well as natural and ecological [FIG. 1]. In relation to urban design, which as a discipline has emerged from architecture and planning, part of landscape urbanism's strength lies in this acknowledgment of temporality. It also has the potential to engage architecture in a way that urban design and landscape architecture do not, by challenging architectural conventions of closure and control, which implicitly disavow knowledge of the various incommensurable dimensions of urban reality. In this context, architecture is construed not as an object but as a device that can transform an urban landscape yet at the same time is not in complete control of the relationships between its constitutive elements.

The architectural historian Kenneth Frampton has written that "priority should now be accorded to landscape, rather than freestanding built form" in the making of cities.[1] Yet to build landscape requires the ability to see it, and the inability to do so continues to permeate architectural design culture. This persistent blindness is evident in the still common recourse to the figure/ground plan, which fails to engage the material aspects of a site, representing the ground as a void around buildings. This convention of figure/ground is part of a historically embedded oppositional system of thought—other oppositions include architecture/landscape, object/space, culture/nature, and work/site—which foregrounds and acknowledges the construction of the first paired term while naturalizing the second as unproblematic background. The tendency is to view the second, or what I call *environmental* term, as an abstract container, separate from the objects, events, and relations that occur within it. These second terms often become fused together in some kind of landscape-space-nature-site blur, in contrast to the supposedly clear outlines of architecture.

The objective of what I call *constructed ground* is to engage and focus on these environmental terms in a way that exceeds the oppositional system that continues to contain them. Constructed ground represents a hybrid framework that crosses between architecture, landscape architecture, and urban design, to engage the complexity of contemporary urban landscape. This framework invests in the ground itself as a material for design, using landscape as both a structuring element and a medium for rethinking urban conditions, to produce everyday urban spaces that do not exclude nature. Its goal is to address simultaneously the concerns of architecture, landscape, and city, without having one or more recede in importance, as would happen in a conventional disciplinary framework.[2]

This text will focus primarily on one term, that of space, which exemplifies, in the opposition object/space, architecture's tendency to disacknowledge that which is around it. The French philosopher Henri Lefebvre challenged the unproblematic conception of space in his well-known 1974 book, *The Production of Space*, arguing that such production is concealed by two mutually reinforcing illusions. He defines one illusion as that of transparency—the idea that the world can be seen as it really is. This illusion, which allows the workings of power that produce space to remain invisible, goes "hand in hand with a view of space as innocent."[3] He defines the other as the realistic illusion—the idea that something by seeming natural requires no explanation. This illusion, which is based on the opposition of culture/nature, allows landscape to be used to mask undesirable histories.[4]

The limits imposed by oppositional categories of spatial identity parallel those of subject identity, such as white/black and male/female. If, as geographer Doreen Massey writes, "it is now recognized that people have multiple identities, then the same point can be made in relation to places."[5] While there has been a tendency in contemporary design theory to interpret the mobility of identity in de-territorialized, nomadic terms, I would argue that, while not fixed—that is, permanently determined by one or two preordained traits—identity is indeed grounded, in space, in ways that are geographically and historically specific. To engage this specificity in a design process requires a theory of difference that is performative, an approach based on a conception of the "other" that begins with the premise that identity is relational rather than oppositional. A relational identity is dependent on articulation, in a sociological sense. As the British cultural theorist Stuart Hall has described, articulation is a "form of connection that *can* make a unity of two different elements, under certain conditions."[6] In other words, unity is a possibility rather than an *a priori* assumption. The challenge in design is to develop ways of working that can support and represent a multiplicity of spatial identity, to bring into focus as (constructed) ground that which is usually relegated to background. Such ways of working need to not only recognize the potential of these historically recessive environmental terms in the design of new environments, but also be aware of ways in which their historical marginalization has conditioned the construction of existing environments. The goal, to borrow a statement from the scientist Donna Haraway, is "a knowledge tuned to resonance, not to dichotomy."[7]

Lefebvre's analysis in the *Production of Space* reveals the city in its complexity as what he describes as a "space of differences." This space, far from being a neutral container, is a field in tension which, unlike most representations of urban space, explicitly includes natural processes. He defines social space as the "encounter, assembly, [and] simultaneity... of everything that is produced by nature or by society, either through their cooperation or through their conflicts."[8] This space of differences can be a starting point for constructing ground,
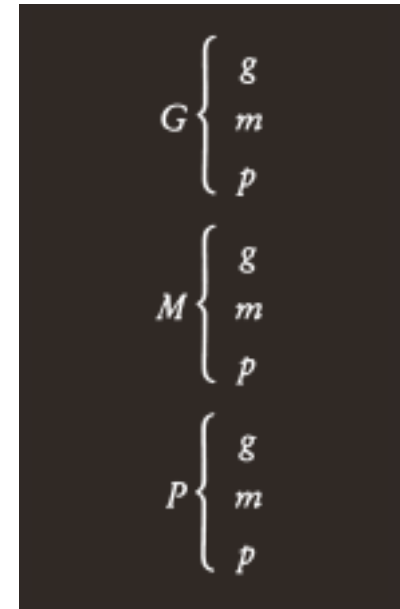

FIG. 2 Henri Lefebvre, diagram of nested scales

understood as a framework for design practice in which the negotiation between the respective scales at which architecture, landscape architecture, and urban design can operate performatively to engage dimensions of difference that characterize the space that is being produced.

The concept of scale as a representation of spatial difference can be used to engage relationships between architecture, landscape, and city across a range of formal, ecological, social and other criteria. These relationships can be apprehended in well-known built projects by Rem Koolhaas/OMA, Andreu Arriola, Catherine Mosbach, Alison and Peter Smithson, and Alvaro Siza; however this discussion of scale may first be introduced in relation to two unbuilt projects from our office, Marpillero Pollak Architects, to outline an approach to design that takes into account the formation of a site by forces acting at multiple scales, often invisible at the physical location of the site itself.

Scale is an issue inherent in all urban landscapes that is barely addressed in design theory or practice. As a conceptual design tool, which can refer to spatial or temporal dimensions of an object or process, it supports a relational approach to built environments—a way of articulating differences that can cross between practices without being subsumed by or allowing any one to dominate. While there is no inherent, assignable scale to architecture, landscape, or city, there is a range of scales associated with each set of practices. Architectural scales traverse a field from the interior to the exterior of a building, from its smallest detail to its overall presence, rarely exceeding the distance from which a project is actually visible. Urban scales extend beyond what is visible from a particular site to scales at which planning has occurred that may have implicated and/or produced that site. Landscape scales also pertain to areas much larger than any specific site, encompassing multiple ecological systems.

At one point in his analysis of space, Lefebvre presents a diagram of nested scales, which he developed through the examination of a Japanese spatial order [FIG. 2].[9] This diagram supports a formulation of the city as a space of differences through two complementary strategies, which together produce dynamic relationships. Its first innovation is to introduce a transitional scale (T), which
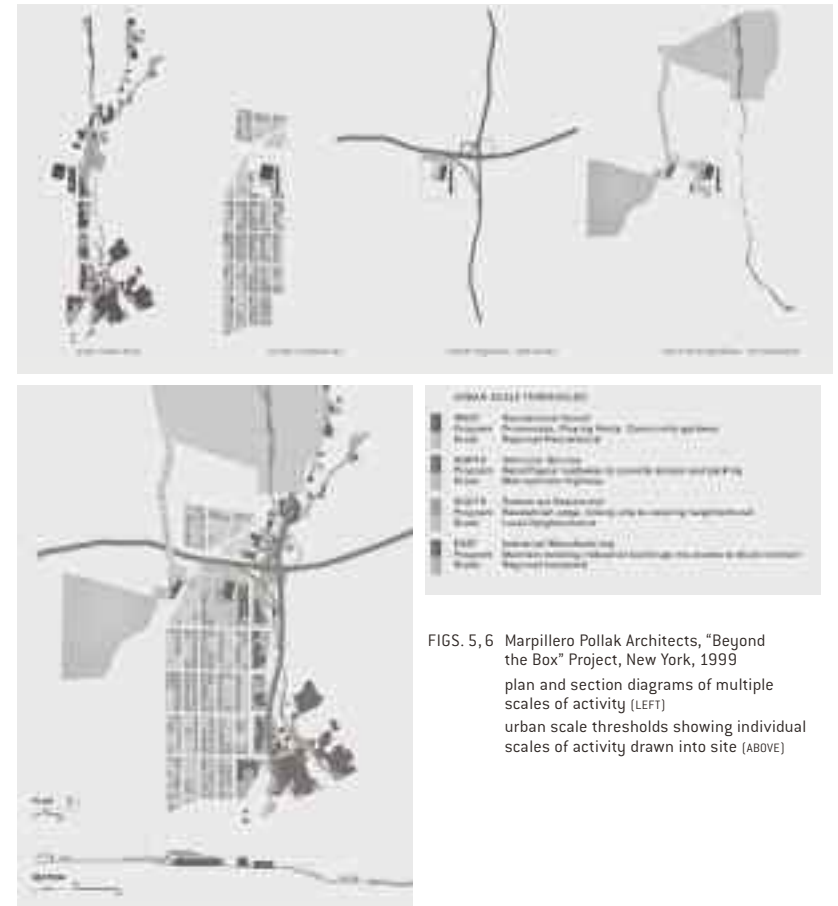
FIGS. 3, 4 Marpillero Pollak Architects, Lt. Petrosino Park Design Competition, New York, 1996:
diagram of site formation by infrastructural forces (LEFT); model view (RIGHT)

functions as a mediator between private (P) and global (G). Its second innovation is that each of these scales is integrated within the other two. The diagram provides a basis for a design approach that can support a dynamic and multidimensional differentiation of space. Its overlay of terms recognizes that all scales are internally differentiated, and that while hierarchies of scale exist, they are not fixed or singular.[10] Acknowledging that unity is neither an *a priori* nor a necessarily attainable condition of identity helps to frame it in terms of processes of becoming, with the capacity to include multiple and perhaps contradictory traits.

A site exists at an unlimited number of scales. If a project can be understood to reproduce its site, the potential of a project to operate at different scales relies upon a designer's investment in representing the elements and forces that exist or have existed at those scales, as a precondition for designing ways to foster interdependencies between them. As an architect/landscape designer working in partnership with an architect/urban designer, our practice includes projects for public spaces on disused sites that have been vacant for decades, whose failure can often be traced to the inability of a modernist master-planning framework to recognize the complexity of their position in between multiple scales of use and activity. An approach that engages strategies of scale has the potential to recalibrate such a site in a way that can resonate with its surroundings, to transform a liability in a way that corresponds to a coming together of relational identities.

Tracing the historical processes that produced a site's isolation supported our 1996 proposal for Petrosino Park, a fragment of land in downtown Manhattan [FIGS. 3, 4]. Each side of the site is severed from a different scale fabric, which the park has the potential to reengage on new terms. Historical analysis revealed successive infrastructural interventions, invisible at a local scale, including the construction of the Williamsburg Bridge in 1902, the 4, 5, and 6 subway lines in 1904, and the Holland Tunnel in 1927, respectively isolating the triangle of the site and diminishing its already narrow width, hollowing out the ground beneath it, and increasing traffic congestion alongside it. Understanding how these material processes produced the site supported the conception of four new

FIGS. 5, 6 Marpillero Pollak Architects, "Beyond the Box" Project, New York, 1999
plan and section diagrams of multiple scales of activity (LEFT)
urban scale thresholds showing individual scales of activity drawn into site (ABOVE)

variously scaled thresholds that extend outward from its physical footprint to engage its invisible boundaries. These new thresholds formulate and participate in the park's identity as a "becoming" that occurs through encounters between diverse social groups, economies, ecosystems, and informational webs. The layering of scales embeds a multiplicity of urban and ecological orders, making it difficult for any one group to exclusively appropriate the park.[11]

While the Petrosino Park project addresses only a small fragment of the city, much of landscape urbanism's focus is directed toward large post-industrial sites whose development will have a significant impact on a city's future. Our project for "Beyond the Box," part of a study in 1999 exploring issues of superstore retail development on industrially zoned sites in New York City, addresses the intersection of urban and suburban uses on a derelict two-acre South Bronx superblock [FIGS. 5, 6]. Working with an understanding of the city as a landscape

made up of multiple surfaces (rather than its conventional representation as a single surface), the project overlays a range of abstract and material scales onto the site, which has absorbed numerous disjunctures since the construction of the Cross Bronx Expressway in the 1960s. Mapping these disjunctures, in the form of different scales of activity and use that stretch against each other and reverberate on the site, makes it possible to engage their potential in new heterogeneous spaces. These existing scales—to the north, the metropolitan scale of the expressway; to the west, a regional scale of recreation; and to the south, a local, residential/pedestrian fabric—each suggest a kind of access and program. The proposal draws these disparate urban orders into the eviscerated interior of the superblock, intertwining them to situate and scale the foreign entity of the "box," and to produce a variegated set of social and natural spaces, culminating in the topographical device of the Parking Hill, a multilevel infrastructure for cars, people, and landscape. The east side of the site retains the industrial uses that are part of a surviving manufacturing zone.

A built project that accomplishes such an overlay of scales is OMA's Kunsthal in Rotterdam (1992), recalling Rem Koolhaas's formulation of "metropolitanism... a totally fabricated world within which any number of opposing views could co-exist."[12] The simultaneity of scales is present in the Kunsthal's ramp, which shifts identity to become architecture, city, and landscape: at an urban scale, beginning from Westzeedijk Street, it functions as the main entry to the park from the city, the Kunsthal building operating as a portal; by forming a bridge from Westzeedijk Street, elevated on a six-meter-high dike, over the east-west service road, the ramp allows the building to respond three-dimensionally to a regional scale of the Dutch landscape, positioning the visitor to perceive the site's juxtaposition of busy motorway and green idyll [FIGS. 7, 8]. At an architectural scale, the museum appropriates the ramp as it passes through the building by pressing a density of programs against it, including ticket booth, café, gallery, bookstore, and display windows; the ramp also provides the organizing structure of the museum, entering the building and folding over itself repeatedly to become entry, overlook, passageway, room, and roof garden. At a landscape scale, the ramp is one of five similarly scaled movement elements forming a promenade that organizes the experience of the park. Each element controls a field similar in size to the Kunsthal: a bridge crossing a field of flowers, a path through woods and a pond, a hard-surfaced "stage," punctuated with cuts for planting and drainage, and the entry grove with its mirrored wall and ground of white shells.

By participating in multiple scales of its environment, the ramp has the capacity to affect that environment at different levels, through corresponding registers of architecture, landscape, and city. As in Lefebvre's diagram, each scale is nested within the others: the roof garden is a fragment of the park landscape, vertically displaced to become a foreground element within the architecture, yet also the culmination of the architecture; the theater seats are a multicolored garden,

FIGS. 7–10 Office of Metropolitan Architecture, Kunsthal, Rotterdam, 1992: view of ramp, with city beyond (TOP LEFT); diagrammatic section, showing conception as a continuous circuit initiated by ramp (TOP RIGHT); sketch of flowers (BOTTOM LEFT); auditorium with multicolored seats (BOTTOM RIGHT)

in a field that operates at the scale of the park as well as the building [FIGS. 9, 10].

A common technique of modernist planning has been to separate functions as a means of resolving conflicts—for instance, suppressing the presence of the car in order to create a pedestrian landscape. This strategy of separation continues to produce sterile environments. Moreover, it cannot support the regeneration of an isolated site, whose derelict condition has been produced, in many cases, by its position between radically different scales. The architect Andreu Arriola layers cars and pedestrians, functions traditionally kept apart, in the multilevel Plaça del Glories Catalanes in Barcelona (1992) to create new spatial configurations [FIG. 11]. The project intertwines local- and metropolitan-scale roadways, a parking structure, a public landscape, and a playground. At a metropolitan scale, it functions as a major interchange, routing cars between principal avenues through its top level. Locally, cars park on the middle and lower levels of the structure, which frames the park at the center, which is entered on foot through large openings in what appears from the outside to be a building, and from the inside a grassy slope. The inscription of vegetation and bodies onto this vehicular infrastructure reappropriates it as everyday urban space at the scale of the neighborhood.

Scale is a key to the development of urban representations that celebrate dif-

FIG. 11 Andreu Arriola, Plaça del Glories
Catalanes, Barcelona, 1992

FIG. 12 Catherine Mosbach, Etienne Dolet,
outdoor spaces, New York, 1992

ferences of size rather than suppressing them in an effort to maintain human scale, a cultural construction identified exclusively with the measurable and the known. Landscape architect Catherine Mosbach's renovation of outdoor spaces around a ten-story residential tower block on a concrete base brings the issue of being out of scale into design, sometimes even augmenting the distance between scales, engaging the tension between them to produce new interpretations of urban domestic space. Platforms, paths, and benches situate individuals but also stage encounters with scales of building, nature, and city. The wood cladding of these elements evokes intimacy of interior domestic space, effecting a displacement of that space into the urban sphere [FIG. 12]. It also provides a material consistency that allows the project to operate at a much larger scale, as if it was the concrete plinth itself that was clad in its entirety. Mosbach's intervention took on the ambiguity of a place in which architecture, landscape, and city seemed to exist in parallel worlds, recasting these disjunctive realities as a landscape of connections.

Each of the above projects suggests some way in which the scale disparities that are an inevitable part of everyday spaces can contribute to rather than preclude a vital urban realm. A further discussion is that of "bigness," which, in urban and architectural terms, has primarily been framed in terms of monumentality. The concept of the sublime, as it has been associated with landscape, offers an alternative strategy for engaging scalar difference. While American nature and modern landscape have been historically represented in terms of the sublime outside of cities, the strength of these spatial traditions has meant that nature within a situation of perceptible containment (as opposed to, say, the expanse of a large urban park) is often relegated to a background position. Yet sublimity has more to do with the perception of uncontainability than with objectively definable size. It engages the contradiction between the idea of the totality of a thing and the perceived impossibility of understanding the thing in its totality. In other words, as Immanuel Kant has written, the sublime can be found in an object "in so far as its boundlessness is represented in it and yet its
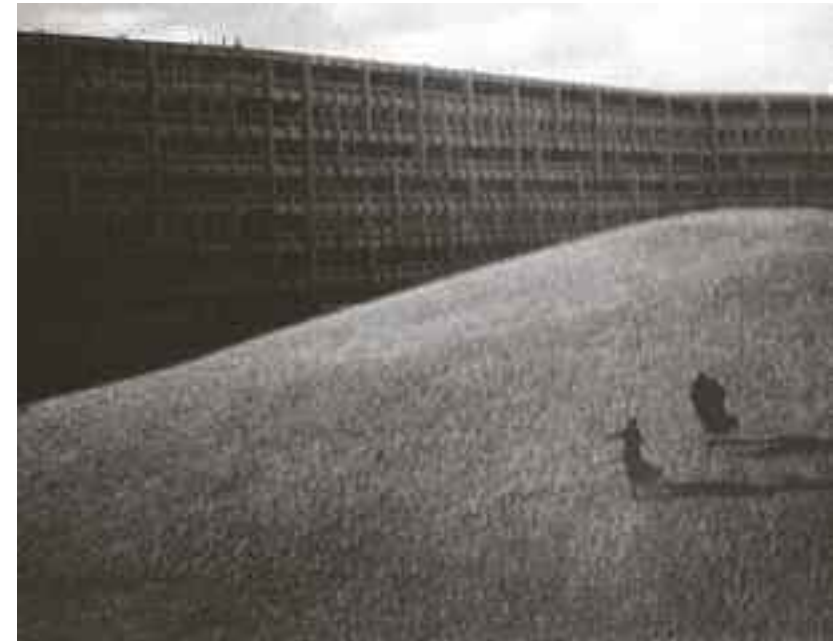

FIG. 13 Alison and Peter Smithson, Robin Hood Gardens, the mound, London, 1972

totality is also present."[13]

The grass-covered mound at the center of Robin Hood Gardens, the1970s housing estate designed by the architects Alison and Peter Smithson, represents a condition of boundlessness while still engaging urban boundaries [FIG. 13]. The size of the mound in relation to the two linear buildings that frame it makes it seem to press upward and outward, creating a tension that is both spatial and material. Its virtually uncontainable presence, in combination with its elemental figural quality, shifts the perception of what would usually be a restricted courtyard space to the point of rescaling the repetitive surfaces of the housing blocks themselves.

Alvaro Siza's 1961 Leça de Palmeira Pool complex engages and reproduces multiple scales of architecture, body, city, and landscape, to enable building and beachgoer to inhabit an endless horizon above an uncontrollable sea, without attempting to domesticate the power of these spaces [FIG. 14]. A jetty by the ocean pool meets the breaking waves at high tide to produce a huge spray, re-presenting the open sea's uncontainable processes. The building's striated geological forms operate locally, to intricately traverse its rocky site, but also regionally, at the scale of the coastal landscape, as well as at smaller scales of human action, threading a route through the rocks to reach the sea. The use of concrete as a building material registers the industrial scale of storage tanks visible from the

FIG. 14   Alvaro Siza, Leça Pool, Matushinos, Portugal, 1961

FIG. 15   Adriaan Geuze/West 8, Storm Surge Barrier Landscape, East Scheldt, Netherlands, 1985

site, rather than ignoring or attempting to screen them out from this set of spaces focused on the enjoyment of nature. It would be easy to ascribe the sublimity of the Leça Pool to its spectacular site, and the architect's activity to one of preservation, if one did not appreciate the difficulties of the location. It is the project that reconstructs a semi-industrial portion of a rocky coast along a busy roadway, by bringing forth and intensifying existing forces and weaving new scales of activity into an existing site.

The project for a storm surge barrier by West 8 represents an uncontainable nature in a different way, by establishing an oscillation between multiple scales of landscape ecology [FIG. 15]. It engages a scale of migration of several species of coastal birds that are not containable within the regional and local landscape for which the barrier is constructed. The infrastructural installation draws the birds onto the barrier island where they arrange themselves by color, corresponding to their species, according to a self-similar attraction, on wide stripes of black mussel shells and white cockle shells. The project sustains a tension between dynamic ethereality and concrete presence; the plateau of colored shells attracts the birds—an uncontainable part of nature—into a field that they inhabit in a way that is unstable even as it reproduces the design.

These strategies each amplify the role of scale to support an inclusive concept of urban landscape that is continually reinvented as it is continually reconstructed. In social terms, this landscape's potential for reinvention means that it is a place

that can be appropriated by different constituencies, in such a way as to allow unexpected things to happen. In ecological terms, it offers a means of approaching something too large or complex to be comprehended as a single totality. In either case, it suggests a provisional means of designing the undefinable, though which unanticipated spatial characteristics may emerge from the interplay between elements and through inhabitation.

The instability that characterizes these projects is a positive one that produces and sustains an openness in terms of the meaning or sense of the work. None of these projects blurs the boundary between architecture and landscape. Rather, they inhabit that boundary through their instability, or lack of fixity, constructing as a space by oscillating back and forth across it.

The projects share an emphasis on the ground, in a way that acknowledges its construction, such that it cannot be equated with a fictionally untouched nature. Each project not only amplifies the role of the ground but also multiplies it, to produce or construe it as multiple grounds rather than the single closed surface traditionally associated with "landscape." These grounds, which are variously clad, isolated and warped, inflated, delineated, and made material, perform roles that are simultaneously natural and social, testifying to the possibility of a vital public space, one that does not settle differences but rather allows them to exist.

Notes

1. Kenneth Frampton, "Toward an Urban Landscape," *Columbia Documents* no. 4 (1994): 90.
2. This essay is part of a research on urban outdoor space to develop frameworks that do not rely on polarities such as that of constructed architecture versus natural landscape, and that are not exclusive to any one discipline. This research is supported by grants from <mark>the Graham Foundation for Advanced Studies in the Fine Arts</mark> and the National Endowment for the Arts.
3. Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Oxford: Blackwell Publishers, 1991): 28.
4. Ibid., 29.
5. Doreen Massey, introduction to *Space, Place, and Gender* (Minneapolis: University of Minnesota Press, 1994), 3.
6. Stuart Hall, "On Postmodernism and Articulation: An Interview with Stuart Hall," *Journal of Communication Inquiry* vol. 10, no. 1 (1986): 91–114.
7. Donna Haraway, *How Like a Leaf* (New York: Routledge, 2000), 71.
8. Lefebvre, *The Production of Space*, 153.
9. Ibid., 155.
10. This recognition precludes the conception of space in the form of a mosaic—a series of different locales each with its own intricacies—a conception that theoretically allows differences to coexist yet fails to represent their interdependence and therefore their potential to act on each other.
11. To understand more about the identity of the thresholds, as well as the design for the park interior, as shown in the model, see Linda Pollak, "City-Architecture-Landscape: Strategies" *Daidalos N° 73: Built Landscapes* (Spring 2000): 48–59.
12. Rem Koolhaas, "Life in the Metropolis or the Culture of Congestion," *Architectural Design* vol. 47, no. 5 (May 1977): 319–25.
13. Immanuel Kant, *Critique of Judgment*, trans. Werner S. Pluhar (Indianapolis: Hackett, 1987), 98.