

An Art of
Instrumentality:
Thinking Through
Landscape
Urbanism

Richard Weller

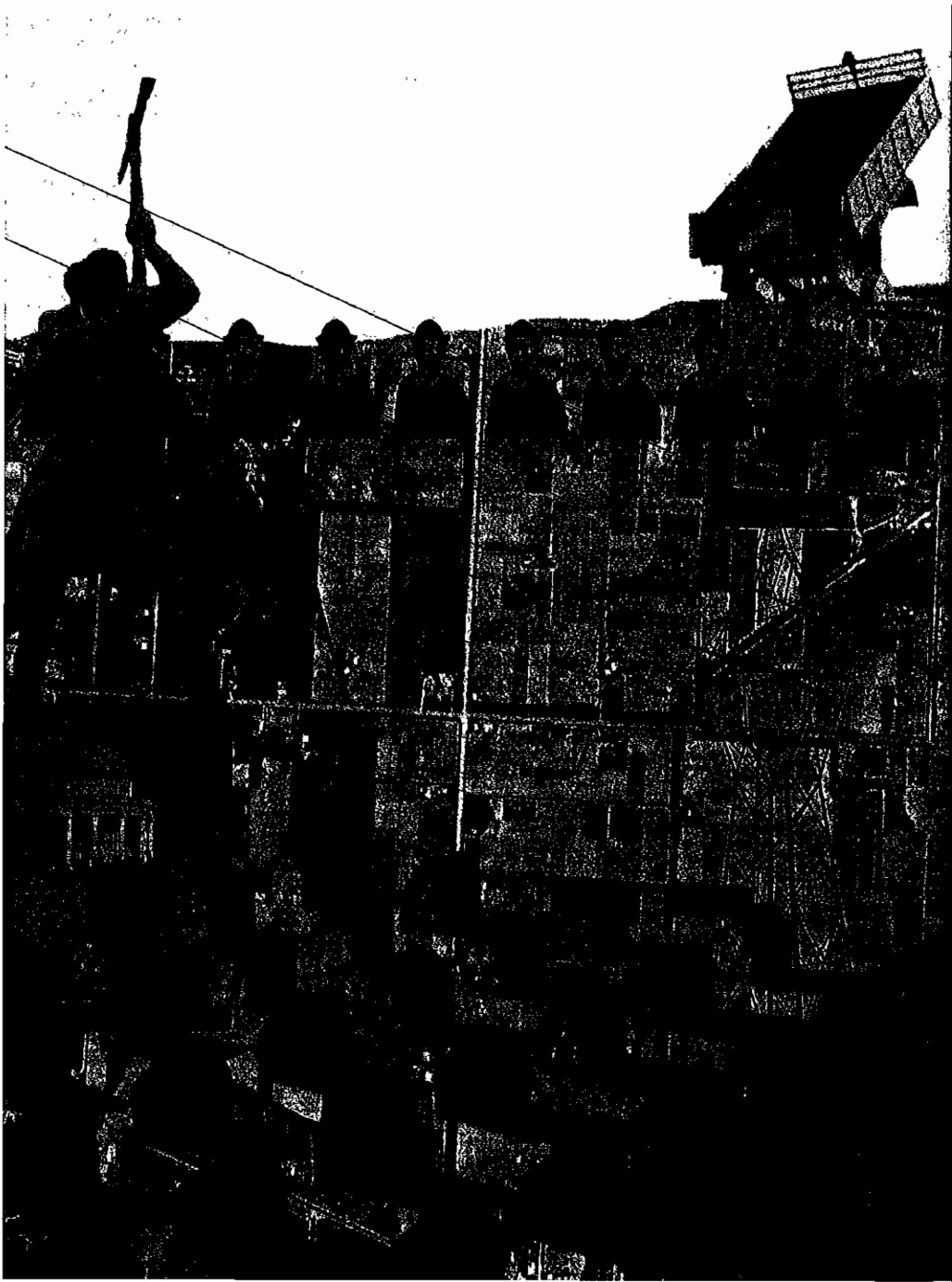


FIG. 1 "Semantic Reserves"

In a classical sense it is virtually impossible to romance the city as a collective work of art. Rather, the contemporary, globally interconnected metropolis is a rapacious, denatured tangle of infrastructure problems and planning issues increasingly subject to base motivations. And yet, even if we are to instrumentally evolve the city in accord with its environmental limitations and social crises, it would remain merely mechanistic, without art.

To conflate art and instrumentality, two terms generally thought so distant as to not relate, I am purposefully returning to landscape architecture's idealism and definition as a holistic enterprise, something that is at best both art and science.¹ Aware that there is much in art and science that landscape architecture will never be, and that landscape architecture seems relatively ineffectual in reshaping the world, this positioning of the discipline seems nonetheless theoretically correct and worthy in its aspiration.²

Landscape architecture's relative impotence in leading any reshaping of the world to date cannot just be blamed on the evil genius of capitalism and the traditional hegemony of engineering and architecture. Landscape architecture's scope and influence, whilst in all likelihood increasing, is still weakened by its own inability to conceptually and practically synthesize landscape planning and landscape design, terms which stereotypically signify science and art, respectively. In common parlance, planning concerns infrastructure (both mechanical systems and land-use designation) which, while essential to everything else the city comprises, bears a low semantic load in and of itself. On the other hand, design is perceived and practiced as the rarefied production of highly wrought objects or specific sites that bear a high semantic load. For its focus on intentional meaning, design sacrifices the scale and instrumentality of its agency, whereas that which planning gains in scale and efficacy it inversely loses in artful intent. Although this is not always the case, and perhaps too diagrammatic, this axiom of landscape architecture's bilateral crisis is the crux of the problem.³ This is hardly a new observation, and therefore this essay (with its tangential subtext of associated montages) doesn't claim to identify new problems exactly—rather, it explores some new ways of getting at the old.⁴

These new ways can be gathered under the rubric of landscape urbanism. Although still a fuzzy cluster of rhetorical positioning and largely unsubstantiated by work on the ground, landscape urbanism warrants serious discussion because it alone seems theoretically prepared and practically capable of collapsing the divide between planning and design. This also entails a compression of

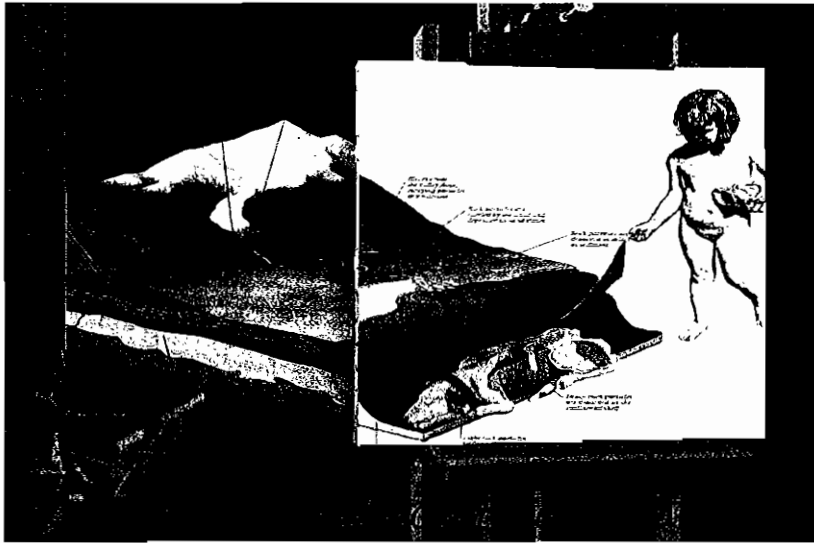


FIG. 2 "Art; instrumentality, and landscape architecture"

divisions between architecture and landscape, between fields and objects, between instrumentality and art. Significantly, landscape urbanism is emerging as a cross disciplinary sensibility, not to say a movement which positions landscape as the datum from which to critically negotiate the denatured field conditions of the contemporary metropolis.

Born of architecture's recent interest in landscape and landscape architecture's own critical self-appraisal in recent years, the ground of the contemporary metropolis is no longer modernity's repressed other (as Elizabeth Meyer once rightly identified),⁵ but potentially the twenty-first century's *mother of the arts*. And yet what makes the emergence of landscape at this time unusual is that it occurs precisely as that which has been traditionally referred to as landscape is almost completely denatured, if not erased, by urbanity. Therefore, to arrive at an understanding of landscape urbanism and be able to review its design ramifications, this essay also attempts to chart what is meant by landscape in the city now (FIG. 2).

Postmodern landscape architecture has done a boom trade in cleaning up after modern infrastructure as societies, in the first world at least, shift from primary industry to post-industrial information societies. In common landscape practice—and here I am referring to a perception of landscape architecture by what is published and awarded in Europe, America, and Australia—landscape architects seem mostly employed to deal with spaces where infrastructure is not. They are employed to say where infrastructure should not be, and are generally expected to create the illusion that mechanical infrastructure is not where it is.

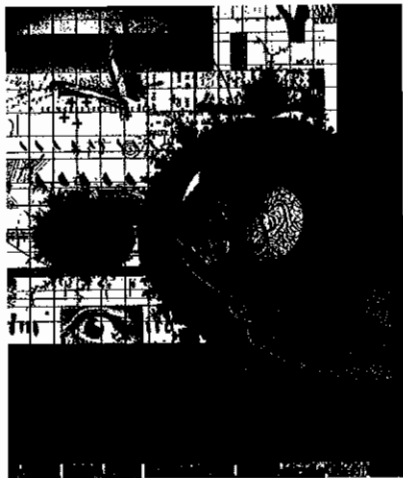


FIG. 3 "Ecology"

A pastoral modernity holds sway in the public imagination, and thus landscape remains popularly defined as the absence of infrastructure, a condition which says much about the prevailing power of eighteenth-century English aesthetics and very little of the truth about contemporary reality. Further, it seems reasonable to say that by virtue of economic rationalism and the hegemony of architecture and engineering, the infrastructural object or system in question in any development is given a kind of autonomous priority over the landscape (socio-ecological field) into which it is to be inserted. How-

ever, as any landscape architect knows, the landscape itself is a medium through which all ecological transactions must pass, it is the infrastructure of the future and therefore of structural rather than (or as well as) scenic significance (SEE FIG. 1).

To know where things should not exist and how to make voids in an increasingly cluttered world—as landscape architects do—is important, but, as is oft bemoaned, landscape architecture often ends up just arranging the wreaths for its own funeral, crying crocodile tears for the nature and neighborhoods of yesterday. Alternatively, landscape design as a fine art, with pretensions to the critical disposition of art, is often seen as the decadent creation of what James Corner refers to as “semantic reserves”—sites where, as he puts it, only “the connoisseurs and the intelligentsia enjoy the associative play of narrative references.”⁶

Landscape design's indulgences in the semantics of the garden are paralleled by planning's tendency toward reductionism, and grandiloquent narratives of reconciliation between culture and nature.⁷ The gap between landscape planning and landscape design that weakens landscape architecture is in some ways demanded by professional specialization, but it is also a consequence of landscape architecture being stretched so far across the intellectual and actual geography of what is meant by *landscape*.

What is meant by landscape cannot be considered unless one works through what can be meant by ecology, and it is perhaps there that we find a new conceptual imaging of landscape, one which landscape urbanist sensibilities apprehend as a hybridization of natural and cultural systems on a globally interconnected scale. Such an apprehension, it will be argued, necessarily interweaves the untenable polarizations of design and planning stereotypes.



FIG. 4 "Power Pictures"

The science of ecology and its popular manifestation as environmentalism has practical and philosophical implications for landscape architecture and society at large (FIG. 3). The conceptual shift brought about by ecology (and, more generally, the physics and biology of the twentieth century) is that the world is one of interconnection and codependency between organisms and environments, between objects and fields. Although translating into a victimized "nature," in the popular imagination, ecology is increasingly synonymous with new and more sophisticated models of universal (dis)order such as chaos and complexity theory, kaleidoscopes through which both romantics and scientists find previously unrecognizable order unfolding over time

in spite of entropy.⁸ Ecology is profoundly important not only because by progressing science from the measurement of mechanical objects to the mapping of non-linear systems it moves science closer to life, but also because it places cultural systems within the epic narrative of evolution. In this sense ecology is not only a meta-science measuring that which was previously beyond measurement, but also a discourse which implicitly leads to questions of meaning and value, questions of art.

Much recent thinking on ecology and urbanism is inspired by the creative potential of contemporary scientific metaphors. Terms such as diversification, flows, complexity, instability, indeterminacy, and self-organization become influential design generators, shaping the way we consider and construct places.⁹ Writing in 1996, James Corner says "similarities between ecology and creative transmutation are indicative of an alternative kind of landscape architecture, one in which calcified conventions of how people live and relate to land, nature, and place are challenged and the multivariate wonders of life are once again released through invention."¹⁰ He urges landscape architecture to develop a creative relationship with ecology in order to exploit a "potential that might inform more meaningful and imaginative cultural practices than the merely ameliorative, compensatory, aesthetic, or commodity oriented."¹¹ Pertinently, he identifies the problem that creativity in landscape architecture has "all too

frequently been reduced to dimensions of environmental problem solving and aesthetic appearance.”¹² The association of ecology with creativity, and in turn creativity with degrees of instrumentality, is long overdue.

Among other things, the conditions of ecological crisis make that which was invisible radically apparent, and with this vision we see our true nature and transcend preoccupations with urban morphology and the simplistic traditional aesthetics of objecthood. But this vision is not easy; for example, take a simple object like a house, unpack its constituent parts, and then trace them both back and forward in time—that is, from their source to their entropic end (lessness). The result, insofar as it is even thinkable, is a complex four-dimensional mapping, and even then it is one which barely represents the true complexity of the materializations and tangential processes involved.

If not to “save the world” and simplistically fit culture into nature, landscape architecture is right to ally itself with ecology. Landscape architecture—insofar as it is implicitly concerned with materials and processes subject to obvious change—seems well placed to give form to an ecological aesthetic. Landscape architecture is *not* frozen music. The axiom of ecology, and something now confirmed by the butterfly effect of chaos theory, is that all things are interconnected. Therefore every act, every design, is significant. Add to this the fact that every surface of the earth is not a given, but rather a landscape manipulated by human agency, then clearly landscape architecture can only blame itself if it does not become more powerful.

Landscape architecture’s potential power is vested in the grand narrative of reconciling modernity to place (FIG. 4); but the contemporary city is no longer bounded, and therefore landscape architecture must track it to the ends of the earth. Landscape urbanism is therefore not just about high-density urban areas and civic spaces, it is about the entire landscape off which the contemporary global metropolis feeds and into which it has ravenously sent its rhizomatic roots, a growth framed in the aerial photo or the satellite image. In the frame of the aerial image, landscape architecture finds its grand narrative of reconciling modernity to place.

But aerial images are contradictory (Faustian) representations because, while they hold out the prospect of directing that which is below, they are also images that invite hubris. Aerial images lay everything bare, and yet by their reduction of things to a marvellous pattern they smooth out the complexity and contradiction of being in a body; they conceal the real socio-political and ecological relations of the working landscape.

A book that critically engages aerial imagery and frames the magnitude of what a relevant practice of landscape architecture might be is Corner’s *Taking Measures Across the American Landscape*.¹³ Unlike Ian McHarg’s plans and panoramas which, as Charles Waldheim identifies, were predicated on a nature-culture polarity, Corner’s montages anticipate and marvel over a synthetic future of

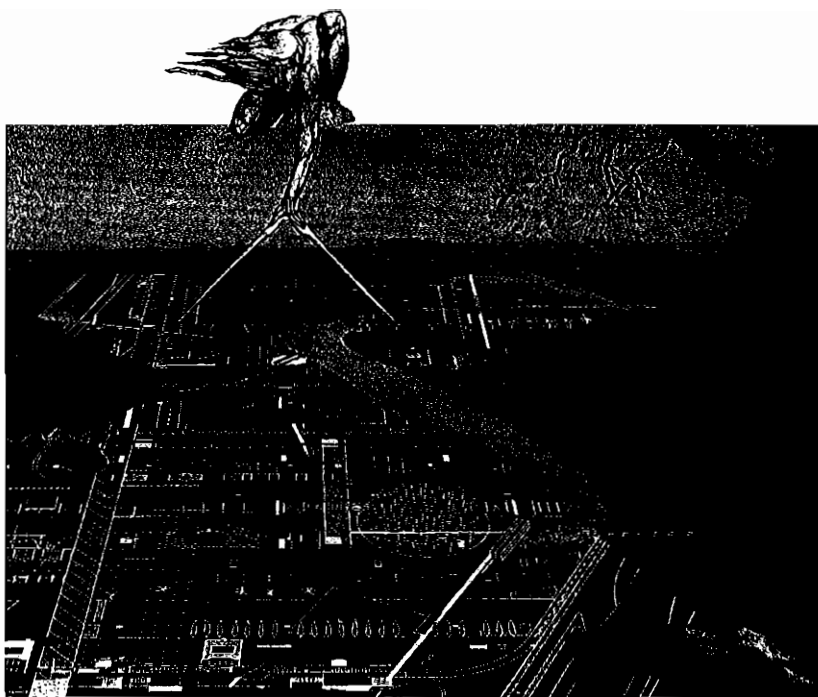


FIG. 5 "SCAPE"

constructed ecology.¹⁴ And yet, even if poststructuralists are right to observe the problem of McHarg's basis in dichotomous semiotics, surely they can also award his planning the potential outcome of synthesis. Unlike McHarg's *Design With Nature*, *Taking Measures* is not a book with a plan. Corner does not design the ground he sees, neither does he propose a method for others to do so. Whereas McHarg's didactic overviews of how to redesign the world below had an answer for everything (except why the plan can never be achieved), Corner's collages of maps, photos, and site data seem to remain merely representational—just graphic recordings of particular intersections of topos and technology, a brand of hermeneutic site analysis.

If we can in retrospect see the impossibility of McHarg's ecological and methodological fundamentalism, can we not also foresee an overly aesthetic, self-conscious postmodernism in Corner's all too beautiful images? Just as McHarg's method could be learned by rote and practiced with a heavy hand by everyone, Corner's representational elegance and theoretical sophistication seems destined to remain voyeuristic, a detached perspective his own recent favoring of *landschaft* (working milieu) over *landskip* (constructed scene) contradicts.¹⁵ Be that as it may, *Taking Measures* frames working landscapes and takes poetics

to the planner's perspective, and when held alongside McHarg's work, we are aptly reminded that landscape architecture is at best an art of instrumentality, or better still, an *ecological* art of instrumentality. If they are to be taken seriously, landscape urbanists need to conjoin McHarg and Corner and ground both.¹⁶

The historian and theorist of landscape architecture John Dixon Hunt leads us in a step toward such a union by noting that the rarefied practice of design of gardens and parks (semantic reserves) provide models for the making of whole places.¹⁷ This point has been borne out by the ways in which the unbuilt scheme for Parc de la Villette in Paris by Rem Koolhaas and the Office for Metropolitan Architecture (OMA) continues to be used in landscape urbanist literature as a benchmark for new ways of conceptualizing the whole landscape. Described by Alex Wall as "a field of social instruments," OMA's design for Parc de la Villette moved landscape design—as the installation of various infrastructures for an array of programmatic potential rather than a completed aesthetic composition replete with symbolic narratives and mimetic elements—to the center of debate over the last twenty years.¹⁸ Unconcerned by Koolhaas's poor ecological credentials in 1999, James Corner stretched OMA's Parc de la Villette to the breaking point, suggesting that it might represent "a truly ecological landscape architecture," that such a landscape "might be less about the construction of finished and complete works, and more about the design of 'processes,' 'strategies,' 'agencies,' and 'scaffoldings'—catalytic frameworks that might enable a diversity of relationships to create, emerge, network, interconnect, and differentiate."¹⁹

As Marc Angelil and Anna Klingmann explain it, Koolhaas reads the city as simply "SCAPE©"—a condition in which architecture, infrastructure, and landscape are undifferentiated and subject to the same forces [FIG. 5].²⁰ It is this conception of the urban environment and its associated landscapes that has gripped a new generation of (particularly and understandably European) designers. The conflation of culture and nature into a hybrid weave across Europe underpins Alex Wall's description of the contemporary landscape as "a catalytic emulsion, a surface literally unfolding events in time," and as a "functioning matrix of connective tissue that organizes not only objects and spaces but also the dynamic processes and events that move through them."²¹

Acknowledging OMA's Parc de la Villette as seminal, Wall speaks of landscape as if it were a powerboard—a surface through which to run internet cables, sewage systems, and whatever else is needed to, as he puts it, "increase its capacity to support and diversify activities in time [FIG. 6]."²² For Wall, as for many aligning themselves with landscape urbanism, the conditions of late capitalism—that is, placelessness, and the mobility of capital, goods, and people—have forced a shift from *seeing* cities in formal spatial terms to *reading* them as four-dimensional dynamic systems of flux. As opposed to neoconservative new urbanism, which would have us reconstruct images along classical or vernacular lines, Wall says that the contemporary landscape is one made up of "network flows,

nonhierarchical ambiguous spaces, spreading rhizomelike dispersals and diffusions, strategically staged surfaces, connective tissue, ground as matrix and accelerant, unforeseen programs, and other polymorphous conditions.”²⁴ This speeding and slippery account of the late capitalist landscape enthusiastically advances a conception of landscape as service matrix. According to Wall, the emphasis in design shifts “from forms of urban space to processes of urbanization, processes that network across vast regional—if not global—surfaces.”²⁵ In line with the central theme of this essay, Wall is speaking of the ambitions of landscape planning and representing them as a design discourse.

The meaning of “city” in this context changes. The city in mind here is not a place or just “a” system, but a part of all processes and systems, a field which covers and makes up the world at any given time. Similarly, for the philosopher and historian Manuel de Landa the city is a coagulation of fluctuating systems, a slowing or acceleration of larger temporal processes.²⁷ The city and its global landscapes are an admixture of cultural, technological, and natural systems, an admixture that encrusts in urban form and its institutions, accretions of mind and matter that can be viewed as crystallizations (as Robert Smithson saw it within larger evolutionary phenomena.²⁶ Accepting that de Landa’s location of cultural history within natural history is a historiography befitting an ecological sensibility, then it is now more appropriate to describe urban centers as relative intensifications of processes that stretch across the Earth’s surface, a surface with depth that can be understood as a complex field charged with articulations, relationships, and potentials. All at once the contemporary city is landscape, building, and infrastructure spread across urban, rural, and wilderness territories, a theoretical positioning of the city as no longer in dialectic with “nature,” but by the same token a positioning which can once again naturalize and therefore justify everything humans make of the world.

Wall’s visions owe more to modernism, futurism, and contemporary systems thinking than to the more orthodox landscape architectural pedigree of English gardens, democratic parks, garden cities, and Jane Jacobs, and it is this difference that makes it interesting. Indeed, the conditions upon which this new landscape urbanism is being constructed have previously inspired landscape architecture’s Arcadian antipathy toward the city and motivated its traditional desire for groundedness, orientation, and emplacement. Any new discourse of landscape architecture—such as Wall’s—must then be appreciated in terms of what is arguably the failing of orthodox landscape architecture to either resist and critique the postmodern city or, on the other hand, to creatively reimagine it.

In theory, Wall’s stated intention is to engage and then structure the forces of the city in a critical rather than compliant manner. In fact, Wall sounds like a good old critical regionalist when he explains that his conception of the landscape as a dominant matrix “may be the only hope of withstanding the excesses of popular culture—restless mobility, consumption, density, waste, spectacle,

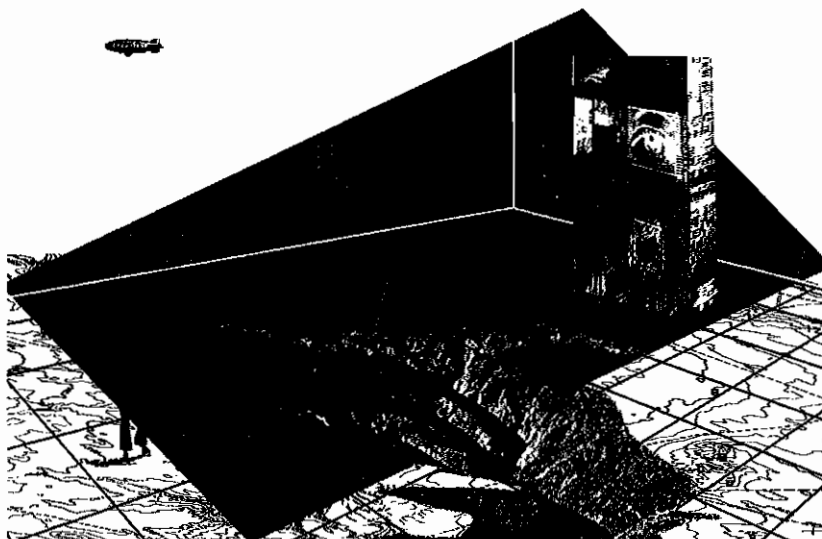


FIG. 6 "Continuous Matrix"

and information while absorbing and redirecting the alternating episodes of concentration and dispersal caused by the volatile movement of investment capital and power.²⁷ He does not, however, sound like a critical regionalist when he divulges an aesthetic predilection for "the extensive reworking of the surface of the earth as a smooth, continuous matrix that effectively binds the increasingly disparate elements of our environment together."²⁸ To a degree, he then finds himself at cross purposes.

Wall says landscape urbanist design strategies are "targeted not only toward physical but also social and cultural transformations, functioning as social and ecological agents."²⁹ Apart from the reference to ecology, he could indeed be speaking of modernism—and perhaps landscape architecture is yet to really have its own modernism, an ecological modernity, an ecology free of romanticism and aesthetics. Even if Koolhaas's ecological credentials are dubious, he and the landscape urbanists are ecological insofar as they read relationships between things as much as objects in and of themselves, as has been architecture's want. In privileging the field over the object, architects, in theory and in scope, are now becoming landscape architects. But one wonders whether they mean to assert that landscape is the infrastructure to which all other infrastructure elements or networks are answerable, or whether they are just more effectively getting on with the job of covering the entire Earth with the brutalist mechanics of the city.

As the next in many recent steps of reinvention, architecture now looks to the so-called landscape, but it does so not for a primal setting in contradistinction

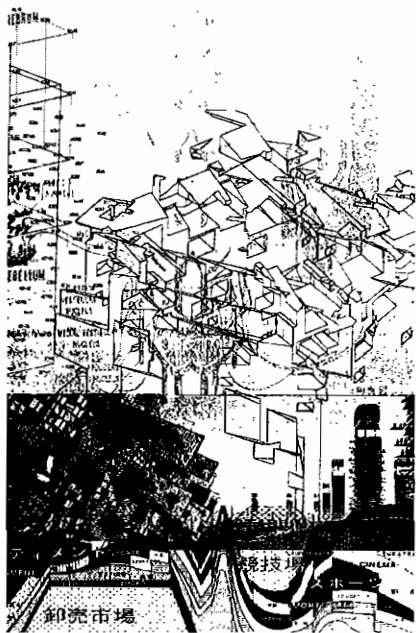


FIG. 7 "Datascape"

to its modern reason, nor for critical regionalism's *genius loci* rather, architecture looks to landscape as the broader informational field of contemporary socio-ecological and cultural conditions for greater control. Part fact and part self-fulfilling prophecy, the denatured, post-dialectical "scape" of the global city and its infra- and supra-structural system is also one increasingly accepted and apprehended by landscape architects.

With renewed confidence, the discipline of landscape architecture realizes that through its ability to deal with large-scale dynamic systems it may be best equipped to deal with many of the problems planners and architects have unsuccessfully struggled with in designing cities.³² A new generation of land-

scape architects are prepared to negotiate the mechanics of the city, philosophically and practically treating both its culture and its nature as a singular dynamic ecology without edge. In this field condition the two disciplines of architecture and landscape architecture find each other entangled together in *the weave of the world*.

In terms of working this weave, one thing seems certain: everything is uncertain—a condition which fits with the definition of chaos as the predictability of unpredictability. Experience teaches that attempts at mastery of the whole are vainglorious. Rather, Koolhaas speaks only of staging uncertainty, of diversification and redistributions, of "irrigating territories with potential." Arguably justified by the fact that indeterminacy is the (quantum) quintessence of our times, such vague invocations are (perhaps necessarily) common to conversations about landscape urbanism. They also stem from a tide of Koolhaasian rhetoric which, in suggesting that architecture is a washed away sandcastle, effectively expands architecture's territory into landscape. Sink or swim? Landscape or architecture? Both, Koolhaas seems to answer.³²

Emerging from a Koolhaasian sensibility, a new generation of designers are moving away from the dialectics and the romantics of design as a tension between form and function, idea and reality. Whilst to an extent ever-present, such romantic dialectics now seem cumbersome and inappropriate to getting on in a

culture of *too much data*. There, the design process becomes a question of computation, not semiotics, a question of negotiating statistical limits, not hermeneutic intrigues. Such work is being gathered under the rubric of “datascape,” which Bart Lootsma explains as simply “visual representations of all the measurable forces that may influence the work of the architect or even steer or regulate it.”³³ Such work is part of the oeuvre of landscape urbanists [FIG. 7].

Not unlike landscape architecture’s recourse to site analysis to justify its outcomes, datascape are thought to have great persuasive, commercial, and bureaucratic force because the subjectivities of the designer can be embedded in seemingly objective data. Whereas more romantic conceptions of the design process see the autonomous designer pained by the collision between ideal form and world, the datascapist does the inverse and begins with the outer limits of a project. They accept that a project is always already a site of negotiation. Deferring a preconceived design outcome, datascaping actively embraces restrictions and regulations. For example, Lootsma tells us that some of the most important threads running through West 8’s landscape design work are “such apparently uninteresting things as traffic laws and the civil code—things often seen as annoying obstacles by designers who put their own creativity first.”³⁴ Lootsma goes on to claim that for a designer, setting aside subjectivity and following the bureaucratic rules of a given place needn’t mean neofunctionalism nor constitute mindless robotics (although there is always that risk), but rather, that the designer “commits a genuinely public act in which everyone can participate and perhaps even subvert.”³⁵ Exactly how this is so, or where it has been tested and proven, remains unclear.

Winy Maas of MVRDV, a practice now synonymous with datascaping, also willingly embraces all the economic and regulatory constraints affecting any design project. Maas argues that in focusing on and working almost exclusively with this factual material, a project’s form can be pushed beyond artistic intuition or formal predilections, and further, that the result is somewhere “between critique and ridicule of a world unable to grasp the dimensions and consequences of its own data.”³⁶ Similarly, Corner believes “the datascape planner reveals new possibilities latent in a given field simply by framing the issues differently. . . in such a way as to produce novel and inventive solutions.”³⁷ Although some of the design results and claims made for datascaping seem as faddish as they are inflated, we can productively ask that if the datascaper can now, according to Corner and Maas, take bland data and make novel and inventive solutions, why has the data-rich landscape design process as we know it not been able to?

Firstly, the purpose and medium of landscape design should not (and does not) always lend itself to the pursuit of anthropocentric novelty. But having made that qualification, consider that where landscape architects have paid close attention to their data they have perhaps expected it to do *all* the work. Positivist rather than hermeneutic sensibilities have reduced the catalytic role of the author

in any design process. Alternatively, also consider that much landscape architecture, while paying lip service to site analysis data, does *not* in fact work with the data carefully enough and allow it to come forcefully to the surface. For example, designers are often more intent on the mimesis of a preconceived, expected, or desired image; and regardless of what site data might indicate, they will arrive at something picturesque.

Datascaping implies that the creative and critical operation of design is redirected from visual and ideological determinations, toward more attentive mapping of interrelated social, political, and economic dynamics that manifest themselves in any given place. In this sense, datascaping as a methodology is, to use a less fashionable word, planning. It is also potentially ecological. But whilst it is easy to understand how datascaping is descriptive of design/planning problems and programs, it is not so easy to see how they are generative of inventive (as opposed to crudely neofunctionalist) design responses.

MVRDV's *Datatown* is a case in point. Based strictly on statistical extrapolation, MVRDV quadruple the current population of Holland inside its existing boundary and visualize the resultant spatial complications. *Datatown*, the book, is full of bombastic images of multilevel carbon sink forests and livestock herded into skyscrapers, as would be necessary to maintain the current quality of life for circa 260 million Europeans within a 400-by-400-kilometer landscape.³⁸ Brilliantly dystopian, this is nonetheless datascaping in its crudest form. At no point do the authors do anything but extrapolate existing statistical conditions and follow function with form; the result being the opposite extreme of McHarg's ideal of a static culture finally finding its niche within the landscape's limits. While both models deny creativity and foreclose the openness necessary to a coevolving nature-culture synthesis, one is left wondering what sort of world lies in between these extremes, and if this is the world that landscape urbanism has in mind.

To conclude, Lootsma tells us that the datascape "is less about philosophy, theory, and aesthetics, and more about how the visionary and the pragmatic may be combined in creative and paradoxical ways."³⁹ He distinguishes a new generation from the old, declaring that datascaping is concerned with "critical pragmatism," not critical regionalism.⁴⁰ We know that the grand narrative of reconciling modernity with place rules the passion of critical regionalism—so the question to ask of Lootsma's critical pragmatism is "critical of what?" and "pragmatic toward what end?" Lootsma, Wall, and Corner all answer that the purpose of design is to "realign the conditions of late capitalism toward more socio-ecologically enriching ends."⁴¹ This would seem a return to Kenneth Frampton's critical regionalist ethics, and it is worth noting that, almost as a postscript to his powerful thesis of resistance in the 1980s, Frampton has himself recognized that any hope of directing the uncontrollable global megalopolis lies in landscape as a structural force, not only an aesthetic source of local authenticity.⁴²

If ecology and society are as simple as datascares suggest, then every site can now be mapped in ways that gain closer access to the four-dimensional, socio-ecological reality of the situation. The computer can work in time, simulating and visualizing dynamic processes of change under specific conditions—modeling complex ecological and cultural flows in relation to design interventions. An intersection of the deleteriously divided art and instrumentality of landscape architecture, the polarity with which this essay began, is foreseeable in the computation of datascares as the cyborgian designer works within a more fluid field of data, ideas, and form. Instead of master plans, which guide the arrow of time to a fixed point, landscape urbanists, while cognizant of the whole, make partial interventions, strategic moves which might incite loops of non-linear change throughout a system. Perhaps then here is a clue for how planning's pretences to the whole and design's preoccupation with parts can come together in a more finely tuned and instrumental landscape architecture.⁴³ It might not save the world, but one is tempted to think of this as an evolutionary leap in landscape architecture's favor, a move toward an ecological art of instrumentality.

Notes

1. Reference to landscape architecture as both an art and a science and a discipline periodically tensioned by bias toward one or the other is common to landscape architectural literature, indeed it is one of the recurrent themes in the American Society of Landscape Architecture's centennial publication, Melanie Simo, *100 Years of Landscape Architecture: Some Patterns of a Century* (Washington, D.C.: ASLA Press, 1999). Similarly, in concluding his comprehensive reader in landscape architectural theory, Simon Swaffield notes that calls for landscape architecture to be both practiced and theorized as an art and science were first heard in the 1950s, and that this ambition remains central to the discipline in the new millennium. Simon Swaffield, ed., *Theory in Landscape Architecture: A Reader* (Philadelphia: University of Pennsylvania Press, 2002), 229.
2. I think it was the American Landscape architect Peter Walker who once pointed out that despite laying claims to the earth, landscape architects affect only a tiny percentage of its surface—a seemingly self-evident point. One could add that this influence is likely to increase as every piece of land is increasingly in need of professional management.
3. The division of landscape architecture's body of knowledge and the divide amongst its practitioners has been, since the 1970s in particular, commonly discussed as a rift between planning and design. This again is a theme which weaves throughout Melanie Simo's *100 Years of Landscape Architecture*, cited above. It is also a theme which has structured debates in most national landscape journals. The issue is also revisited by Elizabeth Meyer, "The Post Earth Day Conundrum: Translating Environmental Values into Landscape Design," and Anne Whinston Spirn, "Ian McHarg, Landscape Architecture and Environmentalism," both in Michel Conan, ed., *Environmentalism in Landscape Architecture* (Washington D.C.: Dumbarton Oaks, 2000), 112–14, 187–90.
4. This essay is a refined and shortened version of a keynote address originally delivered at the 2001 MESH Conference, a biennial Australian landscape architecture conference on this occasion held at the Royal Melbourne Institute of Technology. Some of the illustrations associated with this paper were originally published in 2001 in *Landscape Review* vol. 7, no 1 (2001): 3–44, alongside an essay tracing the work of James Corner.

5. Elizabeth K. Meyer, "Landscape Architecture as Modern Other and Postmodern Ground. in Harriet Edquist and Vanessa Bird, eds., *The Culture of Landscape Architecture* (Melbourne: Edge Publishing, 1994).
6. James Corner, "Eidetic Operations and New Landscapes," in Corner, ed., *Recovering Landscape: Essays in Contemporary Landscape Architecture* (New York: Princeton Architectural Press, 1999), 158.
7. The implied mastery of modernist planning underpinned by belief in predictability and utopia is of course now replaced by its obverse, strategies of partial intervention in anticipation of unpredictability and dystopia.
8. Robert E. Cook gives a neat account of how contemporary models of ecology are influenced by advances in chaos theory and complexity science. Robert E. Cook, "Do Landscapes Learn? Ecology's 'New Paradigm' and Design in Landscape Architecture," in Conan, ed., *Environmentalism in Landscape Architecture*, 118–20.
9. See James Corner, "Ecology and Landscape as Agents of Creativity," in G. Thompson and F. Steiner, eds., *Ecological Design and Planning* (New York: John Wiley & Sons, 1997), 109.
10. *Ibid.*, 82.
11. *Ibid.*
12. *Ibid.*
13. James Corner and Alex MacLean, *Taking Measures Across the American Landscape* (New Haven: Yale University Press, 1996).
14. Charles Waldheim, "Landscape Urbanism: A Genealogy," *PRAXIS Journal* no. 4 (2002): 4–17.
15. Corner's essay "Eidetic Operations and New Landscapes" is structured around a dialectic between *landschaft* and *landskip*.
16. I have argued elsewhere that Corner's practice is in fact concerned with exactly this issue. See Richard Weller, "Between Hermeneutics and Datascape: A Critical Appreciation of Emergent Landscape Design Theory and Praxis through the Writings of James Corner, 1990–2000," *Landscape Review* vol. 7, no. 1 (2001): 3–44.
17. John Dixon Hunt, *Greater Perfections: The Practice of Garden Theory* (Philadelphia: University of Pennsylvania Press, 2000), 220.
18. Alex Wall, "Programming the Urban Surface," in Corner, ed., *Recovering Landscape*, 237.
19. Corner, "Ecology and Landscape as Agents of Creativity," 102.
20. Marc Angelil and Anna Klingmann, "Hybrid Morphologies: Infrastructure, Architecture, Landscape," *Daidalos: Architecture, Art, Culture* no. 73 (1999): 16–25.
21. Alex Wall, "Programming the Urban Surface," 233.
22. *Ibid.*
23. *Ibid.*, 234.
24. *Ibid.*
25. Manuel De Landa, *A Thousand Years of Non-linear History* (New York: Zone Books, 2000). De Landa traces inherently unpredictable flows of genes, words, and materials across the last millennium so as to reveal, among other things, their consequential manifestations in urban form. Relevant to this essay is the way in which De Landa's history conflates natural and cultural systems and reads them as of a coevolving ecosystem, whereas we are accustomed to history as a progression narrative of events, ideas and identities acting against the backdrop of the natural world.
26. Robert Smithson, "The Crystal Land" in Nancy Holt, ed., *The Writings of Robert Smithson* (New York: New York University Press, 1979), 19–20.
27. Wall, "Programming the Urban Surface," above n 19, p 247.
28. *Ibid.*, above n 19, p 246.
29. *Ibid.*, above n 19, p 243.

30. Adriaan Geuze has made this point. "Architects and industrial designers often see their designs as a final product of genius whose aesthetic entirely originated in their minds. A design like that is thrown off by the slightest damage. Landscape architects have learned to put that into perspective, because they know their designs are continually adapted and transformed. We have learned to see landscape not as a *fait accompli*, but as the result of countless forces and initiatives." Geuze, as quoted in Bart Lootsma, "Biomorphic Intelligence and Landscape Urbanism," *Topos* no. 40 (2002): 12.
31. Rem Koolhaas, "Whatever Happened to Urbanism?" in Koolhaas and Bruce Mau, *S, M, L, XL* (New York: Monacelli Press, 1995), 971.
32. *Ibid.*
33. Bart Lootsma, "Synthetic Regionalization: The Dutch Landscape Toward a Second Modernity," in Corner, ed., *Recovering Landscape*, 270.
34. *Ibid.*, 266.
35. *Ibid.*
36. Winy Maas, "Datascape: The Final Extravaganza," *Daidalos: Architecture, Art, Culture* no. 69/70 (1999): 48–49.
37. Corner, "Eidetic Operations and New Landscapes," 165.
38. Winy Maas, Jacob van Rijs, and Nathalie de Vries, *Metacity/Datatown* (Rotterdam: 010 Publishers, 1999).
39. Lootsma, "Synthetic Regionalization," 257.
40. *Ibid.*, 264.
41. *Ibid.*, 273.
42. See Kenneth Frampton, "Towards an Urban Landscape" *Columbia Documents* no. 4 (1994): 83–94; as well as Frampton, "Seven points for the Millennium: an untimely manifesto," *Architectural Review*, online: <http://www.arplus.com/Frampton.htm>.
43. Stan Allen has looked in to this, see Allen, "From Object to Field," *Architecture After Geometry: Architectural Design Profile* vol. 67, no. 127, ed. Peter Davidson and Donald L. Bates (1997): 24–32.