

Gardens, Landscape, Nature: Duisburg-Nord, Germany

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In 1968 Robert Smithson wrote: “The ‘pastoral,’ it seems, is outmoded. The gardens of history are being replaced by sites of time.”¹ Yet the pastoral landscape, with its bucolic imagery and its associated discourse of nature as a redemptive force, remains firmly rooted in the popular imagination and still operates as a default mode in landscape design. From its ancient origins, the pastoral ideal evolved into a uniquely American response to the accelerating pace of industrialization in the mid-nineteenth century,² becoming the dominant aesthetic for the design of the expanding public landscape of America’s cities. But if the development of the pastoral aesthetic expressed our conflicted relationship to technology and industrialization at a particular moment in history, the current process of deindustrialization calls forth a parallel question: Is there a new landscape aesthetic emerging from industrial ruins? How, in this postindustrial age, do we reimagine our relationship to nature, technology, and landscape?

This is the question posed by Duisburg-Nord, the work of the landscape architects Latz + Partner, which opened in 1994 on the site of the former Thyssen steelworks in the northern Ruhr district of Germany.³ The park has received much attention for its sensitivity in retaining the site’s strong industrial presence. The sense of decay has remained intact, vivid, and sometimes surreal. But unlike many other projects on former industrial sites which celebrate the architecture of production, at Duisburg-Nord it is the industrial

landscape that is brought into focus. Not only does the design of the park play on the visual and spatial drama of the blast furnace itself—with its immense chimneys, gantries, and subterranean spaces—but, perhaps more provocatively, it takes as its subject the complex site surrounding the plant which, at first glance, appears as a chaotic landscape of rail lines, slag heaps, and volunteer species.

The landscape design subverts conventional expectations. The decayed forms are not treated as romanticized ruins or as a spectacle meant to instill an experience of the sublime. The aesthetic of the sublime, as theorized in the eighteenth century by Edmund Burke, Immanuel Kant, William Gilpin, and others, celebrated the experience of the divine and sense of the infinite inspired by extraordinary and terrifying natural landscapes—the rocky mountain tops, rushing waterfalls, or deep chasms that, by virtue of their immensity, power, and grandeur, would arouse deep emotions of wonder mixed with terror.⁴ Though originally invoked by natural settings, the sublime was later expanded to include the constructed landscape in what became known as the “technological” or “industrial sublime.”⁵

While the tendency of artists and designers working in industrial sites has often been to cultivate an aesthetic of the “industrial sublime,” choosing to heighten the sense of awe inspired by the relics of industry, Peter Latz’s work suggests a different relationship to the industrial landscape. Discussing his approach, he writes, “The result is a metamorphosis of landscape without destroying existing features, an archetypal dialogue between the tame and the wild.”⁶ The power of this place lies precisely in the tension that exists between “the tame and the wild”: between intervention and neglect, between the ordinary and the bizarre. In this work, “nature” is not “wild”; it is inextricably bound up with technology and shaped by social relationships and cultural memory. David Nye notes that the sublime is by definition something extraordinary—it virtually requires that one be an outsider. The dualistic vision of man and nature, implicit in the aesthetic of the sublime, has been replaced at Duisburg by the clear realization that nature, too, has become a human artifact. Just as the work avoids trading in the imagery of the picturesque ruins, so too does it argue against an aesthetic of the sublime. Latz’s work reframes the “strange” through a dialectic with the ordinary.

This dialectic is expressed at Duisburg-Nord most powerfully through



A knot garden in a former bunker

the trope of the garden. A series of gardens have been planted within and around the ruins of the blast furnace, using a traditional horticultural language of clipped hedges, knot gardens, parterres, bosks, and rose gardens. The disjunction between this formal landscape vocabulary and its industrial setting is both unsettling and profoundly moving. Why the strange juxtaposition? What do the gardens mean, or perhaps more important, what do the gardens *do*?⁷ What is their role in remaking the Thyssen site, and, more

subtly, how do they alter our relationship to the spectacle of decay and lay the ground for a new occupation of this space?

The garden is used variously as a counterpoint to the blast furnace and as a means of interpreting and reframing the industrial landscape. The garden articulates the theme of time,⁸ understood at Duisburg in terms of the cycles of destruction and cultivation, as well as through its resonance with history and cultural memory. As such, it represents the antithesis of the sublime, which exists outside time and represents both an escape from history and a retreat from physical nature into the realm of human spiritual values.⁹ On the other hand, the garden celebrates physical nature and the act of making; beyond the garden is the *gardener*—every garden holds the imprint of the human hand. Latz writes: “I believe that using gardens . . . is in fact the only way of understanding a landscape. You have to work with the actual material.”¹⁰ The garden is used to investigate, to express, and to experiment with the physical material of the site.

Perhaps more fundamentally, the use of the garden at Duisburg-Nord suggests an attitude to regeneration rooted in a social vision. In Latz’s notion of “metamorphosis,” site regeneration is bound up with cultural change. Regeneration begins by cleansing the site’s polluted water and toxic soil, but is meaningful, finally, in the transformation of the blast furnace into a new social space. Latz notes that “what is useless acquires new value as an element through its use.”¹¹ The design of the park succeeds in preserving this strange landscape while transforming its meaning, ultimately by altering our relationship to it and absorbing it anew into our everyday lives. The Duisburg gardens tame and refamiliarize this alienating landscape so that it might become used and lived in new ways: metamorphosed into a new public landscape.

Landscape “Syntax”: The Structure of the Park

The commitment to decoding, understanding, and representing the physical site is at the philosophical core of Latz + Partner’s work. The design of the park is based upon an analytic, almost archaeological approach that seeks to investigate how the industrial landscape was made, how its various components functioned, and what impact production has had on the shape of the land. It is the landscape’s structure, not its imagery—however seductive or

sublime—that ultimately establishes a sense of place and offers a record of the site’s history.

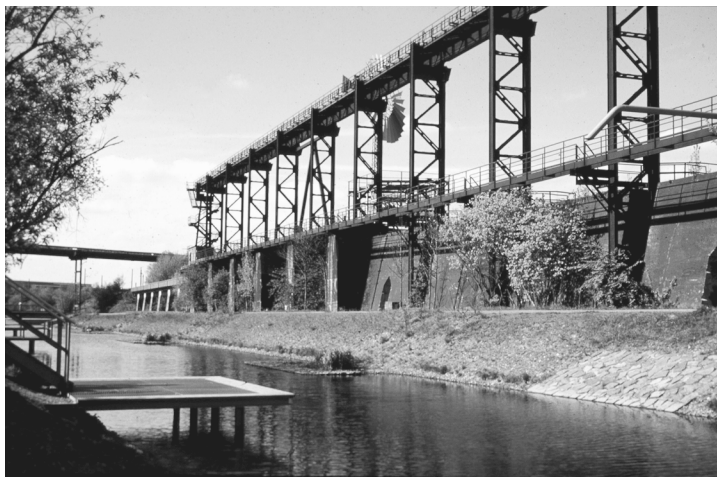
The search for site structure, or what they call its “syntax,” leads Latz + Partner to reject the notion of a “master plan.” The park is designed as a series of autonomous sequences or “layers” that are linked at specific points. There is no unitary composition or unfolding narrative as we move through the park, but rather a synchronic experience of vertically stacked systems.

Landform, in particular, plays an important role in the conception of the landscape, but not in a sculptural or object-oriented sense. The earth is not sculpted into a bizarre or extraordinary landscape, but instead is used to describe the ordinary landscape of production. Landform offers up clues to the systems that operated here, whether by tracing the patterns of the railroad through its embankments and tunnels, or of the canal system typical of the region. The composition of the park is thus expressed in stratigraphic terms.



View of the bunker gardens from above

Emscher canal
after restoration



Each linear system slices through the park like a datum, defining and “explaining” the section. The selective preservation of the site’s infrastructure serves to describe and map the history of industrial processes through their imprint on the land.

The primary layers of the park include the sequences of promenades, the Bahnpark (or Rail Park), and the water park, consisting of canals and reservoirs. Each of these sequences is meant to make the existing systems coherent, legible, and usable once again. The intricate structure of the rail lines, a defining feature of the region’s urban form, provides the organizing principle for movement through the park. A new promenade has been built on the piers of the old railroad trestle that traverses the site. This elevated catwalk lets the body take the place of the machine, allowing a person to move through the park as the train once did—to experience physically the spatial logic of production, and to view the site from a new privileged vantage point. Other paths follow the imprint of the harplike railbed at the former switching yard, an elaborately engineered earthwork of ridges and depressions, now transformed into myriad parallel paths offering multiple choices of circulation.

The second system that structures the park is the Emscher canal. Like the railway, the canal system has become a defining feature of the Ruhr

landscape. The polluted Emscher canal, which once functioned as an open sewer, was one of the most visible reminders of the ravages of industry. One of the site's main transformations is a newly cleansed canal—now part of a closed recirculating system fed by rainwater, which is visibly captured from the buildings in existing overhead pipes and flows across pavements through a maze of open channels and rills that traverse the site.

“Accepting the Situation”: Experimentation, Disturbance, and Regeneration

Latz's stance toward the industrial history of this region is reflected by his simple assertion that “people have to accept the situation.”¹² He approaches the project without moralizing or judging history. His design aesthetic is based foremost on a careful reading of the site as it currently exists, and on an investigation of the exhausted industrial forms, the processes they evoke, and the disturbed landscapes they have left behind. The sense of depletion and decay is treated delicately, with full awareness of how easy it is to dilute the power of the existing landscape while redesigning it. Latz “accepts the situation” that nature has been disturbed and continually manipulated by man. This statement represents a profound shift in park design—from its roots in nineteenth-century progressivist ideology and its typically pastoral aesthetic, to the more contemporary ideology of the environmental movement of the 1970s. Implicit in this pragmatic attitude toward destruction is a significantly different approach to regeneration.

The design of Duisburg attests to the fact that Latz's notion of “accepting the situation” is not a passive one, but just the opposite; it is at the root of his inventiveness. His acceptance of the existing reality impels him, on the one hand, to discover and exploit its unique qualities in unusual ways; and on the other hand, to search for new solutions to the problems it poses. “Everything is *good*,” says Latz, “even polluted soils (except toxic ones), since everything is recycled.”¹³ His approach is empirical, physical, and experimental, engaging all the materials of the site. Underlying this pragmatic position is an affirmation of the power of making—and remaking—and a sanguine belief in our ability to make choices. “Accepting the situation” is about being at home in the world—that is, in the physical, material world. It is about *making*, more than *healing*; it is about celebrating everyday life, not the sublime; it

is about living with contradictions in a fragmentary world, and abandoning any notion of an idealized nature, apart from man.

This position leads Latz to reject the conventional goals of site restoration by taking a different approach to disturbance. Rather than attempt to restore the site to its prior condition, he accepts the site's aberrant processes and materials, and works with them in order to encourage existing formations to continue to evolve. Latz notes that the resulting fantastical forms could not be created by either art or nature alone but lie somewhere in between.¹⁴ This dynamic view of natural processes is in direct contrast to the notion of "stabilizing" a site, which would imply arresting the natural processes acting upon it. For example, Latz argues that "it is absurd [to] attempt to cover slag-heaps with vegetation." Erosion is a natural principle of the material and should not be prevented but rather encouraged, to allow strange and fantastic formations to continue to develop and express the condition of disturbance. Reclamation efforts, he notes, are generally directed toward preventing this—by planting, sculpting, and regularizing disturbed industrial sites to ensure that nothing at all will change.¹⁵

Latz + Partner have chosen to leave large parts of the site untouched. Most of the decayed ironworks have remained intact. Extensive areas of successional forest have also remained, leaving large birch groves that have colonized the black waste material of the coal-washing process. Other non-indigenous steppelike species grow on the thin soils of the coal-soot mixes, casting sediments, and the sands and slags of a former manganese ore depot.¹⁶ This unusual vegetation is a serendipitous by-product of industrial waste. It is the discovery of such intriguing secondary phenomena that leads Latz to claim that "destruction has to be protected so that it isn't destroyed again by recultivation. New places have to be invented, new places at the fault lines between what was destroyed and what remained, between structures still recognized as cultural landscapes and those that are historically devastated."¹⁷

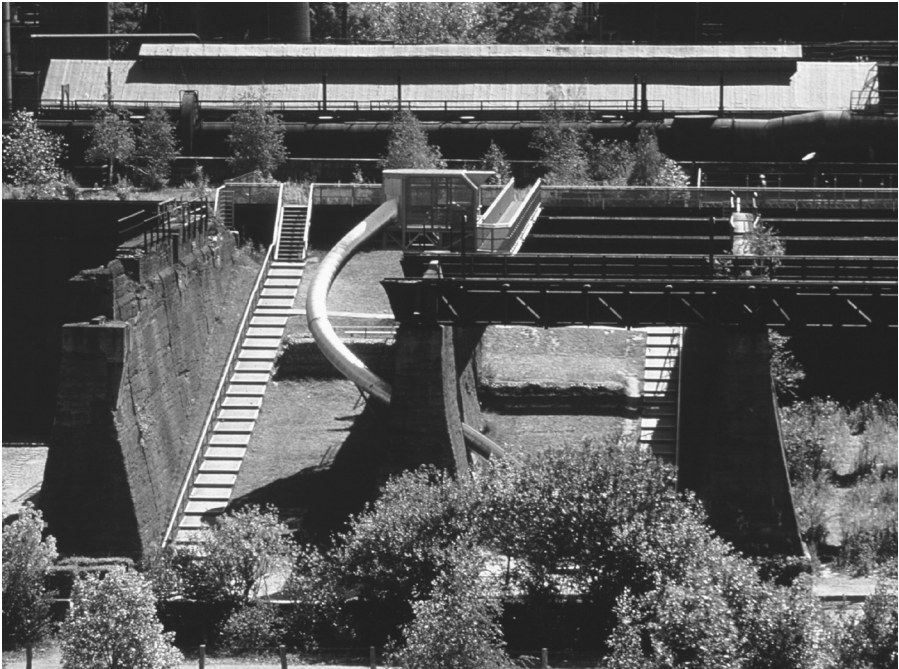
Underlying the work is a preoccupation with the meaning of history. Latz preserves the ruins on the site, to the greatest extent possible, as instruments of memory and as an evocation of a lost heritage—however fragmentary that representation has become. He lets the objects tell their own stories, without trying to synthesize or summarize; he is not interested in creating a



Climbing wall on
former ore bunker walls

monument to history, or a museum. The artifacts resonate with real associations. But the furnace is no longer a furnace; it has assumed another life. For Latz, the site is meaningful as a park insofar as it transcends its particular moment in history and becomes open to the future. The key design strategy is to create a new context for these artifacts so that they lose their specificity and begin to undergo a process of metamorphosis.

This sense of metamorphosis is the focus of most critical discussions of the work, and the surprising mix of new activities at Duisburg is, for many



A new play area along the bunker walls

critics, the measure of its success as a public park. The fantastic qualities of the derelict structures have attracted imaginative new uses—for example, the huge twelve-meter-high walls of the ore bunkers now serve as climbing walls where an alpine club with over 2,000 members makes its base. A diving club has also established itself in the park, exploring the underground lakes that have formed in the groundwater-flooded chambers of the lower storage bunkers. Along the bunker walls, a play area has been created in which a huge winding metal chute snakes through the walls like an ironic, oversized serpent. Large fairs and festivals are held in the central public areas, and performances take place in a new amphitheater built against the backdrop of the blast furnace. (The amphitheater is constructed of concrete mixed with recycled brick gravel, made from the ground stones of the former sintering plant.) In addition to these large group activities, the residential margins of

the park offer protected places for community gardens and children's playgrounds, and the extensive successional woodlands provide a large area for walking and cycling.

Just as "destruction has been protected" in the zones of the coal tailings to encourage exotic new forms of vegetation to take root, so too have the dreamlike destroyed forms of the old blast furnace been retained to inspire a new social space. Some of the new activities have established themselves spontaneously like colonizing species; others have been introduced intentionally through adaptations of the existing structures, or with the careful addition of new elements. But Duisburg's vibrancy as a public space depends less on "programming" the park in a conventional sense—that is, pre-determining a fixed set of activities for each space—than on a subtle design strategy of recontextualization. This strategy has created an open-ended, improvisational quality to the life of the park, encouraging a diversity of uses and users to colonize the landscape. The interventions on the site serve to reframe the industrial landscape by making the strange familiar—and, perhaps more poignantly, the familiar strange.

At first, there is a frisson in the juxtaposition of foreground and background—of Turkish mothers wheeling strollers against the improbable, threatening backdrop of the blast furnace. But then the passage of joggers and cyclists and rock climbers and strolling old couples establishes its own rhythm, and we are shocked by how *unshocking* are these juxtapositions. Why shouldn't this be a jogger's path, or a baby's playground? This alienated—and alienating—behemoth becomes the new urban ground for casual rhythms of encounter, dissolving boundaries both physical and psychological between the space of domesticity and production. This reorientation is further reinforced by a larger urban strategy guiding the design: the park is used to connect the once discrete surrounding towns, which have now grown together to form a continuous urban fabric. What once operated as a marginal space outside the local residential realm now occupies the center of seven towns.

Yet remarkably, Latz + Partner have succeeded in recontextualizing the site without diminishing its strangeness or its scale. This is achieved by domesticating the space—that is, in the sense of making us *at home*—by inviting occupation, and invoking a sense of ownership through subtle and strategic interventions that reframe, rather than erase, the decayed relics.

Flowering bosk at
Cowper Place



The industrial landscape becomes domesticated by implicating us in it. One of the foremost means of asserting a human presence within the site is through the introduction of new ways of moving through it—with stairs, catwalks, and promenades—so as to populate this landscape and suggest an alternate reading of its vastness. By inserting the human body into the machinery of production and altering our physical relationship to it, its monumental scale is transformed—as we touch the forbidding, rusting structure, see it up close, or climb up inside it. The overpowering image of the ironworks perceived from afar, and all that it suggests as an icon of sublime immensity, is challenged at the moment we engage it physically and experience it as occupiable space.

The other strategy used to assert a human presence within the site is

the planting of gardens. They first appear at the entrances to the park, beginning the process of recontextualizing the site—at the main entrance, Cowper Place, as well as at the many secondary entrances that form critical thresholds between the site and the loose, amorphous fabric of disparate towns that surround it on all sides.¹⁸ These entrances, with their formal landscapes—circular clipped hedges around small parking lots, bosks, and allées—establish the urbane, civic language of a large city park. The visual paradox inherent in the use of such landscape codes and conventions is experienced most powerfully at the main entrance. Located in front of the blast furnace, the space of arrival is planted with a regular grid of blossoming fruit trees—a lavish, grand gesture evoking a public garden, played straight except for a single detail: the rusted COR-TEN stakes that support the trees.¹⁹ The juxtaposition of the flowering bosk and the furnace presents the argument of the garden for the first time, at the moment of our first encounter with the blast furnace. While it might be said that the new windmill serves as the most obvious icon for the park, almost manifesto-like in its clarity and confidence as a symbol, it is the power and incongruity of the image of the garden and the blast furnace that most immediately conveys the essence of Duisburg-Nord.

In her work *The Garden as an Art*, Mara Miller claims that the role of the garden is

to mediate those tensions or polarities which are important for a given culture. . . . The garden is a way of framing the terms within which verbal or theoretical debate can take place. Every garden is an attempt at the reconciliation of the oppositions which constrain our existence; the act of creating a garden, however limited it may be, is not only an assertion of control over our physical surroundings but a symbolic refusal of the terms under which life has been presented to us and an insistence on determining the terms of our existence. As such it is always an act of hope.²⁰

To be sure, the simple image of flowering trees set against the blast furnace evokes the idea of renewal. But the profound sense of hope that it inspires derives not only from the power of the image itself—the dramatic contrast of its lush delicacy against the brutality of the ironworks, of new growth



A new windmill recirculates clean water from the channel to oxygenate the system and irrigate the gardens.

contrasted with the sense of decay—but from the conceit of the formal gesture, the civic language of the bosk as a portal to a grand public park. Latz + Partner reach back to a traditional landscape design vocabulary of garden making to reframe the Thyssen site as a public park, using a well-understood landscape convention to recode the site's function and meaning. The use of the garden, then, establishes a measure of familiarity. It also recasts the site as a recognizable public space, in a long tradition of public spaces, thus recovering this landscape from the urban margins and granting it a new civic meaning. The twinning of the furnace with the bosk puts the forbidding strangeness of the site we are about to enter on new terms. Together, these images affirm the possibility of reinventing the site, projecting it into a new future. The act of creating a garden, as Miller states, is an assertion of

control over our physical surroundings; it is a subversive act, and an act of hope.

The gardens are used expansively and eclectically at Duisburg, mixing the strange with the familiar. Latz + Partner ground their gardens in historical traditions and vernacular use; they also invent new forms that challenge accepted definitions of what a garden might be. Some of the gardens are used as signifiers of a civic landscape in bosks or allées; other gardens evoke the domestic scale of the front yard, composed of commonly used plants such as roses, boxwood, and hydrangeas (in the bunker gardens), muscari and scilla (in the Sinterplatz). This is the plant palette of local vernacular gardens, used here to establish familiar domestic tropes and resonate with a sense of the everyday. In other cases the gardens become a physical manifestation and elaboration of the conditions of disturbance. Pioneer species²¹ adapted to disturbed soils are used to form bosks and allées: a bosk of *ailanthus* was planted near the former sintering plant, and at the Neumühl entrance we find an allée of fastigiate black locust.

Gardens have also been planted in the ruins of the bunkers that once held piles of ore and coal deposits. Viewed from a catwalk above, they form a series of garden rooms that have been inserted into the massive two-meter walls. New openings have been sawed through the concrete to create a series of doorways, allowing the visitor to occupy and move through the rooms in sequence. Some of the gardens are effectively roof gardens, growing above contaminated soils that have been transferred to the bunkers and capped to preserve the exotic vegetation that became established in these disturbed soils. Soft-textured, brilliant-colored lichens and mosses have taken hold in the extremely acidic soil in one of the bunker structures. Others are more self-consciously designed, suggesting garden follies: a formal knot garden fills one bunker “room,” alongside an installation made from logs of indigenous birch, reminiscent of the work of Andy Goldsworthy. Some gardens express the ecological disturbance of the site; others seem to defy it by replaying traditional garden forms in this incongruous setting. The eclectic quality of the bunker gardens speaks to the artifice of the garden, whose materials might equally be prized horticultural specimens or the volunteer species of toxicity—“everything is good,” and so, in some ways, interchangeable.

This message is even clearer at a small garden hidden in the woods, near



A *giardino segreto* of industrial detritus set within an old orchard

an abandoned orchard. Here we discover a series of garden plots filled with assorted industrial detritus—rusty screws, gravel, and other construction materials—laid out among the grid of apple trees. This industrial *giardino segreto* highlights the experimental nature of the garden, illustrating Latz’s point that “we understand ways of managing the environment through the garden, like a scientist’s research plot.”²² In this case, the garden is quite literally a research plot of scrap materials arranged to create a new scrap-yard taxonomy, sorting, measuring, and testing the recycled materials of the new garden.

There are utilitarian gardens at Duisburg, too: the gardens that most directly manage the environment are the “working gardens” that have been designed to actively regenerate the site, such as the water gardens that are planted to filter and purify storm water. Here the garden takes on an explicitly regenerative function of biofiltration, which gives physical form to the natural processes active on the site.

The analogy of the garden as a “scientist’s research plot” reinforces the idea of the garden as a site of experimentation rather than a static work of art, whether intended for ornamental or instrumental purposes. True experimentation is defined by its open-ended quality, and the unpredictable results that often challenge the initial hypothesis. Here, the aesthetic of experimentation assumes, as its starting point, the dynamic flux of natural processes. Natural disturbance is accepted as part of that flux; it is neither aestheticized nor romanticized for the strange forms it produces. It is understood as a natural process that can be managed like any other within the overall design strategy—and should be manifested like any other. These processes are managed to different degrees; while some of the end states are predetermined, others are left open to natural succession and chance.

This view rejects the commonly held belief in nature’s constancy and stability, an idea that is deeply ingrained in Western culture, and one that has dominated environmental thought.²³ Latz + Partner’s conception of natural systems reflects the shift that has taken place in ecological theory in which the metaphor of equilibrium has been displaced by that of nonequilibrium, or flux. The definition of ecosystems as highly ordered, steady states, closed systems, has been challenged by recent reevaluations of the role of disturbance. In the earlier “equilibrium paradigm,” disturbance was viewed as external to the system; when it would occur (usually as a result of human activity), succession would restore the system to an equilibrium condition, which characterized the mature state of any system. This theory was first articulated by Frederic Clements, in his 1916 work *Succession*, through the highly influential concept of the climax community, which was to dominate ecological research for the first half of the twentieth century. Implicit in this theory is the idea that the activities of humans are not part of the natural world and are often in conflict with its operation.²⁴ While Clements’s concept of climax community has been questioned since the 1950s,²⁵ the equilibrium paradigm was challenged most forcefully in the 1980s by statistical and probabilistic approaches that have revealed disturbance to be a frequent, intrinsic characteristic of ecosystems. Findings point to a wide range of adaptations to disturbance, suggesting that succession is a highly probabilistic and contingent process, not the deterministic, universal, and linear process it was first thought to be. The nonequilibrium paradigm em-

phasizes “process rather than end point,”²⁶ focusing on how systems actually behave.

This fundamental revision to the understanding of ecosystem dynamics resonates with Latz’s fascination with the phenomena of contingency, chance, and adaptation. With a deep understanding of ecological processes, he embraces the dynamic flux of nature, including the forces of disturbance, which he insists must not be erased to fit a preconceived image of what nature should look like. Just as there is no inherent “balance of nature,” there can be no idealized conception of beauty in the landscape. Latz writes, “Our new conceptions must design landscape along with both accepted and disturbing elements, both harmonious and interrupting ones.”²⁷ For Latz, nature cannot be thought of as pristine or autonomous, since natural processes are inextricably intertwined with the technologies that create and maintain them. This position undermines the idea of nature as a redemptive force, a consistent motif of park design since the mid-nineteenth century and still alive today in various guises.

Consider Dieter Kienast’s proposal for Mechtenberg, another Ruhr site not too far from Duisburg-Nord. A group of artists, architects, and landscape architects met in the summer of 1992 in the Mechtenbergseminar to create a vision for the future of this steep landscape, a former mine. A small garden had been laid out at the top of the mountain at the turn of the century, surrounded by hawthorne hedges. This area, untouched for ninety years, gradually grew into a wood that swallowed up the original monument in the garden. This image gave rise to the new vision, which was dubbed “Sleeping Beauty”; the idea was to create a series of gardens that would be surrounded by tree trunks, preventing public access until the trunks would rot and fall down, “allowing the wood to grow undisturbed in this place for the next twenty years . . . it will remind us that the Sleeping Beauty eventually awoke, and tall and healthy trees will have risen from the polluted ground.”²⁸

The contrast between the designs of Mechtenberg and Duisburg highlights the widely divergent meaning of regeneration in the two works. Kienast’s proposal withdraws the site from human use, based on the assumption that regeneration will occur when nature is simply “left to itself,” undisturbed by human intervention: the site will be “healed” as a body heals itself. Kienast’s proposal is a poetic interpretation of the notion of recovery

inherent in the “balance of nature” metaphor. At the same time, it draws upon a deeper mythic meaning, evoking the recovery of a lost paradise. In the work of Latz + Partner, the idea of the garden has been pried loose from the Edenic narrative. The Duisburg gardens do not gesture toward a state of ideal perfection or harmony; they are not compensatory or utopian or filled with a sense of loss. Latz has suggested that the metaphor of the oasis is a more fitting metaphor for the garden than paradise, evoking a sense of tension rather than harmony. Regeneration is distinguished from recovery, if we mean that recovery of the mythic fullness of nature for which Sleeping Beauty yearns, in her long, deep sleep.

The sense of loss and destruction that permeates our experience of the contaminated industrial landscape is allayed at Duisburg by the profound sense of possibility that comes with the belief in recycling, reuse, and, ultimately, reinvention. The gardens express a sense of the complexity of human engagement with nature, which is both destructive and regenerative. Yet their spirit of experimentation is inherently optimistic, based on an openness to new solutions, new forms, and new definitions that run counter to essentialist ideas of nature. The acceptance of disturbance and flux replaces the myth of recovery with an ethos of experimentation and making, and a renewed belief in human action. The gardens affirm that by “accepting the situation” of worldly imperfection and incompleteness, we also take responsibility for the repair of the world.

Notes

1. Robert Smithson, “A Sedimentation of the Mind: Earth Projects” (1968), in *Robert Smithson: The Collected Writings*, ed. Jack Flam (Berkeley and Los Angeles: University of California Press, 1996), 105.

2. See *The Machine in the Garden* (New York: Oxford University Press, 1964), Leo Marx’s influential work on the pastoral as an enduring American ideal. Marx writes: “The pastoral ideal . . . is located in a middle ground somewhere ‘between’ yet in a transcendent relation to the opposing forces of civilization and nature” (23). The controlling theme of the pastoral, according to Marx, is the conflict between art and nature. In the mid-nineteenth century this was expressed as the conflict between an idyllic natural world and the “counterforce” of industrialization, represented by machine technology.

3. The 568-acre park is one of the best known public spaces within the 80-kilometer-long corridor known as Emscher Park, the site of a unique planning initiative coordinated by the International Building Exhibition (IBA). The IBA program (Internationale Bauausstellung)

was established in 1989 as a ten-year improvement program, following in a long tradition of building exhibitions in Germany. The regional redevelopment strategy was based on the creation of a 300-square-kilometer “landscape park” with a combined focus on economic and ecological improvements as well as the preservation of the unique industrial architecture (*The Emscher Park International Building Exhibition, IBA, 1996*).

4. Edmund Burke wrote in 1757: “Whatever is fitted in any sort to excite the idea of pain and danger, that is to say, whatever is in any sort terrible, or is conversant about terrible objects, or operates in a manner analogous to terror, is a source of the *sublime*; that is, it is productive of the strongest emotions which the mind is capable of feeling.” Quoted in Denis Cosgrove, *Social Formation and Symbolic Landscape* (Madison: University of Wisconsin Press, 1984), 227.

5. This concept, developed most extensively by David Nye in his book *The American Technological Sublime* (Cambridge, MA: MIT Press, 1994), refers to the sense of awe inspired by great feats of civil engineering, such as the railroad, great bridges, dams, and machinery of production. Nye writes: “The industrial sublime combined the abstraction of a man-made landscape with the dynamism of moving machinery and powerful forces . . . (evoking) fear tinged with wonder. It threatened the individual with its sheer scale, its noise, its complexity and the superhuman power of the forces at work” (126). The term “technological sublime” was coined by Perry Miller in *The Life of the Mind in America* (New York: Harcourt, Brace and World, 1965), and also developed by Leo Marx in *The Machine in the Garden*, John Kasson in *Civilizing the Machine* (New York: Grossman, 1976), and others.

6. Peter Latz, “The Idea of Making Time Visible,” *Topos* 33 (2000): 97.

7. Here I am referring to W. J. T. Mitchell’s fundamental question regarding landscape: “not just what landscape ‘is’ or ‘means’ but what it does, how it works as a cultural practice.” This follows from his understanding of landscape “not as an object to be seen or a text to be read, but as a process by which social and subjective identities are formed.” See his introduction to *Landscape and Power*, ed. W. J. T. Mitchell (Chicago: University of Chicago Press, 1994), 1–2.

8. As Mara Miller wrote, “Gardens articulate space in the interests of articulating time.” See *The Garden as an Art* (Albany: State University of New York Press, 1993), 39.

9. See William Cronon’s discussion of wilderness, which was expressed in terms of the “sublime”: “Wilderness represents a flight from history. Seen as the original garden, it is a place outside of time, from which human beings had to be ejected before the fallen world of history could properly begin.” Cronon goes on to discuss the dualistic vision implicit in the idea of wilderness, in which the human is entirely outside the natural. See “The Trouble with Wilderness; or, Getting Back to the Wrong Nature,” in *Uncommon Ground*, ed. William Cronon (New York: W. W. Norton, 1995), 79–80.

10. Peter Latz, “‘Design’ by Handling the Existing,” in *Modern Park Design: Recent Trends* (Amsterdam: Thoth, 1993), 97.

11. Latz has commented that it is impossible to understand the Ruhr region without recognizing the role of the railway network in shaping the landscape. It was a functional system

that not only served the industrial plants but also influenced the layout of the towns. The railroad was laid out as a rational system, providing direct connections, in contrast to the street system, which was typically more haphazard and circuitous, and sectionally separated from the rail system.

12. Peter Latz, personal interview, June 1997.

13. Latz, interview.

14. The Piazza Metallica at Duisburg is an example of this postindustrial hybrid, where the machine becomes an extension of nature. In a former work yard of the ironworks, the production of iron is represented in both its molten and hardened states by a massive grid of forty-nine eight-ton iron plates that had been discovered in the pig-iron casting works. The intensity of the industrial processes gives them the primordial quality of natural geological forces; the eroded surfaces of the plates, which had been subjected to temperatures of 1,600 degrees, are like earth forms eroded by fluvial processes.

15. Udo Weilacher, *Between Landscape Architecture and Land Art* (Basel and Boston: Birkhäuser, 1996), 131.

16. Anneliese Latz and Peter Latz, "New Images: Metamorphosis of Industrial Areas," *Scoop—Cambridge Architectural Journal* 9 (1997): 39.

17. Peter Beard, "Peter Latz, Poet of Pollution," *Blueprint* 130 (1996): 35.

18. The once distinct towns of Duisburg, Meiderich, Hamborn, Kreuz, and Neumühl have now merged imperceptibly to form an almost continuous urban fabric around most of the park. However, the neighborhoods are demographically distinct, and the facilities located near the various entrances are meant to reflect specific neighborhood needs.

19. These original stakes were removed by the park administration after several years.

20. Miller, *The Garden as an Art*, 25.

21. A pioneer species is an early occupant of newly created or disturbed areas. It is a member of the early-stage communities in ecological succession.

22. Latz, interview.

23. See Daniel Botkin, *Discordant Harmonies* (New York: Oxford University Press, 1990), 12–13, for a discussion of cultural metaphors of nature that have influenced ecological thought—from divinely ordered, organic, and mechanistic models to a new model influenced by computers in which the distinction between organic and inorganic is no longer very clear. See also Daniel Simberloff, "A Succession of Paradigms in Ecology: Essentialism to Materialism and Probabilism," in *Conceptual Issues in Ecology*, ed. Esa Saarinen (Dordrecht: D. Reidel, 1980), regarding the impact of Greek metaphysical philosophy—Platonic idealism and Aristotelian essentialism—on ecosystem ecology.

24. For a discussion of this paradigm shift, see Daniel Simberloff's influential "A Succession of Paradigms"; and S. Pickett, V. T. Parker, and P. Fiedler's "The New Paradigm in Ecology: Implications for Conservation Biology above the Species Level," in *Conservation Biology*, ed. P. Fiedler and S. Jain (New York: Chapman and Hall, 1992); and Robert McIntosh, *The Background of Ecology: Concept and Theory* (Cambridge: Cambridge University Press, 1985). For a discussion of ecology's new paradigm and its meaning for designers, see Robert Cook,

“Do Landscapes Learn? Ecology’s ‘New Paradigm’ and Design in Landscape Architecture,” in *Environmentalism in Landscape Architecture*, ed. Michel Conan (Washington: Dumbarton Oaks Research Library Collection, 2000), as well as R. Pullian and Bart Johnson’s “Ecology’s New Paradigm: What Does It Offer Designers and Planners?” in *Ecology and Design*, ed. Bart Johnson and Kristina Hill (Washington, DC: Island Press, 2002).

25. See Michael Barbour’s “Ecological Fragmentation in the 50s,” in Cronon, *Uncommon Ground*, for a discussion of the debate between Frederic Clements and Henry Gleason over the concept of ecological communities.

26. P. M. Vitousek and P. S. White, “Process Studies in Succession,” in *Forest Succession: Concepts and Applications*, ed. D. C. West, H. H. Shugart, and D. B. Botkin (New York: Springer-Verlag, 1981), quoted in Fiedler and Jain, *Conservation Biology*.

27. Latz, “The Idea of Making Time Visible.”

28. Dieter Kienast, “A Set of Rules,” *Lotus* 87 (1995): 67.