6. THE GREENING OF ART

In 1971, the year after Michael Heizer completed *Double Negative,* the German artist Joseph Beuys waded fully clothed into a marsh at the edge of the Zuider Zee in the Netherlands, until little more of him was visible than the top of his trademark hat. This *Bog Action,* as he called it, was meant to dramatize his concern for the widespread destruction of wetland ecosystems in the country as shallow seas were being drained to produce new land.

Beuys was an artist for whom the morally and socially engaged act was entirely synonymous with art; his life was his art. *Bog Action* was just one of many initiatives he made on behalf of environmental causes as part of his broader political life. Later in 1971, for instance, Beuys and a small army of supporters swept with birch brooms a section of a Düsseldorf forest, Grafenberger Wald, to protest the planned cutting of trees to accommodate the expansion of a tennis club. He did numerous solo performances affirming his empathy for
158 animals — notably, *I Like America and America Likes Me* (1974), in which he lived with a coyote for five days in a New York gallery. In 1979 Beuys ran unsuccessfully for the European Parliament as a candidate of the Green party; in 1983 — in a project anticipating Mel
169 Chin's *Revival Field* — he proposed using special plants to reduce the concentration of toxic chemicals in the badly polluted mud flats along the Elbe River near Hamburg. Nothing came of this idea, but his equally ambitious project to plant seven thousand oak trees in the West German city of Kassel was brought to completion. Instigated on the occasion of the Documenta 7 exhibition in 1982, the action was completed when the last tree was planted at the opening of Documenta 8 in 1987. Although Beuys died before this vast urban reforestation project was completed, *7,000 Oaks* lives on as one of the world's largest "green" sculptures.[109]

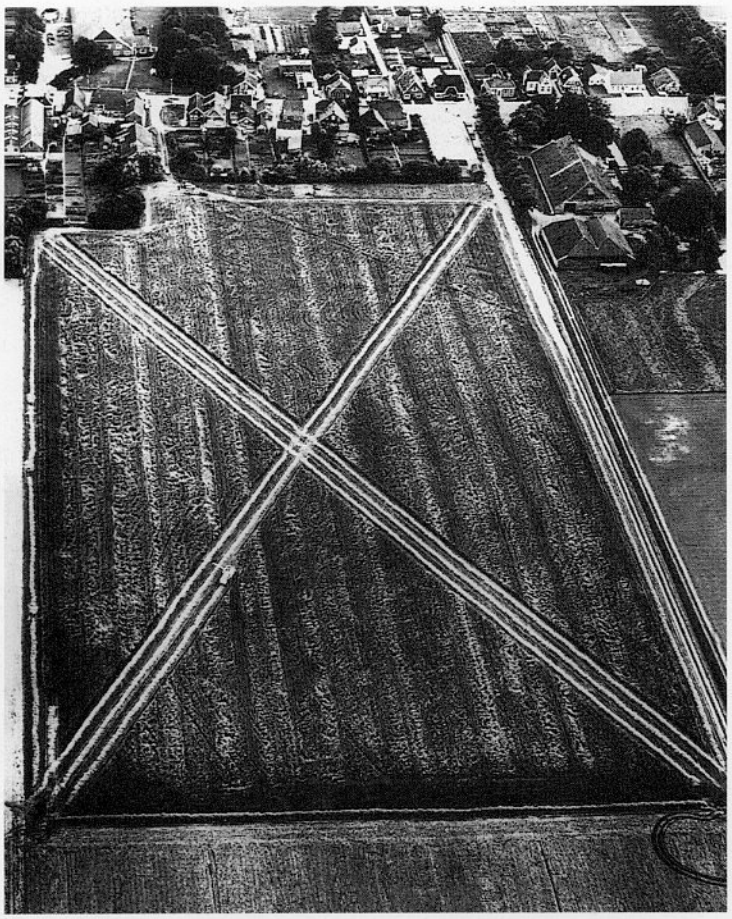
Heizer and Beuys were working in dissimilar landscapes and in different cultural circumstances — one in the relatively unpopulated expanses of the western United States, the other in one of the most densely populated and intensively industrialized regions on earth. But they also represent the opposite ends of a continuum of artists' attitudes toward nature. Whereas Heizer was using the earth as a neutral surface on which to act and as the source of raw materials for his sculptures, Beuys — like his English contemporaries Richard Long and Hamish Fulton — was staking out a more conspicuously empathic relationship to landscape. He also provided a model of the artist as environmental activist and cultural critic, a model that has grown increasingly influential as the years have passed. By submerging himself in a bog, for example, Beuys was affirming a conception of nature as a living system of which we are a part and which we modify, for better or for worse, with our actions. Landscape in this view is a cultural artifact, subject to the vagaries of politics as much as to the laws of nature. No intervention in the landscape is independent of either social or ecological implications. Beuys made it his mission to reveal some of the places where those interventions were problematic and to propose some modest remediations.

Beuys was not alone in hoping that his art might help repair the landscape, as demonstrated by the nearly contemporaneous mine-reclamation projects by Robert Smithson, Herbert Bayer, and Heizer, among others. But their primary intent was to make art, not to direct attention to environmental ills. Other European and American artists practiced a form of ecological activism more akin to that of Beuys; all were expressing the increased environmental awareness that has characterized the past several decades. The German-born artist Hans Haacke, for example, began working with natural materials and processes in the mid-1960s: making ice sculptures, floating balloons in the air, using water to create

158. Joseph Beuys (1921–1986). *I Like America and America Likes Me,* 1974, at René Block Gallery, New York. Courtesy of Ronald Feldman Fine Arts, New York.

159. Dennis Oppenheim (b. 1938). *Cancelled Crop* stage of *Directed Seeding/Cancelled Crop,* 1969. Wheat field, harvester, seed, and grain, 505 x 876 ft. Temporary installation, Finsterwolde, the Netherlands.

160. Alan Sonfist (b. 1946). *Circles of Time,* 1989. Trees, stones, bronze sculpture, and natural landscaping, diameter: 200 ft. Collection of Villa Celle Art Spaces, Florence. Photograph by the artist.



159

mist and erosion. By the turn of the decade, however, Haacke had evidently come to realize that natural systems were almost invariably modified by human actions, and he began to concentrate on revealing the detrimental impact of those actions on the landscape. In 1970, in a project called *Beach Pollution,* he collected all the trash on a 600-foot section of Spanish beach. Two years later came *Rhine Water Purification Plant,* in which polluted water from the Rhine was trucked to the Museum Haus Lange in Krefeld, then treated, filtered, and released into a tank containing goldfish.

By the early 1970s, a related sensibility had begun to emerge in the United States in the work of artists such as Dennis Oppenheim, Helen Mayer Harrison and Newton Harrison, Ana Mendieta, and Alan Sonfist. Starting in 1968, Oppenheim executed a series of ephemeral projects intended to make manifest the political and economic structures that shape the landscape. The most interesting of them took the form of inscriptions: *Time Line,* for example, was a three-mile-long drawing made with a snowmobile on the frozen surface of the Saint John River along the border between the United States and Canada. Not only did it underscore the way the landscape is carved into political jurisdictions but it also marked a boundary between the Atlantic and Eastern time zones. Oppenheim's *Directed Seeding/Cancelled Crop* (1969) was a commentary on the tendency to see the landscape only in terms of the commodities it can produce. At Oppenheim's instruction, a field in Holland was seeded with wheat and later harvested in the shape of the letter X. All further processing was halted. "In this case the material is planted and cultivated for the sole purpose of withholding it from a product-oriented system," Oppenheim explained.[110] 159

Also in 1969, Alan Sonfist started planning for a piece that would add a small patch of forest to the dense urban environment of lower Manhattan. Planted in 1977, his *Time Landscape* is a re-creation of the forest that was indigenous to Manhattan before the arrival of Europeans transformed the island forever. The piece is problematic in several respects. It is meant to be wild, hence it is unkempt. It implies the existence of an "innocent" nature prior to colonization, whereas we now know that the precolonial forest was altered by Native American habitation even before the arrival of settlers.[111] And it reinforces the un-

160

fortunate implication that nature is something apart from culture: a chain-link fence encloses the project, rendering *Time Landscape* inaccessible as well as unattractive.

Sonfist has gone on to make much more engaging variations on this theme — in particular, the version commissioned by Giuliano Gori for the notable collection of site-specific art at his villa, Fattoria di Celle, in Pistoia, 160 Italy. Calling the piece *Circles of Time,* Sonfist created an emblematic history of the Tuscan landscape in a three-acre composition of concentric rings. At the center of the circles is a re-creation of the indigenous but now obliterated Tuscan forest. Surrounding this is a garden featuring herbs known to have been cultivated by the Etruscans; it is guarded by bronze stick figures cast from the limbs of endangered trees. Around this is a ring of laurels, through which passages are cut to permit access to the interior. A broad band of stones constitutes the outermost ring, suggestive of Roman roads and medieval streets. The whole is set on a slope in a working orchard, which connects the composition to present-day uses of the Tuscan landscape.

Beginning in the late 1960s, Helen Mayer Harrison and Newton Harrison traveled the world to study ecological and biodiversity problems ranging from the salinization of fresh water in California to the effect of chemical pollution on Yugoslav forests. They became virtual ambassadors-at-large to the environment. "Our work begins when we perceive an anomaly in the environment that is the result of opposing beliefs or contradictory metaphors," they told an interviewer in 1987. "Moments when reality no longer appears seamless and the cost of belief has become outrageous offer the opportunity to create new spaces — first in the mind and thereafter in everyday life."[112] Their art takes a wide range of forms, from the creation of portable farming systems for museum installation to the study of entire ecosystems, using maps, drawings, photographs, videotapes, and even poetry to analyze environmental conflicts and recommend possible resolutions.

Like Long and Fulton, the Harrisons joined in the reaction against more monumental earthworks. "Think of the vast energy put into big cuts and shapes in the desert that are inherently gestural," Newton Harrison said. "They are transactional with museum space, not with the earth. They are involved primarily with forms."[113] The Harrisons' own work, by comparison, blurred the boundaries between art and science. One of their first projects, for example, involved a study of the mating behavior of a Southeast Asian crab, *Scylla serrata*

161

forskal, which they carried out as a museum installation with the support of a Sea Grant from the Scripps Oceanographic Institute (a grant typically reserved for biologists and oceanographers). They went on to examine whole ecosystems — in one project moving a segment of endangered meadow in Germany, destined to be plowed under for development, to the roof of the Kunst- und Ausstellungshalle in Bonn. In another, they created a memorial to vanishing California floodplain ecosystems as a permanent public art project for the Santa Monica Beach Promenade.

The Harrisons' recent work has grown in scope, addressing the contested landscapes that compose whole countries, even continents. *Vision for the Green Heart of Holland* 161
proposes a "Central Park" for the Netherlands, which would protect the natural and farming communities at the center of the nation from the development pressures being exerted by the ring of cities surrounding it. The proposal suggests the considerable impact that art might have on social policy and thereby on the physical environment. Commissioned by the Cultural Council of South Holland, the Harrisons'

161. Helen Mayer Harrison (b. 1929) and Newton Harrison (b. 1932). *Vision for the Green Heart of Holland,* 1995. Ceramic tile, maps, drawings, video (by Ellen Klaus), painting, and slide projection (slides from the collection of Photo-Natura). Temporary installation, Jeruzalemkapel, Gouda, the Netherlands, and tour.

162. Ana Mendieta (1948–1985). *Untitled,* from The Tree of Life series, 1977. Color photograph documenting earth-body sculpture with tree and mud, Old Man's Creek, Iowa City. Collection of Ignacio C. Mendieta.

Vision covers a region of some 618 square miles (1,600 square kilometers) with a population of about 5.5 million people. The project became the focus of a museum exhibition, then of a poster that was mailed to all the public officials, schools, and architects in the region. The main points in the Harrisons' proposal were subsequently incorporated into a draft planning document by the national minister of the environment. Although the document is still subject to review, the Harrisons' ideas seem well on their way to becoming national policy. In the same spirit, the two have also proposed creating a forest preserve in Tibet to protect the headwaters of Asia's great rivers.

Other artists have found different ways to assert their sense of personal identification with the earth. Like Charles Simonds — for whom the landscape, the body, and architecture are all forms of dwelling — the late Cuban-born sculptor and performance artist Ana Mendieta drew analogies between the body and the earth, but in a more insistently feminist way. In a series called The Tree of Life, she covered her naked body with clay and stood against the trunk of a tree, suggesting the affinity she felt between her vitality and that of the plant, and the dependence of both on the earth. She also created numerous effigy figures in the ground, shaping the image of her own body in mud, flowers, or gunpowder and wood. Some of these she would sprinkle with blood, others she would ignite, implying the violence that she felt had been perpetrated against both women and the earth by a predominantly patriarchal culture. Undoubtedly it was Mendieta's desire to escape the emphatically masculine history of art that led her to reach all the way back to ancient fertility figures as inspiration. Although she was certainly successful in asserting an affinity between the creative powers of women and those of the earth, she also risked reinforcing an old duality in which nature is imagined to

52-55

162

162

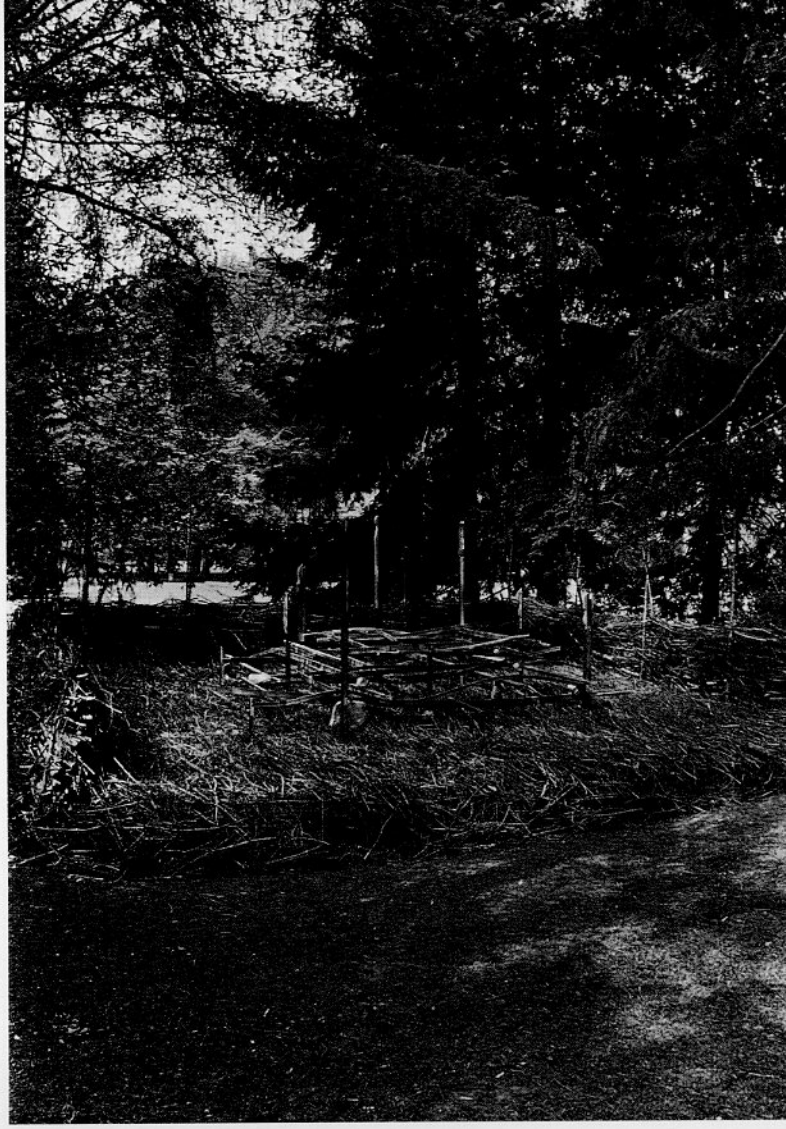
be female and culture is perceived to be male — and the latter presumed to be superior.

Mendieta's work foreshadowed several gender-based transformations in the practice of environmental art. In terms of sheer numbers, it would increasingly become the province of women. More important, their growing presence through the 1980s and 1990s would bring subtle changes to the discourse about landscape. Many women joined in the critique of the first generation of earth artists, seeing in their high technology and heavy equipment a degree of macho posturing. Many more evidenced a commitment to environmental stewardship. I don't subscribe to the notion that there is a "women's art," nor would I say that women are inherently any more or less capable than men as guardians of nature. At the risk of generalizing, however, I would say that women are more attuned to its gender implications. Some, like Mendieta, explore the way that dualities between male and female are replicated in the distinctions between culture and nature or intellect and instinct. Others have become self-conscious about the traditional associations between women and caretaking, especially in the home and garden. Paradoxically, much recent environmental art by women both reiterates and subverts these dualities: as we shall see with the work of Meg Webster, Karen McCoy, and Lorna Jordan, for example, it is at once more domestic, gardenesque, and nurturing than work by men, even as it chafes against these stereotypes.

Whether through ecological intervention, horticulture, or the evocation of ancient ritual, sculptors such as Mendieta, Sonfist, and the Harrisons developed in America the role for which Beuys had provided the model — that of the artist as environmental activist and social critic. Many of them merged art with other pursuits, including anthropology, science, garden design, and landscape architecture. In so doing, however, they have raised questions about whether they were stepping beyond the limits of their competence and whether their work might not be better if executed by someone from another discipline. These are questions to be faced by all artists who would be environmentalists. As their work has shaded toward ecological activism, it has not only had trouble asserting its identity as art, it has sometimes seemed to trespass on the territory of others.

Notwithstanding these difficulties, what might be termed "green art" emerged as one of the most significant new trends in late twentieth-century sculpture. No doubt this was an expression of a deepening and ever more pervasive sense of anxiety about the potentially catastrophic effects of unchecked population growth, industrial development, and resource consumption on global climate and health. Artists can hardly be expected to resolve all our environmental ills. There is some cause to wonder if they should try at all, if the result is neither good art nor good design nor good science. Moreover, their efforts must seem small compared to the magnitude of the problems. It seems to me fair to ask if they are making a real difference or merely expressing their own feelings of frustration and guilt at being part of a culture of conspicuous consumption, pollution, and waste.

In fairness to these artists, solutions to large problems are often local and incremental, and artists surely have a part to play in determining them. More important, art has the power to give voice to myth, if not to help shape it. We need desperately now to revive some old myths — myths about culture being embedded in nature, for example, and about the possibility of people living in greater empathy with their environment. And we need to articulate some new myths — myths in which the considerable forces of technology would be marshaled to fix, not to create, problems, and in which nurture would replace domination as the guiding notion in our earthly affairs. We



163

163. Michael Singer (b. 1945). *First Gate Ritual Series 5/80,* 1980. Pine, rock, and spruce branches, 3 x 24 x 20 ft. Riehen, Switzerland. Photograph by the artist.

are still a long way from the land ethic articulated half a century ago by the conservationist Aldo Leopold in his trenchant book *A Sand County Almanac* (1949). Our relationship with the earth, now as then, seems governed more by expedience than by sound planning. "There is as yet no ethic dealing with man's relation to land and to the animals and plants which grow upon it," Leopold wrote. "Land, like Odysseus' slave-girls, is still property. The land-relation is still strictly economic, entailing privileges but not obligations."

Leopold called for human activities to be regarded in the light of a deceptively simple equation. "Examine each question in terms of what is ethically and esthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."[114] Judgments about what is ethically and aesthetically right are subject to endless discussion. But to the extent that aesthetics plays a part in the land ethic, artists can surely be instrumental in advancing the debate. It would be no little accomplishment if art were to assist in the critical process of cultural redefinition, even as it continues to offer us some of its familiar visual gratifications.

Thus far, the artists who have been most successful at integrating art with environmental activism have used strategies familiar to us from recent public art projects. They have often collaborated with people from other disciplines, and they have developed distinctions, in theory and in practice, between their studio art and their projects in the landscape. Michael Singer provides a particularly interesting case in point, creating distinct kinds of sculptures in different settings and entirely changing his manner of working to fit the public context, where he has emerged as a visionary architect and planner. He has a long history as an environmental sculptor, dating back to some ephemeral constructions of wood or reeds that he created in the mid-1970s in ponds near his home in southern Vermont and in the salt marshes of Long Island Sound and the Chesapeake Bay. More than simple responses to a site, these were expressions of Singer's immersion in a particular place. "In order to experience and learn from the natural environment," he explained, "I felt the need to yield to it, respect it, to observe, learn, and then work with it." These were meditations on landscape, with titles — such as First Gate Ritual Series — that alluded to his almost ceremonial connections with nature. 163

At the same time, Singer has made robust constructions for indoor settings, which often define a passage or an enclosure. These too are contemplative spaces in which to study the fragmented stone or hewn wood that signify larger nature. They can seem almost memorializing in function, and Singer has used related structures in public commissions with a commemorative purpose. The city of Stuttgart, Germany, for example, retained Singer

164

164. Michael Singer. *Ritual Series/Retellings: A Place to Remember Those Who Survived,* 1994. Plantings, brownstone, granite, fieldstone, bronze, and patterned concrete, approximately one acre. Stuttgart, Germany.

in 1993 to design a one-acre garden within a larger city park in conjunction with an international garden exposition. Noting that the site lay over rubble from World War II bombings, Singer elected to create a generalized memorial to armed conflict and to the particular burdens of those who must rebuild their lives and reconcile themselves to history.

164, 165 Calling the piece *Ritual Series/Retellings: A Place to Remember Those Who Survived,* Singer worked with two streams found on the site, supplemented by three new wells. He designed a sequence of spaces around these water sources, including a shadowy glade of willow and ferns, through which the water runs in a granite rill. The streams all converge in a sunny area framed by a stone-and-wood enclosure, entwined with clematis and ivy. Here water flows over and around stone slabs, past low-growing plantings of wild ginger and moneywort. Inscribed on a granite tablet in this garden is a quotation from a poem written about 1800 by Rabbi Nachman of Bratslav, which was found scratched on a ghetto wall in Warsaw in 1945: "The world in its entirety is a narrow bridge, and the main thing is not to be afraid." Singer recalls with evident gratification a conversation among the German, Turkish, and American workmen who were helping him build this memorial garden. One asked, "Who are the survivors?" Another responded, "I guess we all are."

Singer has also been called upon to work on a number of public infrastructure projects, several of which have been geared toward environmental remediation. In 1989, through the Phoenix Percent-for-Art program, he was hired to collaborate with the artist Linnea Glatt on the design of a solid-waste transfer and recycling facility, which was to be built on the 166
site of a landfill that had reached its capacity at the edge of the city. This project necessitated the creation of a new dump in a distant desert location, as well as a facility where garbage could be transferred from standard sanitation trucks to the massive vehicles that would carry it away. Ordinarily, a waste depot would not be considered a civic space and, in fact, this transfer and recycling facility was originally planned as a utilitarian shed with no public access. But the city's director of public works, Ron Jensen, felt that the project offered a wonderful opportunity to educate the public about the workings of their city, perhaps encouraging them to conserve and recycle in the process — thus saving the city both hauling costs and landfill space. So he made the unusual suggestion to the Phoenix Arts Commission that they select artists to head a design team charged with imagining a new kind of public place, where people could observe the parade of their waste and learn about its impact on the environment.

Putting aside the original plans for the facility, Singer and Glatt worked with the designers and planners Sterling McMurrin and Richard Epstein; the architect Dino Sakellar; and the engineering firm of Black and Veatch, Inc., to come up with plans for the entire

165. Michael Singer. *Ritual Series/Retellings: A Place to Remember Those Who Survived.*

166. Michael Singer and Linnea Glatt, with Sterling McMurrin, Richard Epstein, Dino Sakellar, and Black and Veatch, Inc. 27th Avenue Solid Waste Management Facility, 1993, west elevation. Phoenix.

165

166

167. Michael Singer and Linnea Glatt, with Sterling McMurrin, Richard Epstein, Dino Sakellar, and Black and Veatch, Inc. Amphitheater, 27th Avenue Solid Waste Management Facility.

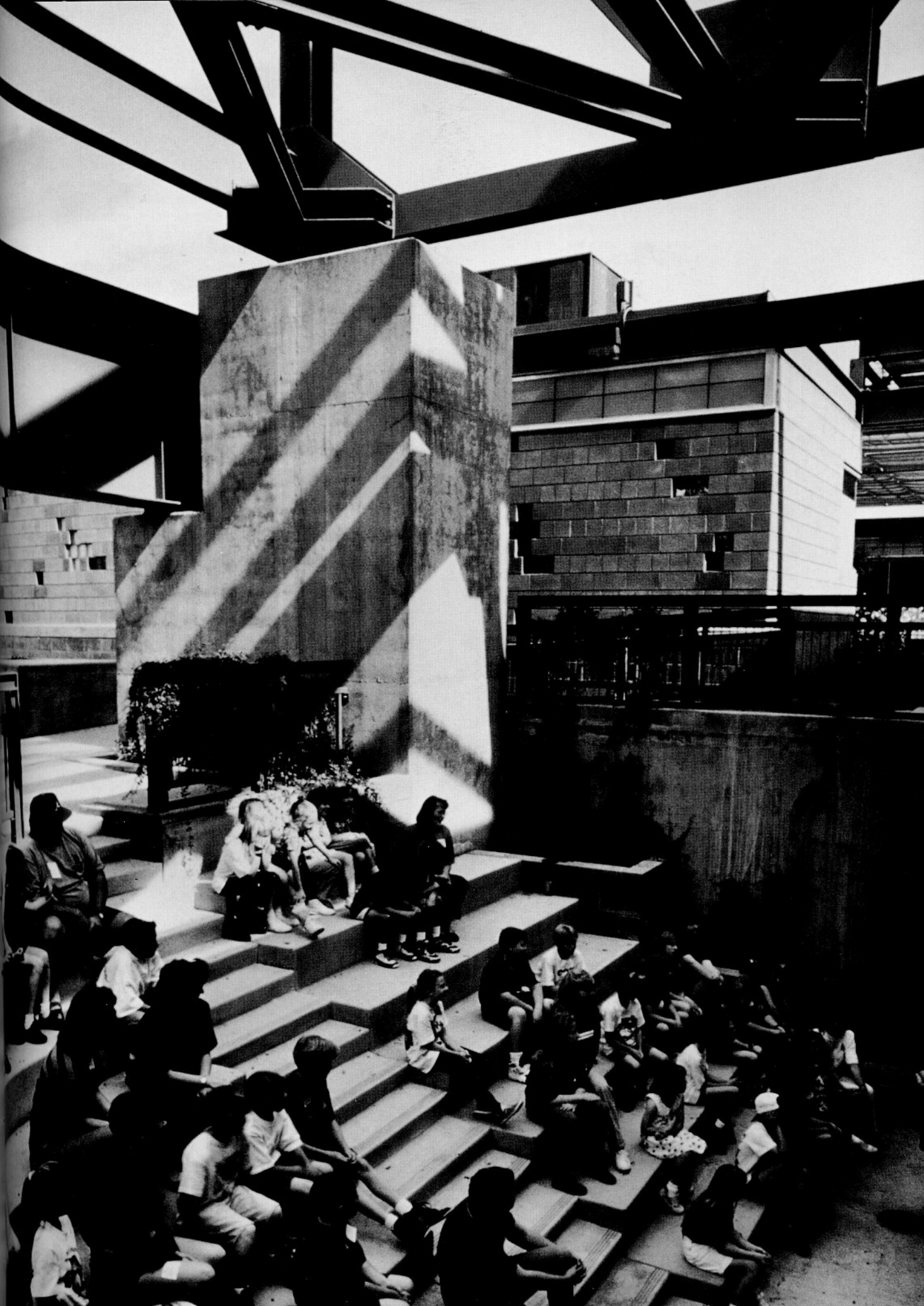
twenty-five-acre site — including roads and landscaping — and a design for a 100,000-square-foot, $18 million transfer and recycling building. This was a far cry from the meditative structures that had previously been Singer's forte, but the project gave him another way to pursue his goal of connecting people with an experience of nature. The team designed three approach roads. One is for the approximately five hundred large trucks per day that convey trash in and out of the facility. Another is for "self-haul": the people who bring their own trash and recyclables. The third, for visitors and administrators, leads over the mile-long, six-story-high capped landfill that had necessitated the project in the first place, after becoming filled to capacity.

The building itself is surprisingly handsome, with gray cement-block walls that are stepped like a ziggurat and softened with drought-tolerant plantings of rosemary, sage, yellow Lady Banksia roses, bougainvillea, and cat's-claw in the terraced intervals. The rosemary drapes, while the roses, bougainvillea, and cat's-claw climb, creating hanging gardens. "The landscape [is] much more than a gratuitously decorated area," Singer wrote in a description of the project. "It is a means to fuse the natural and built environments." The edifice is capped with a 480-foot sage green steel truss that is visible for miles around. The truss negates the need for interior supports, which frees the entire two-acre space for the huge machines that sort the trash. This spectacle is visible from catwalks and from an exterior
167 amphitheater where visitors can peer in through large glass panels. The whole effect is at once archaic and futuristic, suggesting an ancient temple consecrated to a postindustrial phenomenon — the culture of excess and obsolescence.

Singer's success in this venture has led to his involvement in several other public infrastructure projects. In Grand Rapids, Michigan, he designed a river walk and flood-control wall completed in 1996; in New Haven, Connecticut, he led a team that developed a master plan for a waterfront park at Long Wharf, which will entail the reuse of a defunct sewage-treatment facility as a center for vocational education in aquaculture; and in Prague he is at work on a plan to preserve Troja Island and restore the surrounding Vltava River environment. While his assumption of widely disparate roles in different contexts — sculptor, landscape architect, environmental planner, civil engineer — has raised a few eyebrows, it is becoming more typical for artists.

Like Singer, the sculptor Mierle Laderman Ukeles has been engaged in a project involving a solid-waste transfer station. For some twenty years Ukeles has been an unpaid artist-in-residence with the Department of Sanitation in New York City, trying to promote public appreciation of the heroic efforts made by trash collectors and recognition of their importance to the health of the urban environment. She has constructed temporary tributes to them in recycled materials, such as *Ceremonial Arch Honoring Service Workers* 168 *in the New Service Economy.* At her urging, the new marine transfer station at Fifty-ninth Street on the west side of Manhattan has been engineered to be a public space, with catwalks and observation decks so the public can watch the loading of garbage on barges bound for the Fresh Kills Landfill on Staten Island. It is her ambition to create permanent sculptures in recycled materials for the facility, signifying possible other uses for some of the trash we daily commit to the ground. Calling the project *Flow City,* Ukeles has also proposed a wall of video monitors that will broadcast in real time the activities at city landfills.

Mel Chin has become something of an expert in botany for a project he has developed with the scientist Rufus Cheney, a heavy-metals expert in the Environmental Chemistry Laboratory at the USDA's Agricultural Research Service in Beltsville, Maryland. *Revival Field,*



168. Mierle Ukeles (b. 1939). *Ceremonial Arch Honoring Service Workers in the New Service Economy,* 1988. Steel arch with materials donated from New York City agencies, including gloves, lights, grass, straps, springs, and asphalt, 11 ft. x 8 ft. x 8 ft. 8 in. (overall structure), plus glove branches ranging from 2 to 4 ft. long. Temporary installation, New York Public Library.

168

169. Mel Chin (b. 1951). *Revival Field* (aerial view), 1990–93 (photographed 1993). Plants and industrial fencing on a hazardous-waste landfill, approximately 60 x 60 x 9 ft. Pig's Eye Landfill, Saint Paul.

169

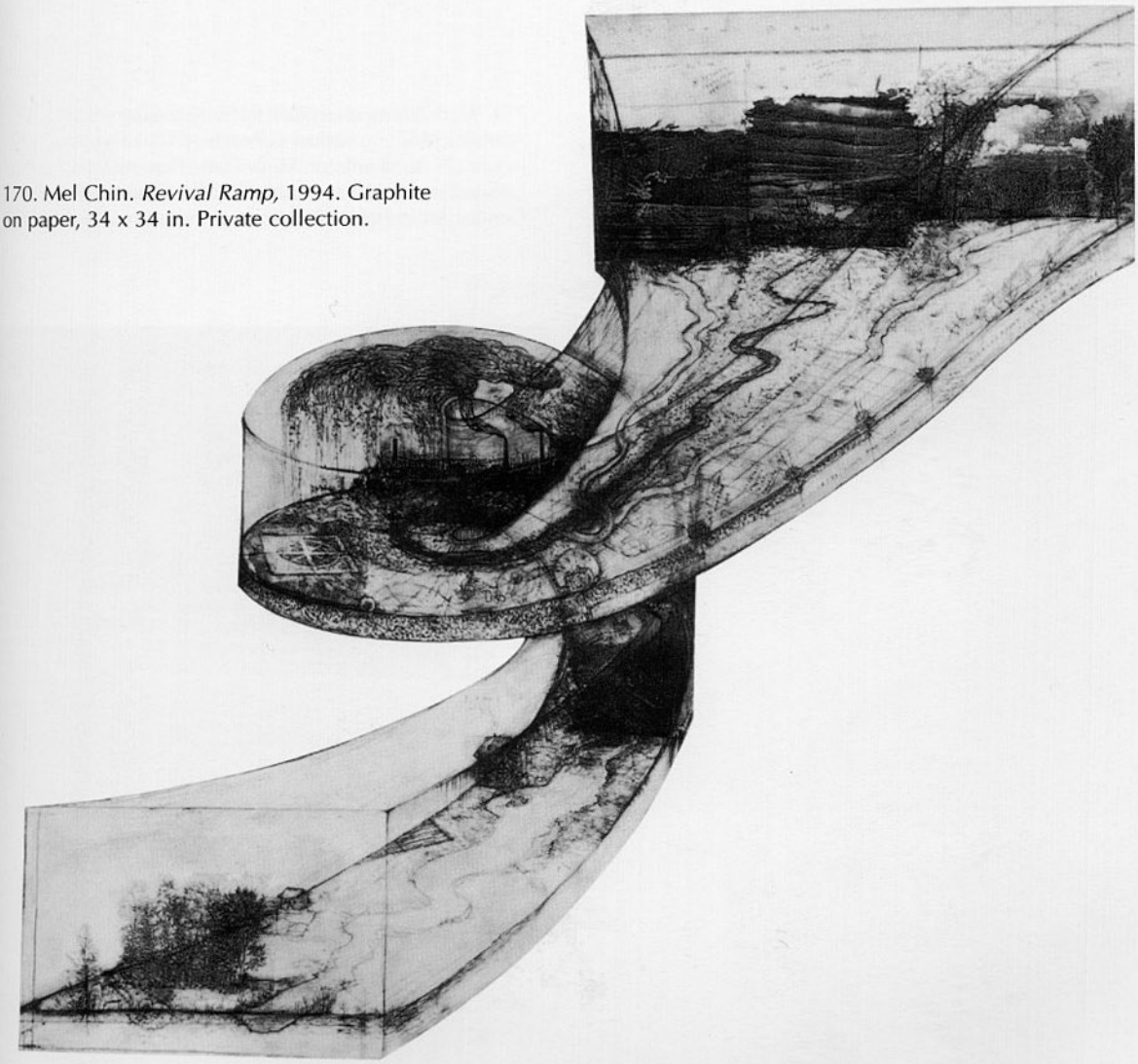
as this series of growing sculptures is called, began when Chin happened upon an article about hyperaccumulators — plants that selectively absorb heavy metals from toxic soils as they grow. Touted as a form of "green remediation" and as a low-tech, on-site alternative to more costly forms of decontamination, these plants had yet to be proved effective in field trials. Recognizing the need to bring scientists, public agencies, and the necessary capital together, Chin approached Chaney with the unusual proposal that he help orchestrate test plantings as an art project. Chin secured the support of the National Endowment for the Arts and the Walker Art Center in
169 Minneapolis and a site at the Pig's Eye Landfill in Saint Paul, which was contaminated with cadmium, zinc, and lead. Between 1990 and 1993, annual plantings of six hyperaccumulators were set out at the landfill in a circular pattern divided by two walkways, evoking the crosshairs on a rifle scope and suggesting that the earth was targeted for restoration.

At the end of each growing season, plants were harvested and tested for the presence of heavy metals. At the end of the three-year period it was determined that they were indeed removing contaminants from the soil, although not fast enough to achieve significant cleansing. Meanwhile, another *Revival Field* was established at a site in Palmerton, Pennsylvania, that had been designated by the federal Environmental Protection Agency as a top priority for remediation. There the soil contains heavy concentrations of zinc and cadmium, probably from a smelter that operated between about 1890 and 1980. The most promising zinc and cadmium hyperaccumulators, including Alpine pennycress *(Thlaspi caerulescens),* are being tested at Palmerton in a variety of soil conditions. Laboratory work has also begun on the next challenging phase of the project — the development of high-biomass, high-uptake "superaccumulators," which would remove heavy metals at a much faster rate. The possibility is being explored that these plants could be harvested and burned, and the metals recovered and recycled. Still other plant species are being sought that might help clean nuclear waste sites by absorbing uranium, cesium, strontium, and other radioactive isotopes.

Chin acknowledges that his work on these projects is a far cry from his studio sculptures, which are beautifully crafted constructions, often made of wood, with enormous aesthetic appeal. By comparison, a *Revival Field* is not an object but a process, an effort to "sculpt a site's ecology." The series relates, he says, to "my interest in alchemy and my understanding of transformative processes and the mutable nature of materials. The contaminated soil is transformed back into rich earth, capable of sustaining a diverse ecosystem."[115]

Chin's insistence that his *Revival Fields* be seen not as static images but as part of a landscape in transformation is underscored by a related drawing called *Revival Ramp.* It de- 17
picts the evolution of a hypothetical site along a stream, beginning at the bottom with a copse of trees lifted from a drawing by Leonardo da Vinci. Moving up through what Chin describes as "a five-hundred-year loop," the landscape passes through agricultural and industrial phases, becoming contaminated with heavy metals by smelting in the latter. The landscape then divides into three branches, becoming a "ramp of possibilities." In one unlikely alternative, the landscape is restored to its original condition. In another, it continues to be degraded. In a third, not yet fully imagined alternative, some middle way is found in which the working landscape is restored to health and productivity. "The future is open-ended," Chin admits, but he clearly hopes that the processes he has helped bring to light will one day contribute to environmental restoration on a large scale.

As the projects by Singer and Chin suggest, some form of environmental awareness — if



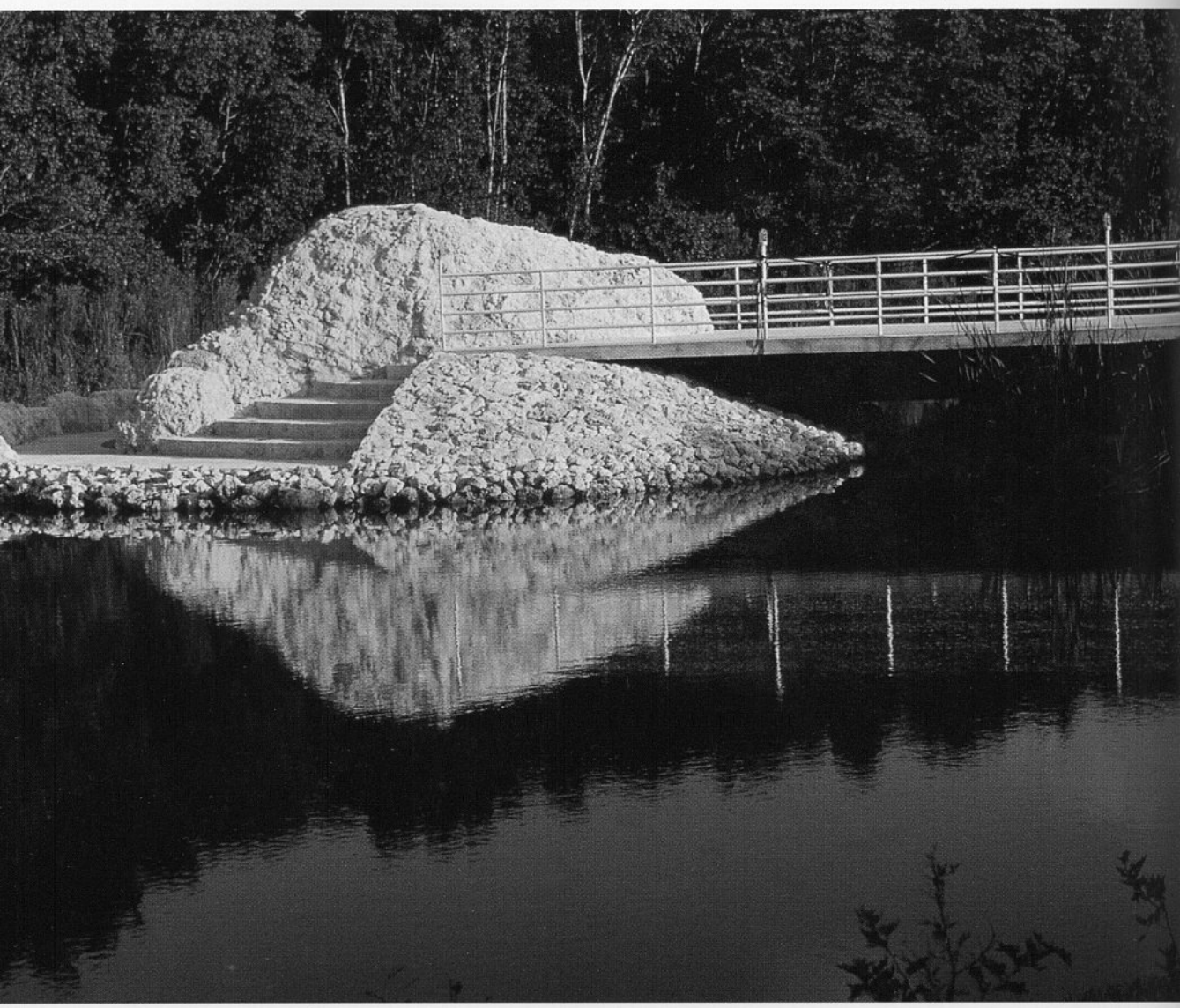
170. Mel Chin. *Revival Ramp,* 1994. Graphite on paper, 34 x 34 in. Private collection.

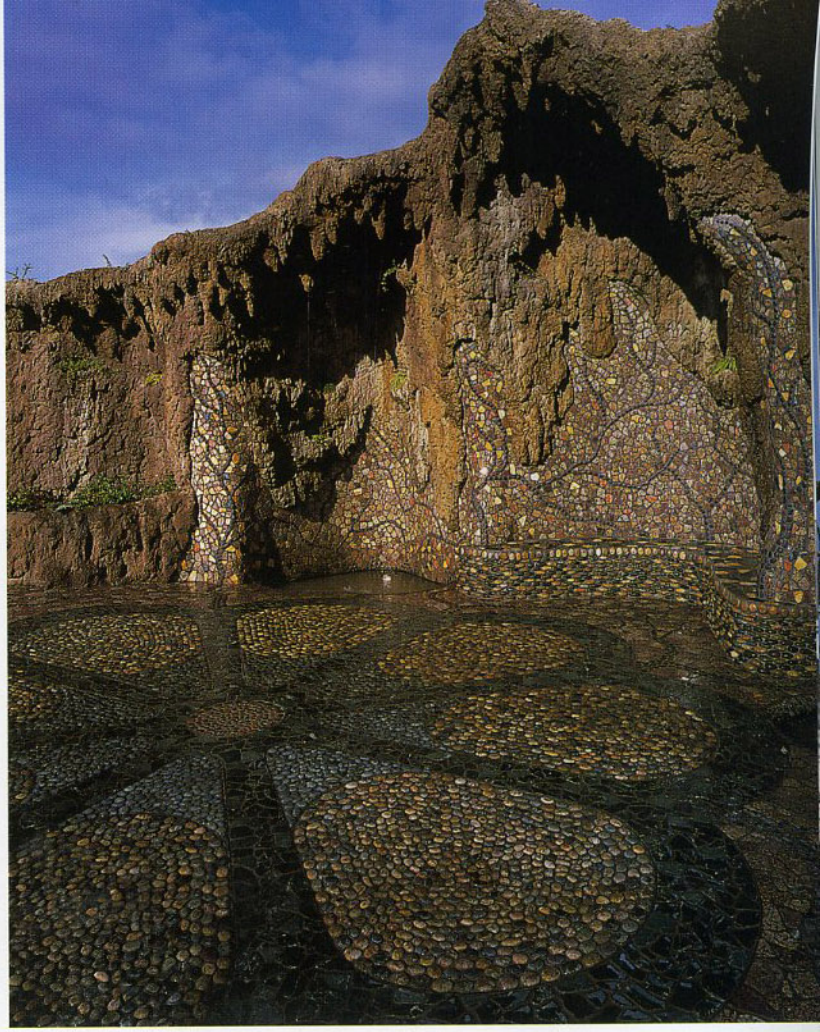
170

not remediation — has become more common to public art in recent years. Elyn Zimmerman, Lorna Jordan, and Jim Sanborn stand out among the many artists who have created for the public space works that engage various natural processes and systems. Zimmerman typically works with stone and water, creating sheltered oases on urban plazas — 138 exemplified by *Marabar,* her project for the National Geographic Society. In some instances, however, her sculptures are a literal 171 bridge between culture and nature. *Keystone Island,* for example, rises from a mangrove swamp adjacent to a new county courthouse on the north side of Miami. Her piece creates a subtle naturalistic counterpoint to the high-tech architecture of the building, designed by the Miami firm Arquitectonica.

The architects had established an axis from the entrance of the courthouse to the rear of the site; it terminated abruptly at the edge of a small tidal lagoon bordered by mangroves. Zimmerman extended the axis over a bridge of her design to a small island she created of coral rock (also known as *keystone*). The material was mined at a now-closed quarry on Key Largo; it is the same stone used in the gardens at Vizcaya, a Renaissance-inspired villa south of Miami, where Zimmerman had first observed with pleasure the way it changes color as it weathers. She designed the island to be some fifty feet in diameter and to rise

171. Elyn Zimmerman (b. 1945). *Keystone Island,* 1989. Limestone, concrete, and water, height: 11 ft., diameter: 50 ft. Dade County Justice Center, North Miami, Florida. Dade County Art in Public Places.





172. Lorna Jordan (b. 1954), *Waterworks Gardens: The Grotto,* 1996. Third of five public garden rooms in the King County East Division Reclamation Plant, Renton, Washington. Stone mosaic, shotcrete, water seeps, pools, fountain, benches, and plants, 8 acres.

172

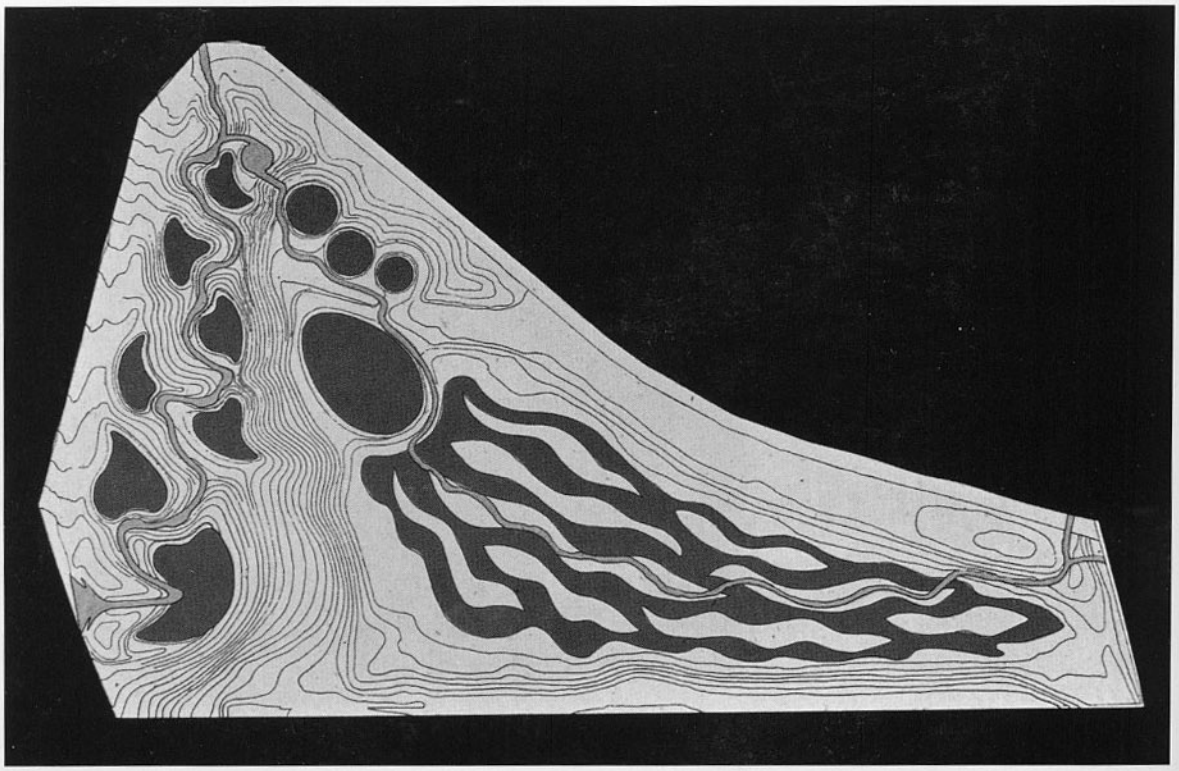
about ten feet from the high-tide line. Steps lead down from either side of the bridge to a walkway that skirts the island. The path passes a small pool on the island that is open to the lagoon; fish can be seen darting between the two bodies of water. Without undue self-consciousness, the project brings visitors face to face with the local ecosystem: with the mangroves and marine life that inhabit the lagoon and with the calcified coral that is the foundation for most of South Florida. Just as significantly, the piece serves as a reminder that at the edges and in the interstices of urban environments are natural systems awaiting discovery and explication. Nature isn't something distinct from culture but permeates the built environment — albeit in a highly transmuted and often debased form.

173 Lorna Jordan's *Waterworks Gardens* restored such a battered ecosystem. Located next to a vast wastewater treatment facility in Renton, Washington, the gardens purify oil-laced and silty storm-water runoff — up to 2,000 gallons a minute collected from 50 acres of roads and parking lots. In the absence of Jordan's project, this water would have been treated along with sewage (an expensive process representing an instance of overkill). Or it would have been collected and filtered in bland detention ponds. Jordan's eight-acre project, commissioned through the King County Metro Arts Program and designed in conjunction with Seattle landscape architects Jones and Jones, turned this problem into an attractive public environment enriched with a subtle narrative.

In plan, the gardens resemble a blooming plant, with leaf- and flower-shaped ponds along stemlike paths; they tell a story about the power of natural systems to cleanse themselves. Particle pollution settles from the water in the first ponds, then trickles into a marsh where filtration is completed among native wetland species including sedges, rushes, yellow iris, and red-twig dogwood arranged in colorful bands. In between, the water bubbles through a fantastic grotto featuring con- 172
crete stalactites overhanging tumbled granite and marble inlay. The floor of the grotto resembles an enormous seedpod, which sends its shoots up the walls. A classical form that reappeared in Renaissance gardens, the grotto is historically linked to sacred springs; here, it represents the rebirth in purified form of the degraded water. Jordan has managed to reconcile history, ecology, and the requirements of public infrastructure and access in this project, which is no small achievement.

Jim Sanborn has executed both public and private works in the landscape. Among the former is a piece called *Coastline,* outside the 174
buildings that house the National Oceanic and Atmospheric Administration (NOAA) offices in Silver Spring, Maryland. His sculpture forms the dramatic centerpiece to a small park outside the complex. It is a semicircular pool about seventy feet long and twenty-five feet wide, bordered on the straight edge by a seven-foot wall of striated granite. Using a reduced version of the pumps that propel waves

173. Lorna Jordan, artist and design lead, with Jones and Jones (architects and landscape architects) and Brown and Caldwell (consulting engineers). Plan for *Waterworks Gardens,* 1996. Ink and marker on Mylar, 22 x 36 in.



173

in amusement parks and calling on the advice of a coastal scientist, Sanborn created variegated patterns of computer-driven swells directed at the granite wall. At times, gentle "lake" waves lap against it at four-second intervals; at others, great oceanic surges break upon it every seven seconds. It's all a simulation, but it is appropriately suggestive as well, reminding us that the landscape is a cultural artifact. At the same time, *Coastline* acknowledges the physical power and mythic potency of the place where water meets the land.

Sanborn's private projects have included
175 Topographic Projections, a series of large-scale but ephemeral light installations in the high deserts of Utah and New Mexico. Using a 2,500-watt projector he built himself, powered by a mobile generator, he directs beams of light through films bearing computer-generated designs, spreading an image sometimes 3,000 feet wide and 2,000 feet high onto darkened mountain ranges half a mile away. These he photographs with a large-format camera, using prolonged exposures, recording not just the projected patterns but also star trails and the tracks of passing aircraft. Sometimes the projected images have been words (*lux,* the Latin word for "light," for example), but more often they have been grids — an allusion, Sanborn says, to the fundamental geometries of geological structure and to cultural patterns such as surveys that have been imposed on the landscape irrespective of its true topographies. His projections set up an interesting dialogue with the work of earlier earth artists like Smithson and

174. Jim Sanborn (b. 1945). *Coastline (Wave Pool for NOAA)*, 1995. Granite, water, and wave generator, 6 x 70 x 30 ft. National Oceanic and Atmospheric Administration, Silver Spring, Maryland.

175. Jim Sanborn. *Topographic Projection (Shiprock, New Mexico)*, October 1995. Projected light, 1,700 x 2,500 x 500 ft. Temporary installation, Shiprock, New Mexico. Photograph by the artist.

175

176

176. Martin Puryear (b. 1941). *Camera Obscura,* 1994. Wood, height: 20 ft. Temporary installation, Denver.

Heizer. Sanborn grapples, as they did, with the wondrous scale of the Western landscape and the imposing geological processes it records. At the same time, however, his brief illuminations have only a minimal impact on delicate desert ecosystems.

The temporary project, often created in conjunction with an exhibition, has become one of the main opportunities in recent years for exploring the intersection of art and ecology. For many artists, the virtue of such work is not only that it is effaced with time but also that it allows them to work in places where they might not be able to place a permanent piece. It also permits them to be more provocative or experimental than a permanent public project ordinarily does.

176 Martin Puryear's *Camera Obscura,* for example, executed for the 1994 exhibition *Landscape as Metaphor* at the Denver Art Museum, had a much higher emotional pitch than public projects such as his pylons for Battery Park City. *Camera Obscura* was composed of an aged cherry tree cut from an abandoned orchard and hung by a chain from a structure that resembled a gallows. The title, which refers to the antique device that projects images upside down, was meant to reveal the artist's ambition for the sculpture: "to present an inverted reality." More specifically, Puryear says, the piece was intended to convey "the idea of landscape as a cultural construct, different from nature. Landscape is nature under the hand of man, or with man looking at it." But the sculpture clearly called to mind a lynching — an intimation that was strengthened when sap ran down the branches and caused the tree to blossom in death. One couldn't escape the sense that the sculpture represented the casual violence being perpetrated against nature as the world's great forests face oblivion. Nor could one avoid the perception that — in profound if unspecified ways — this violence is somehow analogous to the brutal lynchings of African Americans, which are among the sorriest episodes of modern American history. So while the sculpture was meant to evoke the daily, even casual manipulations of nature that compose our landscapes, it came to stand for more vicious transactions with the earth. In all, *Camera Obscura* might be taken as representing some of the subtlety and intellectual complexity of recent art in the landscape, in which historical and cultural references often intertwine with expressions of environmental concern.

Karen McCoy has also put the temporary installation to provocative use, aspiring to the same rich mixture of allusions. "I always try to let a sense of place shape my work," she says. But that requires more than topography or ecology. "It involves a process of remembering, imagining, and contemplating historical and present-day uses of the land." The