PRINT X

Art in America

MAGAZINE FEB. 06, 2014

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Art for the Anthropocene Era

by Eleanor Heartney

Mary Mattingly: Pull (detail), 2013, chromogenic print, 30 inches square. Courtesy Robert Mann Gallery, New York



News from the ecological front has been alarming of late. There was September's report from UN scientists on the acceleration of climate change and the near certainty that these developments are man-made. Then there was the impending arrival of Fukushima radiation on the West Coast, accompanied by half-hearted assurances that "most" of the radiation would be diluted to levels safe for human contact. These reports arrived as New York City prepared to commemorate the first anniversary of the devastating landfall of Superstorm Sandy, reviving memories of other recent damaging "natural" disasters, among them hurricanes Katrina, Wilma and Irene.

It can be hard to shake a sense of imminent eco-doom. Or is there room for "dark optimism," as the eco-themed initiative Expo 1: New York at MoMA PS1, in Queens, last summer styled it? The UN report contains recommendations for international emissions caps and other cooperative measures, but in a world riven by economic, religious, cultural and military strife, that prescription seems unrealistic. What, if anything, can be done?

Against this backdrop of an increasingly endangered planet, eco art gains new relevance, as artists dare to tread where scientists, politicians, environmentalists and other specialists do not. These artists' work centers on the recognition that we have entered into the "Anthropocene"—a new geologic era marked by the impact of human activity on the earth. Working in a variety of modes, ranging from critique to practical demonstrations and shading into other current tendencies like social practice, relational aesthetics, environmental activism and systems theory, eco artists express the hope that art can point the way to a more ecologically sustainable future.

Several recent exhibitions have foregrounded differing approaches to environmental art. At Gemeentemuseum in The Hague last summer, works by over 80 contemporary artists spilled out of the museum into the surrounding grounds. The connecting thread between projects by artists such as Ai Weiwei, Francis Alÿs, Mark Dion, Jimmie Durham and Olafur Eliasson was the melding of nature, technology and culture. Works ranged from small aquatic ecosystems and a repository for nonindigenous species to porcelain "oil spills," plastic water lilies and a garden ornamented by the carcasses of soon-to-be-obsolete oil-dependent cars.

Titled "Yes, Naturally: How Art Saves the World" and curated by Ine Gevers of Amsterdam's Foundation Niet Normaal, this show offered a more upbeat prognosis than MoMA PS1's "Dark Optimism," only one part of the sprawling, festival-like exploration of ecological ideas conceived by director Klaus Biesenbach, along with curator Hans-Ulrich Obrist, codirector of Serpentine Gallery in London. In "Dark Optimism," a dystopian tone held sway. Characteristic were works like Pierre Huyghe's *Zoodram 5 (After* Sleeping Muse *by Constantin Brancusi)*, 2011, a glass tank that provided living quarters for different species of crabs that cannibalize each other, a none-too-subtle metaphor for human rapaciousness. With similar black humor, *Bródno People* (2010), by Pawel Althamer and six collaborators from a working-class neighborhood of Warsaw, remakes Rodin's heroic *Burghers of Calais* into a procession of zombies fashioned from trash and technological cast-offs.

Eschewing the irony that suffused these shows, "Vanishing Ice: Alpine and Polar Landscapes in Art, 1775-2012," recently at the Whatcom Museum of History and Art in Bellingham, Wash., traced the historic lineage of artists' fascination with the Arctic. Paintings, photographs, videos and documentary materials offered evidence of artists working as documentarians, popularizers and educators to shape public perceptions of the environment. The 90 works by 72 artists ranged from collaborations between 18th-century landscape painters and the original Arctic explorers to the elegiac meditations of photojournalist Gary Braasch and video artist Isaac Julien on the science, politics and poetry behind the rapidly disappearing ice floes.

View of Mel Chin's Revival Field at Pig's Eye Landfill near St. Paul, Minn., 1991. Photo David Schneider.



Much recent eco art trades in contemporary terms like "posthuman" (originating in science fiction and referring to the collapse of distinctions between human and machine), "artificial nature" (the title of a 1990 exhibition curated by Jeffrey Deitch for the DESTE Foundation in Athens, Greece, and recently adopted as the project name for a virtual ecosystem by artists Graham Wakefield and Haru Ji) and "ecology without nature" (the title of a book by Timothy Morton that argues that nostalgia for nature is a hindrance to effective environmental action). But current projects build on a firm foundation of work by pioneers like Alan Sonfist, Helen Mayer Harrison and Newton Harrison, Agnes Denes and Mierle Laderman Ukeles, several of whom were included in "Dark Optimism." In the 1970s, these artists were already examining the ramifications of humanity's impact on the environment in works that encompass the transformation of landfills into parks, the restoration of sections of the urban grid to their presettlement state and the mapping out of ambitious plans for the natural and industrial restructuring of endangered watersheds.

Such works were surveyed in a groundbreaking 1992 exhibition at New York's Queens Museum of Art titled "Fragile Ecologies," organized by "Vanishing Ice" curator Barbara Matilsky. While many new works are basically descriptive, exposing and commenting on the dysfunctional interrelationships between humans, technology and nature, the projects in "Fragile Ecologies" were prescriptive, focused on the amelioration of environmental harm. In today's rhetoric, this solution-based approach is often cast as essentialist for its purported separation of nature from culture. This is an argument articulated by T.J. Demos in "The Politics of Sustainability: Art and Ecology," an essay published in the catalogue accompanying the Barbican Art Gallery's 2009 exhibition "Radical Nature: Art and Architecture for a Changing Planet 1969-

2009." But in fact, works like the Harrisons' 1989 Sava River Project, Denes's 1982 *Wheatfield* and Ukeles's ongoing Maintenance Art (an umbrella term for all her work, initiated in 1969 with a manifesto) demonstrate a clear understanding of the necessity of placing humanity within the larger matrix of nature.

The tradition of practical eco art continues today in the work of such practitioners as Jackie Brookner, Aviva Rahmani and Peter Fend and younger artists like Mark Dion, Nils Norman, Amy Balkin and Tue Greenfort, as well as the four artists considered in this article: Mel Chin, Lillian Ball, Mary Mattingly and Natalie Jeremijenko. These four seek solutions, some feasible, some whimsical, to specific environmental problems. Their current projects have been inspired by recent ecological disasters and suggest ways that we may at least partially counter the worst impacts of environmental degradation and climate change. Their work is not without theoretical and practical dilemmas, among them: Does such work simply normalize a bad situation, providing little more than a Band-Aid for a gaping wound? Does a focus on individual efforts undermine the need for systemic change? What is the role of the artist in science-based experiments? How does one evaluate "success"? To what extent do remediation-based projects really remediate? How do artists reach out to corporate and institutional partners without being captured by their often contrary agendas?

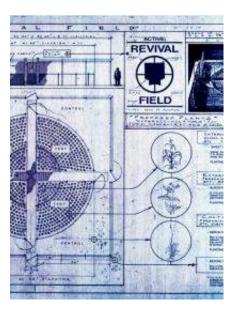
Mel Chin has been struggling with these issues for 25 years. His "Revival Field" project, initiated in 1990, is now a classic model for the partnership of art and environmental science. Working with agronomist Rufus Chaney and bucking the opposition of the politically besieged head of the National Endowment for the Arts, Chin demonstrated the efficacy of using "hyperaccumulating" plants to leach toxic metals from the soil. The first *Revival Field* was constructed in 1991 on a Superfund site outside St. Paul. Following a positive outcome, the pair developed a scientific protocol that has replicated the results in numerous controlled experiments, including subsequent "Revival Field" iterations in Palmerton, Penn.; Zoetermeer, The Netherlands; and Stuttgart, Germany.

Chin does not function solely as an eco artist, and his plans for a retrospective at the New Orleans Museum of Art (Feb. 21-May 25) attest to a restless, wideranging intelligence that touches on everything from alchemy and mycology to politics and community activism. His acumen has manifested itself in such diverse projects as the artistic infiltration of the TV series "Melrose Place" and the creation of a noncompetitive computer game. He returned to the issues that inspired "Revival Field" after a trip to post-Katrina New Orleans in 2006. He discovered that many of the inundated areas were reporting high levels of lead contamination. Further investigation revealed that this problem predated Katrina and that in fact it is endemic in urban areas throughout the country.

Lead contamination is a result of airborne dust emanating from gasoline, paint and other industrial materials and is a particularly disquieting problem in already neglected neighborhoods because it can stunt the development of young brains and bodies.

Again, Chin turned to science for a solution. There are no hyperaccumulating plants that neutralize lead, but working with scientists, environmental health experts and landscape architects from a variety of universities, he discovered a process currently in use by the U.S. military to detoxify its bases. It involves the creation of a natural substrate of organic phosphate that will attach itself to lead-contaminated soil and render it harmless. He dubbed this protocol TLC—Treat, Lock and Cover—and proposed to exploit the mechanisms of art to publicize, fund and encourage the adoption of this procedure.

"Revival Field" diagram, 1990, Diazo blueline print, 19 by 281/4 inches. Courtesy Mel Chin.



In 2007, Chin launched "Operation Paydirt" as a way to bring together the problem's various stakeholders. Recognizing that successful implementation of TLC depended on public and political entities not known for nimble movement or an embrace of innovation, he launched the "Fundred Dollar Bill Project." This is a publicity scheme designed to create grassroots support while shaming local and federal officials into taking action. Fundreds (a combination of fun, fund and hundred) are hundred-dollar bills drawn by children based on a template available on the project's website. Working with schools, churches and other institutions, Chin proposes to gather 300 million "dollars" worth of Fundreds. These will then be delivered by armored car to the U.S. Capitol, where the participants in the project will demand an equal number of real dollars to fund lead remediation nationwide. The scheme is currently under way, with 441,280 Fundreds (\$44,128,000) collected as of this writing. The publicity it has generated has already led to the implementation of



WATERWASH ABC, Lillian Ball 2009-13, Wetland/Grassland Entrance,Recycled Glass Pavement/ Brass, Native plants, Filmstrip signage

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TLC under the aegis of the Environmental Protection Agency in contaminated neighborhoods in West Oakland, Calif., and New Orleans.

Lillian Ball's ongoing WATERWASH® also hinges on the productive partnership of the artist with non-art institutions. (Ball was advised by an intellectual property rights lawyer to trademark the catchy name, although all the concepts are in the public domain.) A sculptor dealing with issues of water and liquid since the late 1970s, Ball has been pursuing environmental art since 2003. The project is a water remediation system, consisting of pathways, plantings and wetlands, aimed at cleansing toxic substances from runoff in urban areas. Like "Revival Field," it uses natural processes to heal the damage done by industrialization and human development.

Inspired by a conversation with a Long Island town planner and ecologist, Ball had already created (in 2007-09) the prototype for WATERWASH in Mattituck, N.Y., on Long Island's North Fork, when she approached Paul Chapman, vice chairman and president of ABC Carpet & Home, in 2009. The ABC warehouse building butts up against the Bronx River waterfront in New York City's heavily industrialized South Bronx. Before Ball's involvement, it was just one more unsightly urban development with a parking lot from which oil and sediment-laden rainwater ran into the river. With financial assistance from the National Fish and Wildlife Foundation's Bronx River Watershed Initiative, Ball enacted a system that would remove these impurities from the runoff while engaging members of the local community and the larger public. She notes with satisfaction that the money for this initiative comes from fines levied on industrial polluters.

Like "Operation Paydirt," WATERWASH is multifaceted. Its ecological component entails the use of plant roots, soil and microorganisms to filter toxic chemicals from rainwater before it enters the river. For this aspect, Ball received assistance from the environmental engineering firm eDesign Dynamics. Public service and educational elements exist in the creation of a public park in a formerly inaccessible and uninviting section of the Bronx waterfront. To plant the new park, Ball worked with young South Bronx residents recruited from Rocking the Boat, a local nonprofit focused on engaging youth in ecological efforts. Environmental engineers from Drexel University in Philadelphia are monitoring the effectiveness of the project.

WATERWASH ABC (2011) offers a lyrical vision of nature in the city, comprising a gently curving pedestrian path composed of recycled glass that winds down from the parking lot through a meadow of shrubs, wildflowers and native grasses. The path leads to a platform overlooking a wetland that has become home to birds, fish and clams. There is also informative signage explaining the process by which the project was created and how it functions to neutralize toxic waste.

WATERWASH ABC was tested with the onslaught of Hurricane Irene and Superstorm Sandy. Ball notes that the wetland was designed with the possibility of such storm surges in mind, and while it and the ABC warehouse were flooded, the waters went down much more quickly and did much less damage than in other shoreline areas. While she continues to oversee the ABC site, Ball reports that two other WATERWASH iterations are currently in the development stages.

Recording material for Natalie Jeremijenko's Mussel Choir, a collaborative project with SHoP Architects and The Living, New



Mary Mattingly looks beyond the kind of immediate problems addressed by Ball and Chin toward what she refers to as the posthuman future, reflecting her conviction that humanity will survive only if we reduce our footprint on Earth. Over the last 13 years she has been engaged in a number of projects that explore the possibility of self-sustaining environments. Her "Wearable Homes" are garments designed to keep the wearer comfortable no matter what the temperature. The 2009 "Waterpod Project," a collaboration with numerous people, was an amphibious home built atop a 30-by-100-foot barge—complete with living quarters, a greenhouse, a windmill and a chicken coop-on which she, three crew members and various guests lived for five months. And her mobile "Flock Houses" (2011-), geodesic domes covered with tarps, are made from reclaimed materials and equipped with systems for rainwater capture, inner-city agriculture and solar and human-powered energy. These modular units are designed to hitch to vehicles for easy transport around the city. Mattingly has also taken her own critique of materialism to heart with a 2013 performance in which she fashioned all of her possessions into a twinewrapped ball and dragged it across the Bayonne Bridge, which stretches between Bayonne, N.J., and Staten Island.

Mattingly's most recent project, *Triple Island* (2013), was inspired by works including Robert Smithson's 1970 *Floating Island*, Gordon Matta-Clark's 1974 "Fake Estates" and Ukeles's Maintenance Art. It comprised three elements: a Flock House, a community garden and a greenhouse. Mattingly erected these on the Manhattan side of the East River on a barren stretch of waterfront that had become a dumping ground for cars after Hurricane Sandy. The work was one of a set of temporary artists' projects initiated on this site by the Lower Manhattan Cultural Council as part of Paths to Pier 42, an effort to rethink uses of the waterfront. Once again Mattingly focused on issues of sustainability and interdependency. Over four months, *Triple Island* provided a home to a series of residents who lived in the house, tended the garden and generated their own electricity with a combination of solar power and a bicycle contraption. Mattingly estimates that the homegrown food, rainwater collection and self-generated energy rendered *Triple Island* about 50 percent self-sustaining.

Perched at the edge of the water, the whole setup had a Robinson Crusoe ambience. Over the course of the summer, residents hung around outside in nice weather and took refuge inside during rainstorms, while curious passersby and community members dropped by to chat or pick vegetables. Set against the backdrop of the busy FDR Drive on one side and barges drifting by on the East River on the other, *Triple Island* offered the aspect of an urban oasis. As one resident, Andrea De Pascual (a doctoral candidate in art education in Madrid), remarked of the experience: "It's a very slow life in a fast city."

Natalie Jeremijenko, who earned degrees in engineering, neuroscience and bioengineering in her native Australia before moving into art in 1988, takes the posthuman idea to its logical conclusion. She wants to change the status of nonhumans by extending to them the kind of rights currently reserved for humans. She also wants to offer her audiences some models for action. As she remarked to me in an interview, "There is a crisis of agency—we don't know what to do as individuals." Drawing on American philosopher John Dewey's idea of the citizen scientist, she sets up situations and experiments that suggest some possibilities.

Jeremijenko's projects have a whimsical nature that belies their serious import. Over the last 20 years, she has created prototypes for such ideas as "Feral Robotic Dogs," which have been equipped with chemical sensors so that they can sniff out environmental toxins, and a "Butterfly Bridge," which encourages butterfly pollination across otherwise disconnected patches of urban nature. *Tree X Office* was a solar-powered work space installed in the summer of 2012 at Socrates Sculpture Park in Queens. It was "owned" by the tree in which it was constructed. As landlord, the tree made \$400 a month and used the profits for its own interests, which included sending its saplings to be planted at various universities. Jeremijenko has also set up "Fish Restaurants"

(2010-) where, as she notes, fish are fed rather than eaten. Their movements are monitored by sensors in robotic buoys, yielding data on water quality, while the algae-based food they are fed binds to heavy metals they may have ingested, allowing the toxins to pass through them.

These projects have all been developed under the auspices of Jeremijenko's Environmental Health Clinic, which is attached to New York University, where she is also an associate professor of art and affiliated with the computer-science department. Currently Jeremijenko is working on "Mussel Choir," a project relying on the fact that mussels filter water at a prodigious rate. She outfits the mussels with sensors that detect the opening and closing of their shells and then convert this data into sound, allowing the bivalves to literally sing. Because mussels flap in distress when there are high levels of pollution, their songs will communicate the condition of the water. Having successfully tested this work at the 2012 Venice Architecture Biennale, Jeremijenko is now constructing a "Mussel Choir" work in the Hudson River and the Melbourne Docklands in her native Australia.

But is it art? The old conundrum has haunted eco art from the outset but seems increasingly irrelevant as art continues to meld with other disciplines. Chin confronted the question years ago when he argued that "Revival Field" was indeed art because it involved the sculptural manipulation of materials, in this case by carving away at a block of pollution. Jeremijenko uses more recent terminology when she argues that her work is a version of "institutional critique," aimed not at the institutions of the art world but at the institutions that determine the fate of our society.

What seems clear is that projects like these harness the power of art, including its tendency toward metaphor and verbal/visual play, its resistance to received ideas and its willingness to colonize new areas of knowledge, to persuade us to think differently about our relationship to the environment. They suggest that with a more proactive approach to environmental concerns, the posthuman era need not signal the end of human life as we know it. Instead, the Anthropocene might provide a new beginning for all the partners in the health of the planet.

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