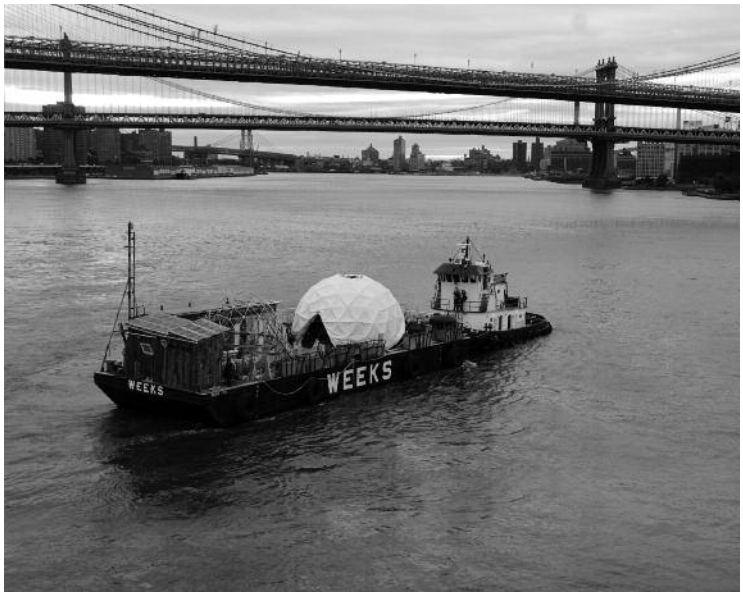


Top: Mary Mattingly. *The Waterpod*, 2009. Photo: Mary Mattingly.

Bottom: Mary Mattingly. *The Waterpod*, 2009. Concrete Plant Park, the Bronx, New York. Photos: Eva Díaz.

Dome Culture in the Twenty-first Century

EVA DÍAZ

In September 2009 I spent a night on the *Waterpod*, a river barge project undertaken by artist Mary Mattingly that made various stops around the New York City harbor that summer. When Sara Reisman and I—the pod's two overnight guests that evening—arrived, its half-dozen residents had secured permission only a day or two before to be towed to the newly opened Concrete Plant Park in the Bronx.[1] We embarked late on a Friday night, greeted on the main deck by a dinner for eight prepared from produce and herbs grown in the on-board garden. The following morning Alison Ward, one of the ship's full-timers and the master of the ship's mess, scrambled eggs freshly laid by chickens kept on the barge, cooking like a frontierswoman in a cast-iron skillet over an oil drum repurposed as a stove, all the while stoking a temperamental fire belching acrid clouds of smoke. Then Sara and I, with resident Ian Daniel's coaxing, pushed off in one of the pod's kayaks for a tour of the Bronx River (a waterway I never knew existed), heading toward LaGuardia Airport. Afterward we stuck around the pod for part of a workshop on worm composting by artist Tattfoo Tan, who rolled on board with extensive gear—soil samples, worms, and whatnot—wearing a park ranger getup tessellated with patches proclaiming him a "Citizen Pruner" and "Certified Master Composter," among other seemingly ersatz designations. (When I complimented his badges, he volunteered that although he had obtained certification through the appropriate city and national agencies, he had himself devised the insignias and had them fabricated.) We left the pod hunting for a toilet that was not three feet off the ground (something about dry composting), and so ended a night and day on the only publicly accessible artists' commune traversing New York City waterways.

Soon after, the *Waterpod* completed its six-month tour of the New York City area—the short-term lease on the barge was up, and the pod had not been engineered to weather northeastern winters. A nonprofit project, it was intended to be a self-organized, self-maintaining community somewhat in the vein of off-the-grid, closed-environment biosphere experiments in conservation and ecological sustainability.[2] Inhabitants of the pod gathered and treated rainwater for drinking, bathing, and cleaning; used solar and wind energy for power; grew much of their food on the boat; and recycled or composted nearly all of their waste.

The pod contained several educational modules asking visitors to consider alternatives for a sustainable local ecology:

it featured a gardening station in which children were taught about agricultural crops native to the New York region, a water treatment station encouraging visitors to conserve and recycle, and an area dedicated to backyard and indoor composting. To a visitor, the pod may have presented itself as an immersive pedagogical device designed to educate area residents about their role in a global ecology.[3] The barge was designed by Mattingly in collaboration with New York–area engineers and California-based engineering students to efficiently make use of local recycled resources and to deploy recent innovations in water purification, urban gardening, and renewable energy.[4] The *Waterpod*'s architecture included not one but *two* geodesic domes.

Top and bottom: Mary Mattingly. *The Waterpod*, 2009. Governors Island, New York. Photos: Eva Díaz.

The *Waterpod* is not unique in revisiting, in the first decade of the twenty-first century, Buckminster Fuller's iconic dome designs.[5] In New York alone in 2009 one could encounter Michael Smith and Mike Kelley's installation at Sculpture Center in Queens exploring, among other 1960s counterculture-derived baggage, the prevalence of domes at West Coast Burning Man events; Fritz Haeg's aggregation of domes programmed for community-based workshops at X Initiative in the former Dia space in Chelsea; and Nils Norman's geodesic and pup tent city on Governors Island. In addition to the geodesic dome, other

alternative architecture structures of the 1960s and 1970s—tepees, yurts, inflatables, zomes, and earth houses—have regularly been referenced in recent artistic practices. Is this resurgence of domes the dawn of a new age of "outlaw design," as fans of Fuller declared his influence on alternative architecture in a 1997 book?[6] If so, this is not the first era of alternative shelter design, nor even the second: the proliferation of tepees, yurts, and prairie houses in the 1960s and 1970s were themselves recoveries of preindustrial architectural forms.

Top, left: Hazel Larsen Archer. *Buckminster Fuller in His Dome at Black Mountain College, Summer 1949.* Image courtesy the Estate of Hazel Larsen Archer and the Black Mountain College Museum + Arts Center.

Top, right: Buckminster Fuller and Shoji Sadao. Montreal Expo Dome, 1967. Image courtesy Shoji Sadao.

Center: Michael Smith and Mike Kelley. *A Voyage of Growth and Discovery*, 2009. Installation detail, Sculpture Center, New York. Image courtesy Sculpture Center and the artists. Photo: Jason Mandella.

Bottom, left: Fritz Haeg. *Dome Colony X in the San Gabriels*, 2009. Commissioned by X Initiative, New York. Photo: Fritz Haeg.

Bottom, right: Nils Norman. *Temporary Permanent Monument to the Occupation of Pseudo Public Space*, 2009. Governors Island, New York.

Yet probing the influence of Fuller on art practice today and understanding how his ideas of equitable resource management and holistic planning—what he termed "comprehensive design"—are received in the present will always be mediated by his reception in the 1960s and 1970s.[7] Of particular importance in exploring, testing, and propagating Fuller's ideas were the "access to tools" ethos of the *Whole Earth Catalog* and other do-it-yourself (DIY) satellite publications and organizations; the examples in practice of the network of intentional communities such as Libre, Drop City, and Red Rockers profiled by the *Whole Earth*

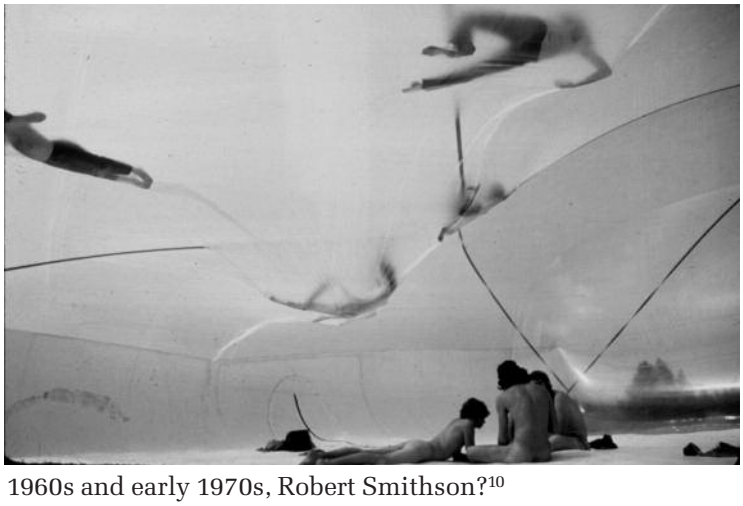
books that were constructing domes and deploying other Fuller-inspired "appropriate" technologies throughout the 1960s and 1970s; and, finally, as Felicity Scott has examined, the challenge of radical art and architectural collectives such as Ant Farm, which were bent on politicizing the technocratic, libertarian logic of Fuller's theories so often rehearsed by his acolytes.[8]

In the context of researching models of experimentation at Black Mountain College, including Fuller's, I had become interested in contemporary artists' encounters with and appropriations of his work. As a parallel project I had begun tracking the influence of his ideas about equitable resource management and sustainable architectural forms into the present. Mattingly, the other artists on the *Waterpod*, and I therefore had a lot to talk about. In particular, Fuller's reception by artists has been pronounced in recent years, and many artists explicitly cite him in ways that nearly constitute a revival. A wide array of contemporary artists and collectives are today reassessing the legacy of Fuller's work with mass shelter solutions and just resource management.[9] (That *artists* use Fuller—especially by directly appropriating the geodesic dome structure—as an umbrella for arguments about sustainable design is particularly noteworthy.) So many more are interested in or inspired by the Bucky Fuller–*Whole Earth*–Drop City–Ant Farm constellation that detailing each invocation of Fuller or every exploration of the now familiar silhouette of the geodesic dome or its related alternative architectures undertaken by contemporary artists would be impossible. The dome "culture" nexus forms but a small territory of the now very large sprawl of contemporary art

Top: Clark Richert. *Drop City*, 1967. According to Richert: "Drop City was an artists' community in southern Colorado, founded by filmmaker Gene Bernofsky, and artists JoAnn Bernofsky, Richard Kallweit, and Clark Richert in 1965. The intention was to create a live-in work of 'Drop Art' informed by the 'happenings' of John Cage and Robert Rauschenberg at Black Mountain College in the late '40s. Inspired by the architectural ideas of Buckminster Fuller and Steve Baer, the 'droppers' constructed domes (one solar heated) based on geometric solids to house their studios and living quarters."

Bottom: Richard Kallweit. *JoAnn Bernofsky, First Dome at Drop City*, 1965.

practices readdressing 1960s modernism. While the geodesic dome is a motif of particular interest to many now, for reasons of nostalgia or its immense iconic significance, its appearance in art contexts is not always citational. To some artists, articulating the stakes of their (conflicted) investment with Fuller's legacy is of key importance. How have artists inherited and reexamined Fuller's experimental model of total design? And how is their interest often mediated by suspicions about teleological "anti-entropic" utopian forms, particularly as this critique was articulated by one of Fuller's most astute critics in the



Top: Ant Farm. *Clean Air Pod*, 1970. Performance, Lower Sproul Plaza, University of California, Berkeley. Image courtesy University of California, Berkeley Art Museum and Pacific Film Archive. Photo: Chip Lord.

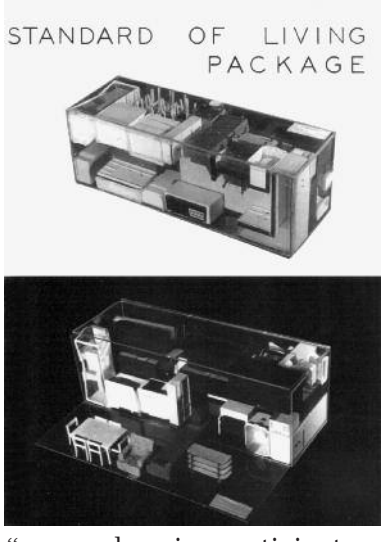
Bottom: Ant Farm. *50′ x 50′ Pillow*, 1969. Temporary installation, Freestone, California, 1970. Image courtesy University of California, Berkeley Art Museum and Pacific Film Archive. Photo: Chip Lord.

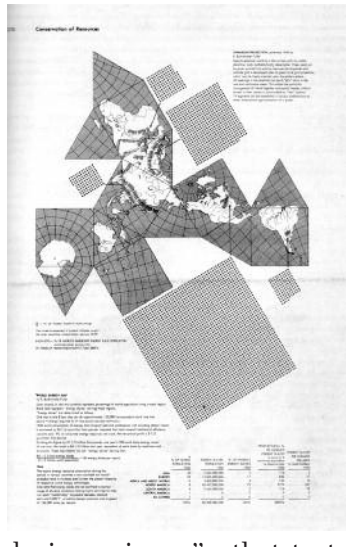
1960s and early 1970s, Robert Smithson?[10]

Those who revisit Fuller's postwar dome technologies and other 1960s and 1970s shelter designs do so to radically rethink architectural structures, both as a practical solution to contemporary housing crises (proposing prototypes for lightweight, portable, and efficient shelters) and as a historical trope of innovative "guerrilla"—that is, decentralized and possibly unauthorized—architecture. Fuller's rambling, sometimes haranguing exhortations can be distilled to a basic set of claims that have subsequently proved immensely influential. He proposed that a radical and equitable redistribution of global resources

(including natural and existing technological resources used to house, feed, and clothe the world's population) could be accomplished through an empirical study of dynamic patterns of consumption. In turn, the universal application of "comprehensive design"—the study and design of the total human environment, including shelter, infrastructure, communication, and other networked systems—could efficiently allocate the sufficient resources of the planet, "Spaceship Earth."[11] This ambition to redistribute was evident in Fuller's attempts to chart the unequal consumption of raw resources in industrialized versus underdeveloped nations. To remedy this asymmetry he demanded that designers become more efficient in distributing resources globally. In these claims, Fuller was part of a larger "post-scarcity" technocratic utopianism that claimed the tools for such a redistribution were available and only needed to be systematically applied by social planners.[12]

Yet the articulation of "total thinking"—what Fuller termed





Left: Buckminster Fuller. *Standard of Living Package*, 1949.

Right: Herbert Bayer. Illustration from *World Geo-Graphic Atlas*, 1953. Buckminster Fuller's Dymaxion Projection Map is used to display the global distribution of "energy slaves" (machine power replacing human labor).

"comprehensive, anticipatory design science"—that tests traditional artistic and architectural forms in order to teleologically progress toward a utopia of efficiently managed resources, which culminated in the geodesic dome, is perhaps not the most important feature of Fuller's influence. Instead, his paradoxical stance of self-declared success in the face of apparent setback—his proposal of a model of experimentation that accommodated failure in the name of a larger holistic program—has proved to be one of Fuller's greatest contributions.[13] Dropping the totalizing, holistic, technocratic program while thinking experimentation as an often absurdly impractical experimental prototyping is a means by which artists today engage Fuller's utopian imagination. The geodesic dome was one of the rare grassroots, DIY forms of the twentieth century: in its heyday in the 1960s into the early 1980s it was appropriated by many as an easy-to-build and cheap modern alternative to traditional values both social and architectural. Now, as geodesic domes are once again returned to public consciousness,

this time almost exclusively by artists, it seems crucial to ask why. And why, I asked myself, after I went back to the *Waterpod* a few weeks later for a closing event, had I not noticed the ambiguity of the white flag under which the pod sailed: "I Remember Earth"? Its unavoidably elegiac quality; its statement of care, responsibility, and traumatic loss; its implication of surrender (flying the white flag); and its defiant reminiscence were glaring.[14] Is the present-day return to Fuller's domes utopian at all?

Initially I thought that in projects of the early 2000s by artists such as Oscar Tuazon, Michael Rakowitz, Nils Norman, and Marjetica Potrč, a marked shift had taken place in twenty-first-century quotations of the geodesic dome that distinguished them from many 1960s and 1970s incarnations. The difference: gone was the frontiersman logic of back to the land, drop off the grid, atomized micro-environmentalism; gone, too, was the technological euphoria about the consumption of appropriate

Ian Daniel aboard *The Waterpod*, 2009. Photo: Leyla T. Rosario.

"tools." In contrast to popular dome-building practices of the 1960s and 1970s, a new set of concerns came to the fore, sometimes in direct opposition to the ambitions of that earlier generation. What emerged instead was a return to issues that had been explored earlier by politically radical collectives such as Ant Farm and Archigram: sculptural structures as temporary interventions in urban sites, as kiosk production, and as shelter/information display hybrids.[15] Domes were and continue to be important to artists as a form of improvised construction using recycled materials and for their multifunctionality as pavilions and gathering places for culture and communication. At the axis of alternative architecture and political art, artists working in this vein seemed able to speculate and experiment with a complex and often parallel set of issues: how to historicize the utopian imagination of the 1960s and how to prototype ecological sustainability in sculptural form. These approaches concerned access to shelter in a wider sociopolitical, rather than individual consumerist, sense and questioned the social

responsibility of the artist for connecting art in public places to matters of civic concern.[16]

This shift in practice represented an ideological battle to uncouple Fuller from his reputation as a technocrat obsessed with recognizing universal patterns and preoccupied by an apolitical postscarcity logic that positioned inequality as an outcome of inefficiency rather than as a result of a capitalist logic of endless growth. Instead, circa the early 2000s, contemporary artists seemed interested in Fuller in order to highlight his advocacy of equitable resource distribution and his paradigm of architecture as information display.[17]

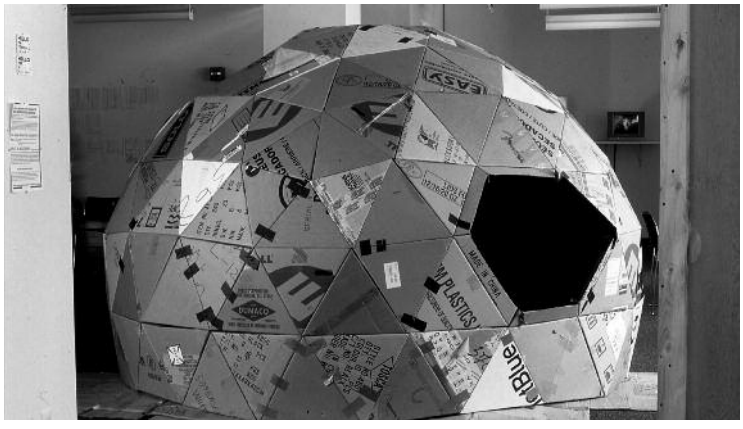
Dome "culture" is an important touchstone for reinventing possibilities of public culture and collective memory and responsibility. Artists paradoxically use the geodesic dome in urban settings as a conscious misreading of Fuller. Fuller's dome culture in its original incarnation was part of a larger politics of spatial decentering and suburbanization, a symptom

Nils Norman. ***Omnidirectional Protestation Explorer*****, 2005.**

of a Cold War–era tendency to think urban space as a tremendous strategic liability. In contrast, reinventions of dome culture in the early 2000s joined a less fearful urbanism with Fuller's more socially just proposals for universally available shelter and better-distributed natural resources and consumer goods. Fuller's contradictions could never be smoothed over—his legacy remains contested—but artists appeared to be trying to jettison the Fuller of suburbanization, of technocratic euphoria about efficient central planning. Instead he was revisited as a figure of modern-day ecological sustainability, and his imperative to turn "weaponry into livingry" is being reconsidered.[18]

Tuazon, Rakowitz, Potrč, and Norman had all used obvious references to homelessness and the unequal distribution of basic resources to the underprivileged in their prior work. Norman, in rethinking domes as hybrid structures—ones that double as shelters and as venues for information display—had used them as urban kiosks in an argument against eroding the public functions of the city street and for reinforcing public

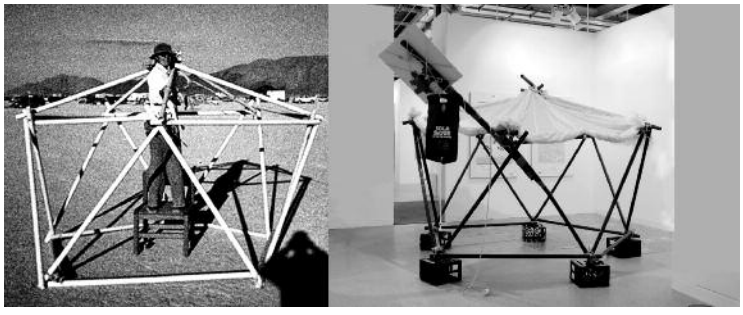
spaces as multivalent sites in the face of neoliberalism's tendency to privatize and limit public exchange. In his case, the kind of information housed by the dome connected various historical struggles concerning the distribution of resources. For example, one project explored the connections between "free" stores undertaken by the San Francisco–based Diggers in the late 1960s and their mid-seventeenth-century forbearers' (and namesakes') struggles against the privatization of common lands in Commonwealth England. Another project proposed a dome pavilion as a hub for a speculative urban agricultural plan designed, among other things, to shelter social justice



Top: Oscar Tuazon. *1:1*, 2006. Mixed media installation: steel plates, steel profiles, screws, bolts, and nuts. Image courtesy the artist and STANDARD (OSLO), Oslo. Photo: Stein Jørgensen.

Bottom: Oscar Tuazon. *Coming Soon: City Without a Ghetto*, 2002. Cardboard, self-published book, photographs. Image courtesy the artist and STANDARD (OSLO), Oslo. Photo: Oscar Tuazon.

advocates from police. Tuazon constructed geodesic domes using cardboard boxes, scavenged from supermarkets and drugstores, bearing the logos of ubiquitous commodities. The *City Without a Ghetto*, as he termed the work, created provisional spaces of shelter alluding to vernacular cardboard structures in marginal areas, while also producing sculptural installations in galleries that made reference to the temporary and precarious housing of homeless populations.[19] Michael Rakowitz produced inflatable dome structures that likewise tackled problems of homelessness in city centers. His constructions of the late 1990s latched onto existing structures' heating and ventilation systems, creating parasitic temporary housing for urban dwellers. Additionally, in a project from



Top to bottom:
Michael Rakowitz. Bill Stone's *ParaSITE Shelter*, 1998. Image courtesy the artist and Lombard-Freid Projects, New York.

Marjetica Potrč. *Burning Man: A Buckminster Fuller Dome*, 2004. Image courtesy the artist and Meulensteen Gallery, New York.

N55. *Urban Free Habitat System*, 2008.

N55. *Walking House*, 2008.

2003, Rakowitz revisited the near total destruction by fire in 1977 of the 1967 Montreal Expo dome designed by Fuller and Shoji Sadao. He constructed a two-meter-high, tentlike model of the dome strung with mobiles of small coded semaphores and national flags. The project connected protests against the Vietnam War upon Lyndon Johnson's Expo visit in 1967 to Fuller's paradoxical collaborations with educational institutions and the military, including the construction of the so-called Supine Dome at the progressive Black Mountain College in 1948—his first failed attempt to erect a large-scale geodesic dome—shortly before a successful dome assembly on the lawn of the Pentagon Garden in 1949. Potrč, an architect working interdisciplinarily in art contexts, created quick-construction dome structures out of recycled materials. Her urban interventions employed hybrid dome constructions to be used as music festival shelters or bunkerlike structures to upgrade traditional shantytown constructions.

Raumlabor Berlin. *Der Berg*, 2005. Volkpalast Zwei, Berlin. Photo: David Baltzer/ Bildbuehne.de.

We might be tempted to read the works of Tuazon, Rakowitz, Potrč, and Norman as interventions in the city (as opposed to Fuller's emphasis on a network of domes as nodes in a suburban sprawl) and to see their work as an at times satirical commentary on the seeming intractability of homelessness in the neoliberal competitive economy (as opposed to Fuller's sense of the postscarcity plentitude that would arrive with an efficient management of global resources). Other, more recent works—such as the Copenhagen-based collective N55's *Urban Free Habitat System* (2008) and *Walking House* (2008), and Fritz Haeg's installation *Dome Colony X in the San Gabriels* (2009)—likewise seemed to consider the political implications of shelter design as a topic of critical importance for artists by proposing nearly functional, yet ultimately quite farcical, prototypes of rolling domes, clumsy walking shelters, or information-saturated tents for squatting the hills north of Los Angeles. This sense of the dome as an exemplar of a new art of critical public sculpture was abetted by projects such as those undertaken by Raumlabor Berlin, Minsuk Cho/Mass Studies, Tomas Saraceno,

Top to bottom: Minsuk Cho / Mass Studies. *Ring Dome*, 2007. Storefront for Art and Architecture, New York.

Tomas Saraceno. *Observatory, Airport City*, 2008. Image courtesy the artist and Tanya Bonakdar Gallery, New York.

Tomas Saraceno. *Psycho Buildings: Artists Take On Architecture*, 2008. The Hayward, London. Image courtesy the artist and Tanya Bonakdar Gallery, New York.

Fritz Haeg. *Sundown Salon #29: Dancing Convention*, 2006. *Fritz Haeg's Sundown Residence*, Los Angeles. Photo: Fritz Haeg.

Molly Corey. *The Dome Project*, 2004–2007. Installation shot.

Haeg (in his earlier Los Angeles–based Sundown Salon), and Plastique Fantastique, among others, that used the dome more neutrally as an architecture of gathering places, often in urban sites. In the early 2000s Tuazon, Rakowitz, Norman, and Potrč seemed to form a radical band of critique on a spectrum of dome designs reclaiming a kind of public culture in liminal city spaces.

Yet when considering artist Molly Corey's work, we can see how the optimism about domes as radical critiques of existing models of shelter design and resource management—and their particular suitability as DIY common areas—had been treated suspiciously as early as the 1960s and 1970s. In her 2004–2007 work *The Dome Project*, Corey interviewed her parents and other founders of the rural Red Rockers commune in southern Colorado, home to one of the world's largest freestanding geodesic domes, which was hand built by the communities' founders in 1968–1969.[20] Corey combined the audio track of these interviews with a series of silent home movies taken by

Plastique Fantastique. *Medusa*, 2008. Flippat Festival, Gustav Adolfs Torg, Malmö, Sweden. Photo: Marco Canevacci and Markus Wüste.

members of the community during its 1968–1972 heyday. Accompanying the film is an installation of a small cluster of miniature geodesic domes constructed from images of her own previous artworks and from photographs drawn from her family archives. In a moving segment of the film, Corey's mother Mary reflects on the pitfalls of the community's withdrawal into an extra-urban frontier, and how the very silhouette of the dome seemed to indicate a better, more promising future, a future that in the end was available only provisionally to the micro-community of her white, upper-middle-class "dropout" peers.[21] By the early 1970s, tensions in the community reflected the once politically progressive members' discomfort with their increasing insularity from larger social politics.

In that vein Tuazon and I once discussed how the retreat from popular dome building in the 1980s had represented (yet another) rollback from the high-water mark of late 1960s utopianism, though perhaps only because this form of idealism (do-your-own-thing libertarianism) was itself a departure from

the radical social justice demands of the New Left. We talked about how Lloyd Kahn, one of the editors of the *Whole Earth Catalog* and the author of the influential "how-to" *Domebooks* series, had by 1989 repudiated the euphoric claims about domes he had once espoused. "Inspired by Buckminster Fuller to work on solving 'mankind's' housing problems," Kahn wrote, he had once proselytized for domes. But by the late 1980s he mournfully concluded, "They don't work. . . . Domes weren't practical, economical or aesthetically tolerable." He hoped that in revising his previous position he could help others illuminate the continuing fascination with domes by presenting future readers with "the results of an experimental voyage . . . the bitter and the sweet."[22]

Is a "bitter" side of the 1960s returning today? Certain disquieting elements of the recent works by Mattingly and Norman color a too rosy interpretation of early 2000s dome works as a new form of political art and urban intervention.[23] Artists now return to Fuller for his Cassandra-like call to ecological responsibility. Domes are seen, much as Corey's subjects eventually came to view them even during the "utopian"

Buckminster Fuller and Shoji Sadao. *Dome over Midtown Manhattan*, 1960. Image courtesy Shoji Sadao.

1960s and 1970s, as dystopian architecture, spaces to begin society anew under threats of being rent by conflict and scarcity, and as a means to rescue the planet from bad stewardship, overconsumption, and waste. Another side of Fuller has crept in: an urgency about nomadism in which improvised, off-the-grid shelters may become unavoidable features of a coming postapocalyptic world. (This was evident even in Fuller and Sadao's 1960 proposal to skin midtown Manhattan with a plastic dome, ostensibly to provide a controlled climate and to economize on snow removal costs, but with an unavoidable implication that the dome could provide protection from nuclear fallout.)[24] A sense of ecological catastrophe both regional and global permeates artists' works today, as though the construction of alternative architectural forms such as domes becomes a prototyping technique for generating forms of emergency shelter. (Not to imply a causal relationship, but several factors seem important in considering this shift to a more pessimistic reception of Fuller. They include the calamitous political and infrastructural failure in the wake of Hurricane Katrina in 2005 and the ongoing housing crisis in the New Orleans region; the

related problem of the increasing scientific evidence for and ineffective legislative response to global warming; and the near-total privatization of once collectively owned natural resources that further troubles the feasibility of postscarcity arguments.)

In Norman's tent city installed at Governors Island in the summer of 2009, the notion of societal neglect concerning access to public land that had been evident in his earlier projects seemed to carry a new sense of resignation. The cluster of about a dozen lightweight camping tents (the development and popularity of which were themselves an offshoot of a *Whole Earth*

Top: Nils Norman. *Temporary Permanent Monument to the Occupation of Pseudo Public Space*, 2009. Governors Island, New York. Photo: Charlie Samuels, courtesy Creative Time.

Bottom: Nils Norman. *Temporary Permanent Monument to the Occupation of Pseudo Public Space*, 2009. Governors Island, New York.

Catalog argument about the application of Fuller's domes as widely available consumer technologies) on the island were neglected. Overgrown with weeds, they looked like temporary refugee housing slowly calcifying into a permanent encampment.[25] Eerily, their emptiness indicated a kind of double disturbance: not only were they an improvised housing situation becoming a substandard fixture; they were depopulated as if by some political, military, ecological, or other catastrophe.

The strangeness of the work's site on Governors Island is evident in Norman's title, *Temporary Permanent Monument to the*

Occupation of Pseudo Public Space. The 172-acre island, located a short boat trip from lower Manhattan, has been kicked around between state and national agencies for centuries. In recent history the site has been used by the U.S. military, first as an Army and then as a Coast Guard base. In 1996 the island was decommissioned and most of its 225 structures were turned over to the state of New York, with a portion of the site including its two historic forts remaining under federal control as a national monument.[26] In recent years Governors Island has been opened to a weekend crowd by free ferry service from lower Manhattan and Brooklyn, and in 2009 it was the venue for a series of site-specific art projects sponsored by the public arts agency Creative Time.

Norman's work was commissioned as part of that exhibition. In the context of the island's lack of inhabitants and permanently vacant structures, which exist in an inverse relation to the density of the rest of New York City, the unoccupied tent city was hardly legible as art. Because of a squabble with the National Parks Department over litter disposal on the island, Creative Time was not giving out paper maps to the exhibition, so one haphazardly stumbled across artworks when touring the island. I was therefore surprised when, after my visit to the island, I reviewed the exhibition materials on its website and realized that the tent city, which had seemed like yet another of the island's weird empty shelters, was actually Norman's piece.

Governors Island's hastily abandoned structures feel like the set of a *Twilight Zone* episode in which familiar routines have been ominously halted, and Norman's tents looked like part of this sudden, uncanny vacancy. The postapocalyptic sense that the island's inhabitants were removed and replaced by legions of day-trippers wandering through now-empty bunkers and base housing was put into a new "disaster tourist" register by Norman's derelict mini-domes, which seemed to be just another piece of the strangely unoccupied scenery. The overgrown quality that permeates the island, including the weeds reclaiming Norman's tents, implies a class division in which the tents' permanence reflects of most cities' systemic reproduction of the conditions of homelessness. Viewing the scene, one might imagine that a sci-fi virus had wiped out the island's population, while leaving its class inequalities brazenly evident in this little plot of dome architecture. People's Park in Berkeley, California, has for some years provided sanctuary to a now-permanent tent city encampment. The social uprisings in 1969 that led to the founding of the park have resulted in a rare and dismal sight: an urban space where people can be visibly poor and homeless together. Norman's piece seems to ask, Is that the best we can do, to prolong the intractability of homelessness by protecting its visibility?

The *Waterpod* was docked on the other end of Governors Island the same day I saw Norman's tent city. Unrelated to the works in the Creative Time exhibition, the pod had traveled from a berth at Sheepshead Bay in Brooklyn to its site on the

eastern edge of the island. The pod was open to all, and my first encounter with it was as one of many curious visitors drawn to the hand-lettered signs welcoming visitors on board. (As part of the multiyear, multi-agency negotiations undertaken to launch the project, the pod was granted status as a public park by the New York City Parks Department and was accessible to visitors during daylight hours. This relationship was later formalized and the *Waterpod* subsequently decorated with official park signage.)[27]

Unlike the sculptural prototypes of other works that appropriate domes, the *Waterpod* was in fact a practicable shelter design. The pod went beyond what most artists' projects had limited themselves to before: it actually *was* a hybrid art-commune, not a gallery-based prototype.[28] The urban contexts of the work of Tuazon, Norman, Potrč, and Rakowitz moved away from off-the-grid, frontier micro-environmentalism, but the *Waterpod* employed those very features for its residents while simultaneously remaining a hybrid of temporary shelter and

Ian Daniel. ***Waterpod Kitty*****, 2009.**

information display for visitors. The pod functioned as a practical example of a crisis or "doomsday" community model of recycling and sustainability in an imagined ecological catastrophe. As Mattingly proposed, the pod was designed to "visualize the future fifty to one hundred years from now," presumably a millenarian future in which the necessity to uncouple shelter from failed infrastructures will dictate new types of self-sufficiency.[29]

This secondary hybridity—the pod's indeterminate status between art project and ecological polemic (something Fuller advocated, in a different formulation, in the fused art-science role of "anticipatory design science")—is perhaps what led to the project's neglect by critics.[30] Mattingly told me that, other than a piece in the *New York Times* when the project launched in the spring of 2009, the pod received little art press.[31] Though historically, and again today, visual artists are the ones undertaking Fuller-inspired sustainable design projects, these efforts have frequently been difficult to recognize as art, or even archi-

tectural or design, practices. The *Waterpod* fits within a legacy of artists' explorations of Fuller's work to test ideas that are often treated abstractly by art historians, sociologists, architects, and designers. However, these explorations involve a commitment to interdisciplinary collaboration at the planning stage and at the level of daily practice that surpasses most narrowly conceived definitions of art practice. To Fuller, this artist-scientist-inventor hybrid role was catalytic: comprehensive designers (i.e., society's creative agents), tasked with imagining the future, would envision utopian possibilities and implement visionary solutions.

Yet the *Waterpod*'s mixing of art practice and ecological caution produces ambiguous effects far from Fuller's boosterism of artists as social designers. On the one hand, the pod insistently enacts a utopian idea of micro-collaboration; on the other hand, it reflects a wider cultural anxiety about the collapse of larger social institutions and their urban infrastructure. Likewise, in Norman's work collapse is not imminent; it has already arrived—though the facts of social inequality are routinely repressed, they continue still.

These mixed effects may be the legacy of Fuller's utopianism, part of the ambivalent reception utopian thinking has received in the last few years as the talk of utopia that was thick on the ground during the 1960s returned in art conversations of the early 2000s.[32] Implicit but often unacknowledged in those invocations of a better society, however, was the nagging concern that the leftist imagination had stalled, as suggested by worsening conditions for the global poor and increasing class inequality in the United States. In that brief early 2000s period when art practices became ever more utopia-obsessed, the possibility of a viable political life for progressives under Bush Jr. seemed less and less likely as calls for global ecological and economic justice were ignored. That the contours of art-world utopianism were vague and sometimes conflated presence with politics was therefore unsurprising; artistic practice and audience participation compensated, in a "relational aesthetics" manner, for political agency.[33]

As a countermodel, Fredric Jameson proposes dystopian thinking as a potent subset within a tradition of progressive utopianism.[34] To him, the dystopian fantasies of classic sci-fi writers H.G. Wells, Aldous Huxley, George Orwell, Ursula K. Le Guin, and Philip K. Dick foretell the social and ecological consequences of the exploitation of people and resources in untrammeled globalized capitalism.[35] The calls to accountability in dystopian projects are demands to see portents of the future today, to understand the future's connection with the forces shaping the present. These projects, as Le Guin argues, do not extrapolate predictions about the future but work as thought experiments that seek "to describe reality, the present world."[36] The prescience of dystopian sci-fi is in the way it constructs an almost banal parallel present that issues from a merely mild realignment of historical forces.[37] The emphasis is

on the quotidian, not the visionary, future; on continuity, not rupture. Dystopianism is a powerful way to think historically about the possible shape and texture of the future by considering the consequences of changes that can be made in the present. Jameson is particularly concerned to defend dystopianism against the reactionary tendency of "anti-utopianisms" that discourage even tentative speculations about the contour of the future by fixating on the past.[38]

The contours of Fuller's utopian imagination and its stake today can be understood when compared with Jameson's sense of the dystopian. Fuller's "utopia or oblivion" formulation (taken from the title of his 1969 book) sounds an alarm against the catastrophic extinction of humanity by supplanting considerations of the present with a fixation on the future.[39] In this formulation, as Reinhold Martin has noted of Fuller, obsessive futurity is an escape from challenges presented by the present, just as the nostalgic undercurrents of anti-utopianism can act as a smokescreen obscuring contemporary problems.[40]

In contrast, Norman and Mattingly offer viewers a dystopian imagination in art. Fuller's prolepsis about the future was hampered by a shortcoming common to all eschatologies: the hope that the future will be radically transformed *in spite of* the present. Perhaps that is not the escapist vision we need or deserve from art. The eerie vacancy of Norman's tent city on Governors Island rejects fantasies of a future magically transformed; and the *Waterpod*'s emphasis on the practical possibility of recycling and conservation asks viewers to rethink environmental change at a microcosmic level. These are propositions for a collectivity closer to the pragmatics of a bumper sticker spotted in the desert of Southern California: "When the Rapture comes, we'll have the Earth to ourselves."

Notes

The Art and Design History Department at Pratt Institute granted me valuable research assistance in the completion of this project. Special thanks are due to Maxwell Tielman for his perseverance in tracking down images.

1. I was brought as an overnight guest by Reisman, director of the New York City Department of Cultural Affairs Percent for Art program, who had informally advised Mattingly about navigating the permit process among the several city agencies involved in the project.

2. Some examples of closed-system biosphere projects include BIOS-3 in Krasnoyarsk, Siberia (1965–1984; it continues in limited form into the present day); Biosphere 2 near Tuscon, Arizona (1987 to the present, with active missions in 1991–1993 and 1994); and the Eden Project in Cornwall, England (2000 to the present).

3. Though living in a sustainable community undoubtedly has great personal benefits and pedagogical satisfactions, the *Waterpod* at times seemed to be a site of demanding privation (living in tiny ship quarters, cooking only what can be produced on deck, etc.).

4. The *Waterpod* website thanks "a NY-based multinational team of artists, designers, builders, civic activists, scientists, environmentalists, and marine engineers" for the pod's design and construction. Additionally, the site credits Lonny Grafman of Appropedia.com and his Humboldt State University engineering class for working on the Waterpod's water and energy use features. The Waterpod Project, "Past, Present, and Future," www.thewaterpod.org/future.html.

5. Fuller did not invent the geodesic dome. Walther Bauersfeld's Zeiss Planetarium in Jena, Germany—first begun in 1912, halted during the war, and finally opened to the public in July 1926—is considered the first structure of its kind. But Fuller patented an icosahedron (a polyhedron with twenty identical equilateral triangular faces) geodesic dome in 1954, and he was immensely influential in popularizing it.

6. Chris Zelov and Phil Cousineau, eds., *Design Outlaws on the Ecological Frontier* (Philadelphia: Knossus Publishers, 1997).

7. To illustrate the point: I arrived at my grandparents' house in Puerto Rico one Christmas disappointed because a delivery of books I had planned to read on the trip had not turned up in time for my departure. Previously I had written my father in general terms about my research on the current surge of interest in 1960s and 1970s architectural experiments. Still, I was surprised to eye, amid the TV remotes and old telenovela guides littering the coffee table, a spineless, heavily mildewed but still intact first edition of Lloyd Kahn's 1973 compendium *Shelter*, which my father had dug out of one of his numerous collections of counterculture ephemera; it was the book I had mourned most in my missing shipment. The coincidence reinforced my sense of a strong continuity between his generation and mine. That tattered copy of *Shelter*, written by an editor of the original *Whole Earth Catalog* and the author of the influential *Domebook* series—all pieces of scripture for the late 1960s/early 1970s commune dweller and each a relic of my parents' hippie cross-country travels out West—represents part of the cultural patrimony of my generation. (My dad reported that by the early 1990s he had sold the *Whole Earth Catalogs,* and though he had indeed once owned one of the *Domebooks*, its fate had been for some years unclear. The now reduced Kahn bequest came courtesy of another time capsule: an off-color anecdote recounted the case of crabs he and my mother caught from a sleeping bag borrowed in Libre, one of the Colorado dome-based communes profiled in *Shelter*). The larger question remains: why were my parents interested in domes? And why, for evidently very different reasons, was I interested in them too? I have heard similar stories (thankfully not about crabs) regarding the importance of counterculture communes, 1960s- and 1970s-era shelter designs,

and their related habitat publications from many youngish artists with whom I have talked during the last several years. What I suspected has proved true: Bucky's influence in the late 1990s and 2000s came to my generation almost wholly mediated by his reception in the 1960s and 1970s.

8. "Access to tools" was the subtitle of each of the four *Whole Earth Catalogs* (Fall 1968, Spring 1969, Fall 1969, and Spring 1970), as well as the subsequent *Last Whole Earth Catalog* and *Whole Earth Epilog*. In addition to featuring articles in categories such as whole systems, shelter and land use, industry and craft, communications, community, nomadics, and learning, the *Whole Earth* books were catalogs of things one could order through the mail. Andrew W. Kirk's book *Counterculture Green: The Whole Earth Catalog and American Environmentalism* (Lawrence: University Press of Kansas, 2007) provides an engaging history of the *Whole Earth Catalog* and its offshoots such as the influential grant-giving, San Francisco Bay Area–based Point Foundation started by Stuart Brand. For information about Ant Farm's relationship to Fuller's legacy, see Felicity Scott, *Ant Farm: Living Archive 7* (Barcelona: Actar; New York: GSAPP, 2008); and her excellent study of postwar architecture and its countercultural critics, Felicity Scott, *Architecture or Techno-utopia: Politics after Modernism* (Cambridge: MIT Press, 2007). Scott's recent "Fluid Geographies: Politics and the Revolution by Design," in *New Views on R. Buckminster Fuller*, ed. Hsiao-Yun Chu and Roberto G. Trujillo (Stanford, CA: Stanford University Press, 2009), studies the reception of Fuller in the late 1960s, in particular the World Game and dome projects, by connecting those ventures to the antipolitical and millenarianist logic of some of Fuller's acolytes.

9. Some of these include Caitlin Berrigan, Matt Bua, Molly Corey, Fritz Haeg and the Sundown School, Dave Hardy, Heather Morison and Ivan Morison, N55, Nils Norman, Sarah Oppenheimer, Nosey Parker, Plastique Fantastique, Marjetica Potrč, Tobias Putrih, Michael Rakowitz, Ishmael Randall-Weeks, Raumlabor Berlin, Tomas Saraceno, Oscar Tuazon, and Holly Ward.

10. Fuller was using the term *anti-entropic* as early as 1927, according to James Meller. See R. Buckminster Fuller, "Universal Requirements for a Dwelling Advantage," in *The Buckminster Fuller Reader*, ed. James Meller (London: Pelican Books, 1972), 261. For more information about Robert Smithson's view of Fuller, see his interview with Alison Sky, "Entropy Made Visible" (1973), in *Robert Smithson: The Collected Writings*, ed. Jack Flam (Berkeley and Los Angeles: University of California Press, 1996), 301–309; and Dana Miller, "Thought Patterns: Buckminster Fuller the Artist/Scientist," in *Buckminster Fuller: Starting with the Universe*, ed. Dana Miller and Michael Hays (New Haven: Yale University Press, 2008).

11. R. Buckminster Fuller, "Comprehensive Designing," in *Buckminster Fuller: Anthology for the New Millennium*, ed. Thomas T.K. Zung (New York: St. Martin's Press, 2001). For a compelling discussion of Fuller and the prevalence of the rhetoric of networks in the 1950s and 1960s, see Mark Wigley, "Network Fever," *Grey Room* 04 (Summer 2001): 82–122.

12. Murray Bookchin, *Post-Scarcity Anarchism* (Berkeley, CA: Ramparts Press, 1971), perhaps best encapsulates the argument, popular in the period, that the liberatory potential of recent technological advances would soon allow all goods to be readily available and free.

13. For example, Fuller's first attempt to erect a twenty-two-foot-high geodesic dome out of Venetian blind slats at Black Mountain College in the summer of 1948 failed and was good-naturedly termed the "Supine Dome." His eventual success in raising a large-scale geodesic dome the following year reflected the achievement of "synergetic" processes, but not only in the sense that the structure became stronger than its constitutive lattice of parts. To Fuller, when an entire system or holistic theory's synergy (in this case the theory of tensegrity) was experimentally validated, it reinforced the presup-

positions of his entire method. The Supine Dome exemplified his model of experimentation; it allowed tactical failures as part of a larger holistic strategy. For more information about Fuller and a pedagogy of failure, see the chapter on Buckminster Fuller in my dissertation, "Chance and Design: Experimentation in Art at Black Mountain College" (Ph.D. diss., Princeton University, 2009).

14. The dome's association with a broad audience of pacifist countercultural communities during the 1960s and 1970s is somewhat ironic: the greatest fiscal patronage of the geodesic dome came from the U.S. armed forces. The military used it sporadically for airborne portable utility structures, helicopter hangers, and radar outposts for remote Arctic defense locations.

15. For a discussion of how Ant Farm introduced a notion of social politics to Fuller's sense of an "uncritical integration" of politics and architecture, see Felicity Scott, "Allegorical Time Warp: The Media Fallout of July 21, 1969," in *Living Archive 7*, 18. For a discussion of how, for example, Archigram's 1969 project Instant City returned design to urban space as the prime site where technology and information converge (while remaining in the lineage of Fuller's proposal of the dome as a nomadic technocratic shelter), see Lara Schrijver, *Radical Games: Popping the Bubble of 1960s' Architecture* (Rotterdam: NAi Publishers, 2009), esp. 95–145.

16. Generally art in the public arena that has been executed through "legitimate" channels does not address itself to concerns that stem, in any sort of self-reflexive manner, from urban culture. (Though creators of land/environmental art such as Robert Smithson, Walter de Maria, and James Turrell aspired to a condition of rural public-ness, most often this required their purchase of the land, thus taking it out of common control in order to allow it to remain publicly accessible). As cultural critic Chantal Mouffe has argued, the primary feature of democratic public spaces is that they are always subject to diverse, contentious interpretations about their use (as opposed to private or autocratic spaces, where unilateral control can be exercised). See Chantal Mouffe, *The Democratic Paradox* (London: Verso Press, 2000). The circumscription of public art as ornamental, large-scale sculpture neutralizes or avoids the social differences and divisions that constitute "the public."

17. For more about Fuller and hybrids of shelter and information display, see Mark Wigley's article about Fuller's intentions for the Geoscope and the World Game in Mark Wigley, "Planetary Homeboy," *ANY* (*Architecture New York*) 17 (1997): 16–23; and Beatriz Colomina on the collaboration between Fuller and Charles Eames and Ray Eames in the 1959 United States Exhibit at the Moscow World's Fair in Beatriz Colomina, "Enclosed by Images: The Eameses' Multimedia Architecture," *Grey Room* 02 (Winter 2001): 6–29.

18. R. Buckminster Fuller, *Critical Path* (New York: St. Martin's Press, 1981), xxv. Felicity Scott has noted that the "weaponry into livingry" formulation is not as pacifist as it initially appears, given Fuller's call for a total mobilization of resources toward defeating Communism and ending the Cold War. See Scott, "Fluid Geographies," 174–175.

19. *City Without a Ghetto* was part of a larger project of the same name undertaken by Tuazon and the Center for Urban Pedagogy in New York in 2003.

20. For more information about Red Rockers, see Peter Coyote, *Sleeping Where I Fall* (Berkeley, CA: Counterpoint, 1998); Lloyd Kahn, *Shelter* (Bolinas, CA: Shelter Publications, 1973), 138–139; and Timothy Miller, "The Sixties-Era Communes," in *Imagine Nation: The American Counterculture of the 1960s and '70s*, ed. Peter Braunstein and Michael William Doyle (New York: Routledge, 2002), 327–352.

21. For further information on Corey's project, see Juli Carson and Nana Last, *Paradox and Practice: Architecture in the Wake of Conceptualism*, exh. cat. (Irvine: UC Irvine University Art Gallery, 2007), 15–16.

22. Lloyd Kahn, *Refried Domes* (Bolinas, CA: Shelter Publications, 1990).

23. In "The New Public Art: Encounters in Privatized Space," in *Mind the Gap*, exh. cat. (Brooklyn, New York: Smack Mellon Gallery, 2006), I argued that these forms of intervention in interstitial sites of urban space were the hallmark of a new kind of progressive public art. I was not alone in this interpretation. Nato Thompson and Gregory Sholette, in *The Interventionists: Users Manual for the Creative Disruption of Everyday Life* (North Adams, MA: MASS MoCA, 2004; Cambridge: MIT Press, 2005), argued more broadly that a new form of art had arisen that used "tactical interventions," many in public spaces, "to insert the practice of art into the social realm" and combat "the increasing privatization of public visual and social space" (14).

24. In a similar vein, in 1949 Fuller's lectures presented his students at the Institute of Design in Chicago with the following problem of apocalypse cum homework assignment: "The city is to be evacuated. All residential and industrial concentrations of 50,000 persons or more are in immediate danger of annihilation. Consumable goods now directed towards these areas will be diverted to smaller decentralized communities. . . . Everything not decentralized will be destroyed." This anxiety was perhaps understandable given the climate of fear in the United States in the late 1940s generated by the possibility that the Soviet Union would obtain the atom bomb (the USSR eventually detonated their bomb in August 1949). See "Group Project, Architecture 7, R. Buckminster Fuller, Instructor, Institute of Design, Chicago," [spring semester] 1949, p. 2, in R. Buckminster Fuller Papers, Green Library, Stanford University. See also his mention of catastrophic decentralization in the draft of his article "Preview of Building," 1 April 1949, 10, in Fuller Papers. For a compelling take on Fuller's postapocalyptic tendencies, see Alex Soojung-Kim Pang, "Dome Days: Buckminster Fuller in the Cold War" in *Cultural Babbage: Technology, Time and Invention*, ed. Francis Spufford and Jenny Uglow (London: Faber and Faber, 1997).

25. The *Whole Earth* books were keen on providing resources for building and camping to assist "back to the landers." The consumer application of the geodesic dome for portable camping tents was part of this hippie outdoorsman movement, assisted in particular by companies such as the Patagonia outdoor apparel company (an offshoot of Yves Chouinard's climbing gear company) and The North Face ("the first tent manufacturer to employ R. Buckminster Fuller's patented geodesic principles in the backpackable tent market," E.M. Hatton, *The Tent Book* [Boston: Houghton Mifflin Company, 1979], 189). In *Counterculture Green*, Kirk makes a persuasive argument about the parallels between the appropriate technology movement of the *Whole Earth Catalog*–sponsored Point Foundation and free-market "green" counterculturalism. See, in particular, the chapter "Free Minds, Free Markets."

26. The island is managed by the Governors Island Preservation and Education Corporation (GIPEC), a New York State agency, with funding to maintain the site split evenly between contributions from the state and the city of New York. In April 2010 the state turned governance of the island over to the city of New York. For further information about the logistics of the island, see http://www.govisland.com. For a lively history of the site, see Nick Paumgarten, "Useless Beauty," *The New Yorker*, 31 August 2009.

27. In some ways awarding the *Waterpod* park status made sense. The pod had well-tended gardens and featured a strong educational component (i.e., it taught visitors about composting, water reclamation, and solar energy). However, the unmistakably dire tone of some of the pod's literature left me wondering how or why the Parks Department had approved this experiment about the viability of the New York environment of the near future. For example, from Mattingly's statement on the project: "In preparation for our coming world with an increase in population, a decrease in usable land, and a greater flux in environmental conditions, people will need to rely closely on immediate communities and look for alternative living models." Mary Mattingly, "A Floating World: The Concept of the Waterpod Project,"

Waterpod Project, website, 2008, http://www.thewaterpod.org/concept.html. Also, Mattingly's body of photographic work often depicts individuals in situations of environmental catastrophe caused by runaway climate change or other kinds of ecological disaster. We might be witnessing a particularly receptive moment for such arguments; after all, 2009 was also the year Cormac McCarthy's bleak postapocalyptic 2006 novel *The Road* was released as a Hollywood movie.

28. By inserting real bodies into the experimental architectural prototype (not merely artist-created sculptural objects that imply absent users), the *Waterpod* calls to mind the rich legacy of intentional communities undertaken by artists. From artist collectives such as Brook Farm (an experimental agricultural community near Boston, Massachusetts; founded in 1841, it was inspired by Charles Fourier's utopian socialism and was associated with American Transcendentalism—Ralph Waldo Emerson and Margaret Fuller were visitors, and Nathaniel Hawthorne and Amos Bronson Alcott were inhabitants) to Drop City and Red Rockers in the 1960s in southeastern Colorado, the *Waterpod*'s status as a physical site of artist-created community also conjures the long history of conflict in previous intentional communities. These tensions often divided community members because the time necessary to sustain the community jeopardized opportunities for members to work on their individual creative practices. The *Waterpod*, perhaps by nature of its personable originator, Mary Mattingly, or by dint of its intentionally limited duration during New York's milder months when people love to be outdoors, seemed to be thriving during my visits, in spite of the rudimentary cooking and sanitary conditions and lack of privacy provided by the tiny bunks.

29. Mattingly, "A Floating World."

30. Comprehensive designers, also known as "artist-scientists," were for Fuller "an emerging synthesis of artist, inventor, mechanic, objective economist, and evolutionary strategist." Fuller, "Comprehensive Designing," 71, 75.

31. Steven Kurutz, "A Fluid Definition of Self-Sufficiency," *New York Times*, 3 June 2009, D4. A follow-up article was published in August by Melena Ryzik, "Life, Art and Chickens, Afloat in the Harbor," *New York Times*, 12 August 2009, C1. Lauren O'Neill-Butler published a conversation with Mary Mattingly on Artforum.com in April 2009, "Mary Mattingly," http://artforum.com/words/id=22408. Douglas Kelley posted a video of his visit to the *Waterpod* on 8 September 2009 on the *Douglas Kelley Show List,* now available on YouTube, http://www.youtube.com/watch?v=XPAWXiJj0_Y.

32. We can perhaps thank Hans-Ulrich Obrist's *Utopia Station*, a collaboration with Molly Nesbit and Rirkrit Tiravanija at the 2003 Venice Biennale, for the prominence of the concept during the early 2000s. *Utopia Station* included a large array of projects by artists such as Liam Gillick, Yoko Ono, Martha Rosler, and Superflex.

33. For a critique of artists associated with what Nicholas Bourriaud dubbed "Relational Aesthetics," see Claire Bishop, "Antagonism and Relational Aesthetics," *October* 110 (Fall 2004): 51–79. Bishop points out that participation as a member of an art audience may not be the same thing as a public community. Hal Foster's critique of Bourriaud in the *London Review of Books* questions whether the reliance on concepts such as relational aesthetics ultimately mask the compensatory nature of substituting artistic participation for political agency. Hal Foster, "Arty Party," *London Review of Books* 25, no. 23 (4 December 2003): 21–22.

34. Frederic Jameson, "The Politics of Utopia," *New Left Review* 25 (January–February 2004): 35–54. Jameson's *Archaeologies of the Future* (London: Verso Press, 2005) used authors and fictional characters in sci-fi literature as case studies for the argument set forward in the *NLR* piece.

35. This continues in recent works by Jonathan Lethem, George Saunders, Mark von Schlegell, and, until her death in 2006, Octavia E. Butler.

36. Ursula K. Le Guin, *The Left Hand of Darkness* (New York: Ace Books, 1969), xii.

37. Dick and George Saunders are particularly adept at presenting thought experiments about the quotidian future: what would San Francisco's antique market be like today if Japan had won World War II (Dick's *The Man in the High Castle*)? Or what would happen if a theme park of prehistoric cultures required underpaid workers to mimic the tedious existence of Neanderthals in all its depressing detail (Saunders's *Pastoralia*)?

38. Jameson, "The Politics of Utopia," 41.

39. Fuller, *Utopia or Oblivion: The Prospects for Humanity* (Baden, Switzerland: Lars Müller Publishers, 2008).

40. Reinhold Martin, "Fuller's Futures," in *New Views on R. Buckminster Fuller*, ed. Chu and Trujillo, 176–187.