II: BLOW UP

ECO-TRIPPING IN MEDIA AMERICA

REALITY ON THE ROAD WITH INFLATABLES

(INDUSTRIAL) PRODUCTION IN THE DESERT

INTERMEDIA
"Mobile, self-transporting, nomadic, turned-on information/media/inflatable truckin'-down-the-highway freaks of the seventies," reads the description of Ant Farm in Jim Burns's *Arthropods: New Design Futures.* Burns's book featured pages from Ant Farm's 1971 *Inflatocookbook* alongside the work of Archizoom, François Dallegret, E.A.T., Eventstructures Research Group, the Halprin workshops, Haus Rucker Co, John Johansen, Missing Link Productions, Onyx, Cedric Price, Pulsa, Superstudio, and other "new environmentalists" exploring, as Burns put it, the "impacts of change." *Inflatocookbook* followed the precedent not only of Kahn's *Domebook,* which first appeared in 1970, but also of Steve Baer's 1968 *Dome Cookbook,* to which Ant Farm's title referred. The first such do-it-yourself manual for alternative architecture, *Dome Cookbook* offered recipes for "zomes," zonahedral reworkings of Fuller's geodesic domes that were Baer's own "freak-culture" answer to overcoming the orthodox world of professional architecture. Along with geodesic domes, the more complexly shaped zones quickly spread through the communes of the American Southwest in the late 1960s. *Inflatocookbook* was Ant Farm's contribution to "searching out a means, a way of doing, a spacial [sic] expression of alternatives to the rigid architectural paths we were led down as children." It provided the reader with "images of what environment can mean when a person takes it in his own hands, feeling it and molding new forms." Quick, cheap, lightweight, and easy to use, polyethylene construction also importantly involved the user in all phases of production, making it "a medium for learning about whole design processes." Offering recipes (plans and instructions) for air-supported structures, along with information on materials, construction, heat loads, safety, anchoring, and the fans needed for inflating pneumatics, *Inflatocookbook* was Ant Farm's "attempt to gather information and skills learned in process and organize [them] for easy access."
View from inside 100-by-100-foot inflatable by Ant Farm, 1969. Courtesy Chip Lord

Ant Farm, Inflatablebook, 1970/71
Interior page with drawings by Curtis Schreier
The do-it-yourself manual was the product, as Ant Farm explained on the credits page, of lessons learned from building approximately twenty inflatable structures over the previous year or so, ranging in size from a 100-by-100-foot white and clear square “pillow” to “a tetrahedron that folds out of a suitcase.” It was compiled from November 10 to December 10, 1970, and appeared in January 1971 as loose-leaf pages held within a clear plastic folder, a format Ant Farm imagined would facilitate additions, and hence a form of updating or interactive (nonlinear) reprogramming through periodic mailings. (This feedback-based transformation would not be realized as imagined, and the 1973 reissue took the form of a stapled booklet.) In addition to Lord and Michels, Ant Farm now included Kelly Gloger, Joe Hall, Doug Hurr, Hudson Marquez, Curtis Schreier, Andy Shapiro, Michael Wright, and Fred Unterseher. Sylvia Dreyfus, Sotiti Kitrilakis, and Charley Tilford were also involved with Inflatocookbook’s production, and T. L. Tom Morey of Southcoast, who had collaborated with Michels on the Antioch College Art Building in Yellow Springs, Ohio, during the previous summer, contributed to its pages.

To indicate some of the connections here: Gloger, Hall, and Shapiro were all Southcoast members and had participated in Time Slice. Gloger had studied at the University of Houston, Shapiro at Antioch College. Hall had participated in the 1968 Halprin summer workshop with Lord, as well as in a workshop under Paolo Soleri where Wright had been an apprentice. Schreier, who had studied at RISD, worked for Lawrence Halprin & Assoc. at the time of the 1968 workshop. Unterseher had studied at the San Francisco Art Institute and worked on the Liferaft Earth event (discussed later). Marquez and Lord had met at Tulane University, where Marquez had studied art. Hurr, who had been a student in North Carolina, had been a participant in Crash City and had come to Houston to take part in Astrodaze.
With their proposed class on Enviro-Communication rejected, Lord and Michels had left Houston in early fall 1969. Michels soon departed on a trip to Europe and India and Lord entered into the more collective phase of Ant Farm, with the "extended family" or "urban eco-commune" moving into a 40-by-40-foot warehouse at 247 Gate 5 Road, Sausalito. As explained in Design Quarterly's special issue on Conceptual Architecture, Ant Farm "consists of environmentalists, artists, designers, builders, actors, cooks, lifers and an inflatable named frank; war babies, television children, Rod & Custom subscribers, university trained media-freaks and hippies interested in balancing the environment by total transformation of existing social and economic systems." During the early phase of this new communalism, the group also operated at times under the names Pneumads, Southcoast Pneumads, Southcoast Inflaenvironment Group, and even Southcoast All-Electric Campfire, but incorporated as Ant Farm Inc., a nonprofit educational corporation, in early 1970. inflatable structures would become for a while not only standard pieces of enviro-equipment but key catalysts in an ongoing "environmental information circuit" that continued the project of a media-enhanced, interactive form of exchange and the production of a mobile educational facility to expand environmental awareness and ecological consciousness.

Immediately before Ant Farm's return to San Francisco, Tilford, Hall, Gloger, and Shapiro had constructed a 100-by-100-foot taped polyethylene inflatable with materials donated by Union Carbide of Houston. As recounted in the 1973 edition of Inflatablecookbook, the "big plastic pillow" was made for an ill-fated Wild West festival in San Francisco and then proposed for use at Stewart Brand's Liferaft Earth event. Beginning on October 11, 1969, Liferaft Earth was a weeklong "starve-in," replete with hippie celebrities such as Dr. Hip Pocrates and Hog Farm's Hugh Romney (who changed his name to "Wavy Gravy") at the time of the event, to protest the exploitation of natural resources and the threat posed by untrammeled population growth. "Things are getting crowded and hungry on the planet," the first announcement for the "Hunger Show" warned. "Environment is not only finite, it's short. So is time." Designed as a game in which players would remain in the inflated 100-by-100-foot polyethylene pillow without eating for a week (with succumbing or departure designated a "death"), the highly theatrical event was explicitly staged for mass media. Indeed, the intent was to "do a flamboyant, pointed piece of media theater on the subject." The Whole Earth Catalog reiterated the nature of the intended "audience" when it stated that "the stadium was the news media." Along with earth posters and a sign reading "Are You Ready to Die?" the inflatable served as visual interest during a preliminary press conference, where a scale model was presented to garner media attention. Initially located in a parking lot in Hayward, California (when Berkeley and other sites fell through), Liferaft Earth moved when it started to rain to the Whole Earth Catalog Store in Menlo Park, then, after a visit from the police, finally to the Portola Institute, also in Menlo Park.

97 Ibid.
— A photograph of Tilford with the model of “The Magic Pillow” appeared with a short note titled “Liferaft Airhouse” alongside the first announcement. Inflatable structures, the text explained, were portable, “instant,” temporary, cheap, and high-tech (“polyethylene provides tension to compress air flow, making air structural”); they were “high-response environments” suitable for “concerts, conventions, festivals, events, events...” Attempting to convey the intense sensory potential of this counter-architecture, the note added a further description: “non-rectilinear architecture (ecstatic environment)/geometric cut-out patterns = curved sensory shapes when inflated. Sensual overload potential in environments with light, sound, movement, water, temperature.” The giant pillow, for which Shapiro and Hall had also worked to produce secondary net structures, was, however, rejected as unsafe by Hayward city fire marshals and “finally had its day at Altamont.” In its place Hall and Shapiro quickly improvised a pneumatic wall about four feet high that snaked around the edge of the parking lot site on which Liferaft Earth took place. This provided a minimal barrier, “like the bulging sides of a rubber raft,” or, as Brand suggested, “pure vulnerability.”


101 Ant Farm, Inflatablebook, n.p.

102 Rick Field and Stewart Brand, quoted in “Liferaft Earth,” 94.

REALITY ON THE ROAD WITH INFLATABLES

In early 1970, Ant Farm advertised their services as “air buildings, nomadic visions” in the “Unclassifieds” section of Domebook. On the facing page was an image of a smaller, 50-by-50-foot pillow they were experimenting with for a planned event called the Mt. Fuji Rock Festival. As with its 100-by-100-foot precedent, this pillow was thought of as a key piece of environmental equipment with which Ant Farm could test out the rapid deployment possibilities of their imagined Real@ity, the name given to their ideal of a dispersed “instant” urbanism premised on “the evolving lifestyle associated with the rock festival.” Indeed the program seemed all too perfect. Ant Farm had been commissioned to produce inflatable structures by Gandalf Inc., a group of Los Angeles lawyers who planned to fly in thousands of American rock fans to stage a massive Woodstock-like event in Japan. Ant Farm was to provide fifty inflatables to house visitors for the duration of the festival, fulfilling the fantasy of an instant city or “moment village.” The prototype in the photograph reproduced in Domebook was fabricated at a waterbed factory in January 1970 out of fourteen-gauge single-layer vinyl. Although the event did not go ahead, this pillow too would have another life as an interactive prop, this time in visits to colleges and schools, as well as to ecology and alternative architecture events, during a “Demonstration Tour” in Spring 1970.

An important stop on this tour was a conference from March 20 to 22 in Freestone, California, organized by Berkeley professor Sim van der Ryn. The aim, as van der Ryn explained in his invitation, was “to learn to design new social forms, new building forms, that are in harmony with life...to build a floating university around the design of our lives.” In addition to van der Ryn’s own ecological design research center, the Farallon Institute, and Ant Farm, participants included alternative designers, educational institutions, and ecological groups such as Zomeworks, Big Rock Candy Mountain, Earth People’s Park, Pacific High School, People’s Architecture, Kamakazi Design Group, the California Institute of the Arts (CalArts or CIA), the Whole Earth Catalog, and others. The event was recorded in the form of “public notices” prepared by participants and published in Progressive Architecture under the title “Advertisements for a Counter Culture.”

Introducing the dossier, editor Forrest Wilson situated the importance of the work in the way in which it had not simply embraced technology but deployed it to alternative ends. If there had been little technical invention per se, he suggested, there...
had been "very original uses of existing architectural technology. For example, the pneumatically tensed membrane becomes an 'air pillow' put to uses Frei Otto and Victor Lundy would never have dreamed, and Buckminster Fuller's geodesic dome becomes a Zomework climb toy. At the Freestone Conference," he concluded, "technology became the stuff of fine art." For the event, Ant Farm had set up the 50–by–50-foot pillow, images of which made their way into many contributions to the P/A dossier. As recalled by Lord, "it provided shelter large enough for the group to meet in, a climbing toy for kids, and a symbol of portable architecture that could be removed without leaving a mark on the earth where it had been." Ant Farm's two-page spread within "Advertisements for a Counter Culture" was, however, devoted to earlier workshops and media projects. With intentionally misregistered red- and blue-ink screens, the collaged material referenced the Apollo 11 mission with a parodic commemorative currency that read "Unified Space over America" and included images from Astrodaze and Time Slice, as well as Electronic Oasis enviro-collages that had served as visual mediation for environmental "trips." The spread also included a short text demarcating attitudes towards the environment and assigning titles to four possible categories: the exploitation and economic hierarchy of "Fat City," the "superconsumption" of "Rock City," the alternative culture of "Edge City," and the psychedelic time warp of Real@ity. This text includes the most detailed published portrayal of Real@ity. "The boundaries and limitations of group consensus/individual initiative have been breached," the account began, referencing the fluid, amorphous sense of self and community characteristic of the psychedelic experience. It continued, offering further description of this hallucinatory time-space strata,

The difference between man building (the process) and natural growth is not immediately apparent. Time can be shaped at will—design as looking ahead in times of scarcity will not exist. Real@ity—people relating to events in their own mind and events in the real world will do so only at different speeds (it appears equivalent). A multilevel projection in two seconds as intense as a million years living it. Although one may have an energy budget higher than ever, he will appear to sip it delicately, wasting far less than in Fat City. Living invisible forms—riding inside animals, drinking the sap of trees, for intangible transformations, the outward manifestations take on many forms.

Sun focus, moon trips, the fossil fuel legacy and the genetic code a language. Now Rock City plastics look crude, compared to the structure of DNA.
Ant Farm's work and environmental consciousness, as I have argued elsewhere, remained in many regards closer to the domain of Edge City—"Whole Earth Catalog, Video Freaks, Hippie Bus with solar energy," etc. Yet this "progression" from Fat City to Real City suggests that their "new vision" or "fantasy" for a time yet to come remained indebted to the experience of altered states of consciousness, especially as they impacted architects' sense of place-time relations and social structures. That is to say, the dissolution of normative frameworks and barriers that was central to the psychedelic trip continued to haunt Ant Farm's strategies of environmental transformation, whether "high" or not.

Ant Farm's spring 1970 "traveling show of inflatable structures and environmental information circus" also included an Earth People's Park ecology event and the Air Emergency performance for Earth Day at the University of California, Berkeley, both in April. Dressed in lab coats and gas masks, and with the pillow referred to as Clean Air Pod (or CAP 1500), Ant Farm staged Air Emergency as a sassy piece of "media theater," "pollution art," or "life art" that wryly captured the escalating sense of the destruction and militarization of the environment. A result of having studied the civil defense graphics and fallout shelters of the 1950s, Air Emergency was a "survival event" in which those who didn't seek shelter from pollution by entering CAP 1500 were told that they would die within fifteen minutes from an "air failure." Small yellow circles were attached to "victims" remaining outside, who were informed that the circles were "sensors which can be monitored by a Human Resources Satellite which is tracking your final movements." Ant Farm had become an Office of Air Emergency Mobilization, a broadcast service dedicated not simply to escalating the rhetoric of impending doom but to taking their brand of "eco-tripping" back to the media.

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The group also attended the International Design Conference in Aspen in June, again at the invitation of van der Ryn, as part of a countercultural contingent that radically destabilized the identity of this long-standing modernist institution. IDCA 70 adopted the title "Environment by Design," but its commitment to ecological concerns remained for many younger participants inscribed not only within the ideological limits of an outdated institution, but confined within an equally outdated presentation format that precluded interaction and feedback. A documentary film by Eli Noyes and Claudia Weill made this evident: cutting back and forth between the multiple camps, the film revealed the disjunction or "generation gap" to be at all but unbridgeable, despite attempts to bridge it through the official inclusion of environmental groups and a "black caucus" as well as via counter-attempts to infiltrate the conference's main tent with theatricalized hippie culture.


106 Ibid. Wilson is referring to Victor Lundy's well-known collaboration with Birdair (pioneers in the field of pneumatic structures) for the traveling Atom for Peace pavilion, designed for the U.S. Atomic Energy Commission in 1960, as well as to Frei Otto's long-standing experiments with tensile and inflatable structures. Otto had taught at Berkeley in 1948; his course materials appeared as Lightweight Structures: A Compilation of Lecture Notes, Design Analysis, Photographs, and Sketches Pertaining to the Four Week Seminar on Lightweight Structures Conducted by Dr. Frei Otto in the Department of Architecture, University of California, Berkeley (Berkeley: University of California, 1960). See Frei Otto and Rudolf Treuel, Zuhemanspruchte Konstruktionen: Band 1, Pneumatische Konstruktionen (Frankfurt: Ullstein Fachverlag, 1962).

108 Ibid. This was an event at which the theme Environment by Design led to a reevaluation of the conference itself;

109 Eli Noyes and Claudia Weill, IDCA 70, 1970. With thanks to Eli Noyes for making this available to me. As the opening text recounted, "the theme Environment by Design led to a reevaluation of the conference itself." See also Scott, "Shouting Apocalypse," where I discuss these events in more detail. Ant Farm also staged events at Pacific High School, Golden Gate Free University, California Institute of Technology (Pasadena), UCLA, San Francisco Art Institute, California College of Arts and Crafts (Oakland), and many other venues.

110 The Oakland Tribune covered the event as "Breathing—That's Their Bag," Oakland Tribune, Wednesday, April 28, 1970, 1. This was reworked and included as a page in Inflatable-cookbook, in which it was retitled "Faculty Urges U.C. Control of Air Labs," and postdated to April 28, 1979. 
Ant Farm's mode of presentation repeatedly sought to push the limits of existing formats. "Categorized as lectures, ecology events, environmental alternative displays, or art," the group explained, "Ant Farm projects are, in reality, always treated as response information exchanges." That such "information exchange" was conceived of as a form of education was recognized in the fall 1970 issue of *Big Rock Candy Mountain*, a publication, like the *Whole Earth Catalog*, of the Portola Institute, and a self-professed "learning to learn catalog." A short editorial note to a two-page spread of Ant Farm work and services registered, however, lingering confusion about these "freaky designers" and their work with inflatable structures and theatrical presentation: "Sometimes an item or a group of people don't fit snugly into any educational category, including our own, yet they still seem like they belong in *Big Rock Candy Mountain*. The Ant Farm is such a group." Many of Ant Farm's events with inflatables, including Altamont, were recorded in *Pneumad Popstars* (1969/70), a mesmerizing 16mm film shot by Gloger, which gives some sense not only of the fluid and amorphous environment the early inflatables gave rise to, but of the wonderment and almost ecstatic pleasure they elicited from people participating in this unscripted performances.\(^{118}\)

118 *Ant Farm, "WLS: World's Largest Snake.*

114 *Ant Farm, "Ant Farm," Big Rock Candy Mountain* (Fall 1970): 6. The note continued, "I can see that they are inventive, freaky designers; I can see that they make inflatable structures; I can see a sense of theater in their presentation, yet still, these parts haven't come together into a whole picture for me. I know that I like them and kids do too," 8. The second page of this spread included, along with a note advertising their services for events and schools, a list of "Ant Farm—Off the Shelf" items for sale, including 80-foot-diameter domes, 10-foot-diameter stick-dome kit, a 10-by-10-foot inflatable classroom, 4-foot vinyl pillow, 100-by-100-foot polyethylene pillow, an Ant Farm Calendar composed of numbered polyethylene envelopes with clothespins, wire, and pegs, and the Inflatable Cookbook. *Pneumad Popstars*, filmed by Kelly Gloger, 1969/70 and later recut as *Ant Farm Inflatables* (2005). Courtesy Chip Lord.

115 *Epigraph attributed to Fred Richardson, in "Production in the Desert," Whole Earth Catalog (January 1971), 41–44.*

116 *Whole Earth Catalog (January 1971), 41–44.*

119 For a symptomatic account of architecture's response to relations between eco-technology and dispersal or decentralization see, for instance, Don Raney and Claire Montelsky, "The World: Love It or Leave It," *Progressive Architecture* (June 1970): 78–85.

118 Leo Marx developed this notion of a pastoral impulse in American literature in his 1964 *The Machine in the Garden*. As he explained in another context, "by 'pastoral impulse' I mean the urge, in the face of society's increasing power and complexity, to retreat in the direction of nature," towards a "landscape that bears fewer marks of human intervention," Leo Marx, "American Institutions and the Ecological Ideal," in *Arts of the Environment*, ed. Gyorgy Kepes (New York: George Braziller, 1973), 89, 90.

119 Thomas Albright, "The Environmentalists: The Whole Earth Catalog," *Rolling Stone* (December 13, 1962): 90–92. *The Whole Earth Catalog* was, Brand explained to Albright, "strictly an outgrowth of the commune movement." It was conceived (with, in Brand's own term, the "Fullerian wealth sanction") as a service to sell goods to alternative, often rural communities. There was also a Whole Earth Truck Store that traveled to communes and other locations. For an important new account of Stewart Brand see Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago: University of Chicago Press, 2006).