

TOMÁS SARACENO LOOKS TO THE SKY AND SEES POSSIBILITIES

for rethinking how we live in relation to one another—for reshaping notions about nationality and property, and revising our ideas about the fixity of the built environment and the organization of cities. *Air-Port-City*, Saraceno's ongoing project, envisions networks of habitable structures that float in the air. The freedom of their airborne location allows for these sections of living space, organized within a modular cellular framework, to join together like clouds, creating aerial cities in constant physical transformation. As he explains, "Like continental drift at the beginning of the world, the new cities will search for their positions in the air in order to find their place in the universe.... [This structure is] capable of imagining more elastic and dynamic border rules (political, geographical, etc.) for a new space/cyberspace."¹

It is easy to imagine an airborne city as an escape from the realities of the earth, where we leave behind the mess (in both physical and social terms) that we humans have created for ourselves. The artist cites the invention of the hot-air balloon during the time of the French Revolution as a not-so-coincidental signal of man's quest to escape and find protection in another plane of existence, something that recurs throughout history when societies go through traumatic phases. But Saraceno's project is not an individualistic fantasy of escape; rather, it is a visionary rethinking of collective social organization that hopes also to undermine certain oppositional relations—of the individual to the collective, of humankind to the natural world, of the rationality of the built environment to the irrationality of the natural environment. We are not apart from nature, we are a part of it, and any future solution for living needs to account for a more permeable relation of the built and the natural. Traveling on passive energy collected from the wind and sun, the miles-long *Air-Port-City* foregrounds ecological sustainability, and does not rely on impositions upon or obliterations of the natural landscape to exist.

We think of architecture as immovable, inert, and permanent, but those qualities of building are rooted in architecture's relation to the ground. They reflect as well shared cultural values related to the primacy of the individual over the collective, to our desire for security, to ingrained notions of property and its relation to capitalism and land ownership. Saraceno's ideas, and those of many visionary architects, look to history for models of collectivity, fluidity, flexibility, and nomadism that are anathema to these more dominant cultural models of stasis. The history of visionary architecture, from unrealized ideas like Archigram's "Walking City" of the early 1960s or Buckminster Fuller's "Cloud Nine" levitating geodesic spheres of the same period, to Ant Farm's realized pneumatic (inflatable) buildings of the early 1970s, have challenged the inevitable linear progression of human fixed settlement. Fuller in fact defined an inverse relationship between the weight of buildings

(physical and formal) and the development of mankind and industrialization.² Saraceno in particular speaks of an aspiration to unlearn, implying the stripping away of these basic shared assumptions about how we live, tracing backwards from the perceived limits of what is culturally possible in order to carve out new visions for living. He uses the metaphor of the cloud to allude to *Air-Port-City's* physical and social movements—"as habitable platforms that float in the air, changing form and merging with other platforms just as clouds do... [they] will fly through the atmosphere pushed by the winds, both local and global, in an attempt to equalize the (social) temperature and differences in pressure."³

Saraceno's photographs use the natural environment to poetically suggest this skyscape of the future. For *Cumulus*, Saraceno traveled to Solar de Uyuni in the Bolivian Andes, the largest salt lake in the world. The lake's glassy surface reflects the sky, producing the illusion of a plane of existence suspended among the clouds. *Galaxies forming along filaments like droplets along the strands of a spider's web* not only provides a poetic photographic model for Saraceno's future cities, but the flexible strength of spiders' webs suggests the ideal qualities for *Air-Port-City's* netlike superstructure. Saraceno's suspended and floating environments give



Tomás Saraceno: *Galaxies forming along filaments like droplets along the strands of a spider's web*, 2005; C-print; 33 1/2 × 43 5/16 in.; courtesy of the artist.



Tomás Saraceno: *The Endless Photo*, 2006; C-print mounted on Plexiglas and aluminum; 40 × 56 in.; courtesy of the artist and Tanya Bonakdar Gallery, New York.

physical form to his conceptual framework, and anticipate at small scale the reality of his large-scale vision. The form of the bubble is the building block for much of Saraceno's airborne architecture. On a metaphorical level the relation is obvious—bubbles contain space and float on their own, and their shape echoes the form of the world. Structurally speaking, as well, they are ideal small-scale models for his large-scale propositions—as a continuous spherical membrane, the bubble represents a flexible building component that relies on principles of tension to gain stability. Saraceno's interest in bubbles and other soap-film structures builds upon and makes very specific reference to the work of the German visionary architect Frei Otto, who spent his career studying the physical properties of soap film.⁴ Saraceno also experiments with simple machines to demonstrate the form-finding process of soap bubbles, whose forms are created autonomously, dependent on the physical laws of membrane surfaces that dictate that surface tensions are equal across the entire form. Such structures are known as *pneus*, and they represent the essence of form—the most fundamental structures in nature, down to the singular construction of a cell. Saraceno employs the building block of the pneu in the suspended sculptures that serve as models for related parts of *Air-Port-City*. Minimal surface forms similar to soap bubbles can be achieved by inflating or suspending other kinds of thin membranes such as plastic, or even, in the future,



Tomás Saraceno: *Breathable Boundaries*, 2007 (detail); nylon thread, air, liquid soap; dimensions variable (70 3/4 × 70 3/4 – 102 3/8 × 102 3/8 in.); courtesy of the artist.

Tomás Saraceno: *On Air*, 2004; installation view, *Flying Garden/Air-Port-City/On Air*, Pinksummer Contemporary Art, Genoa, Italy, 2004; PVC plastic, air under different pressures, and people; dimensions variable; courtesy of the artist and Pinksummer Contemporary Art, Genoa. Photo: A Coco.



as Saraceno suggests, flexible membranes of Aerogel, a remarkably strong, lightweight material developed for use in the aerospace industry and with which Saraceno often experiments. Organized cellularly, with interdependent constituent parts, these sculptures redefine the idea of wholeness and completeness as states of flux rather than stasis. Inside a flexible superstructure, individual living modules can be plugged in, as can modules for recreation and civic use, resulting in an environment that responds to both the needs of individuals and the shifting needs and desires of the transitory communities.

Saraceno's *Flying Garden* works imagine parallel agricultural modules, at present housing species of Tillandsia and Spanish moss that receive necessary nutrition from the atmosphere—they are "air-sufficient," an apt metaphor for the human self-sufficiency that his project hopes to engender. The operative concept at the heart of *Air-Port-City* is one of dynamic balance, with an idea of "cities and civilizations encouraging a continuous mobility" that supercedes traditional notions of earthbound national, racial, and social boundaries between people. In their permanent nomadism, these modules for living generate alternate structures of social organization, with implications for shifts in economic and political structures as well. Notions of freedom are manifest in the empowerment of individuals to transcend traditional boundaries and make more fluid choices about where and with whom to live collaboratively, but there is a concurrent implication of interdependence reflected in the organizational structure of literally linking modules together. Some of Saraceno's interactive installations anticipate these social relations—upon entering one of his inflatable structures, your presence affects temporarily the suspension of others in the space.



Tomás Saraceno: *Flying Garden*, 2005; installation view, *Luna Park Fantastic Art*, Villa Manin Centre for Contemporary Art, Codroipo, Italy, 2005; transparent balloons, air, elastic cord, and plants; dimensions variable; courtesy of the artist and Tanya Bonakdar Gallery, New York.

Much of Saraceno's work demonstrates the physical properties of his materials, articulating in small-scale the potential for their application to *Air-Port-City*. He has already experimented with the possibilities of flying on passive solar energy: transcending quixotic ambition, he built and flew the largest solar-powered geodesic balloon ever built. Looking into projections of future possibility, he has applied practical principles from engineering, physics, chemistry, aeronautics, and architecture to experiment and model logistical solutions. With the aid of lawyers and engineers, to date Saraceno has filed for patents for the construction of habitable vehicles that couple a mix of lighter-than-air gases and the insulating properties of Aerogel (which is only three times heavier than air itself) to fly without engines.

This research into engineering the material reality of his visionary cities is complemented by research that implicates the fields of sociology, economics, environmental sustainability, and political science as a means to consider the structural relations of such a societal reimagining. Saraceno's architectural program, like those of Fuller, Archigram, and other visionaries, posits questions about the reshaping of social space and human behavior as much as imagining realizable architectural plans. Utopias, especially as modeled through visionary architectural programs, are useful because they allow us to reimagine ourselves and our

surroundings in the ideal. This stretching of possibility beyond the immediately attainable allows us to shake off the mistakes of the past, to evade the learned limitations of how we see our world and each other. Looking at the shifting notions of utopia embedded in visionary architectural programs, we do not see a linear evolution of the ideal, a series of progressive notions. Rather, each vision of utopia conforms to its time, reacting to the social and political issues of the day while also solving for the perceived problems of previous utopias. In Saraceno's vision, the techno-inflected futures proposed by Fuller or Archigram, in which technology is the answer to all human problems, are supplanted by imagined balances between mediated and natural worlds. Economies of scale and material reflect a higher consciousness about waste and conservation.

Beyond technological and material feasibility, we are still left with the conundrum at the heart of all utopian visions—how do we reconcile individual agency and collective harmony? How can human beings better live together? Visions of utopia always imply the future tense—and concomitantly, some sense of aspiration in the social imagination. A *utopia*, defined in the Greek as “no place,” can't exist, so the terms of discussion can never be about what *is*, but rather with what *could be*. Much like *Air-Port-City*, utopias are defined by this lack of stasis, so fluid revisions of utopia are an important exercise in humanity, imagining shape-shifting possibilities, like Saraceno's vision for an untethered future in the sky.

Elizabeth Thomas

PHYLLIS WATTIS MATRIX CURATOR

NOTES

- 1 Stefano Boeri and Hans Ulrich Obrist, "Interview with Tomás Saraceno," *Domus* 883 (2005), 4.
- 2 See R. Buckminster Fuller, *Utopia or Oblivion: The Prospects of Humanity* (New York: Bantam Books, 1969); Fuller, *Operating Manual for Spaceship Earth* (New York: Aeonian Press, 1976); and Fuller, *Konkrete Utopie* (Duesseldorf: Econ Verlag, 1974).
- 3 Boeri and Obrist, 4.
- 4 Frei Otto, *Complete Works: Lightweight Construction and Design*, ed. Winfried Nerdinger in collaboration with Irene Meissner, Eberhard Moller, Mirjana Grdanjski (Boston: Birkhauser, 2005), 18–23.



Tomás Saraceno: *32MW* (detail), 2007; installation view, *Flying Garden/Air-Port-City/Sharjah Biennial 2007*, Commissioned by the Sharjah Biennial 8, Sharjah, United Arab Emirates; PVC pillows, air, and polyester webbing; courtesy of the artist and Tanya Bonakdar Gallery, New York.

Tomás Saraceno was born in Argentina in 1973; he lives and works in Frankfurt, Germany. Upcoming exhibitions include *Megastructure Reloaded*, Berlin; *Storefront for Art and Architecture*, New York; *Towada Art Center*, Japan; *Sonsbeek 2008*, Arnhem, Holland; and the *Liverpool Biennial*. Saraceno's work has been featured in solo presentations at Centre d'Art Santa Monica, Barcelona; Barbican Art Gallery, London; and Portikus, Frankfurt. He has participated in exhibitions at venues such as the Walker Art Center, Minneapolis; Lyon Biennial; Sharjah Biennial 8, United Arab Emirates; Büro Friedrich, Berlin; de Appel, Amsterdam; São Paulo Bienal; Musée d'Art Moderne de la Ville de Paris; Museum Boijmans van Bueningen; Moscow Biennale of Contemporary Art; 50th Biennale di Venezia; and Kunstverein, Frankfurt. Saraceno studied architecture at the Universidad Nacional de Buenos Aires, then continued postgraduate studies in art and architecture at Escuela Superior de Bellas Artes Ernesto de la Carcova, Buenos Aires, and Staatliche Hochschule für Bildende Kunst, Frankfurt.

PUBLIC PROGRAMS

Artist's Talk

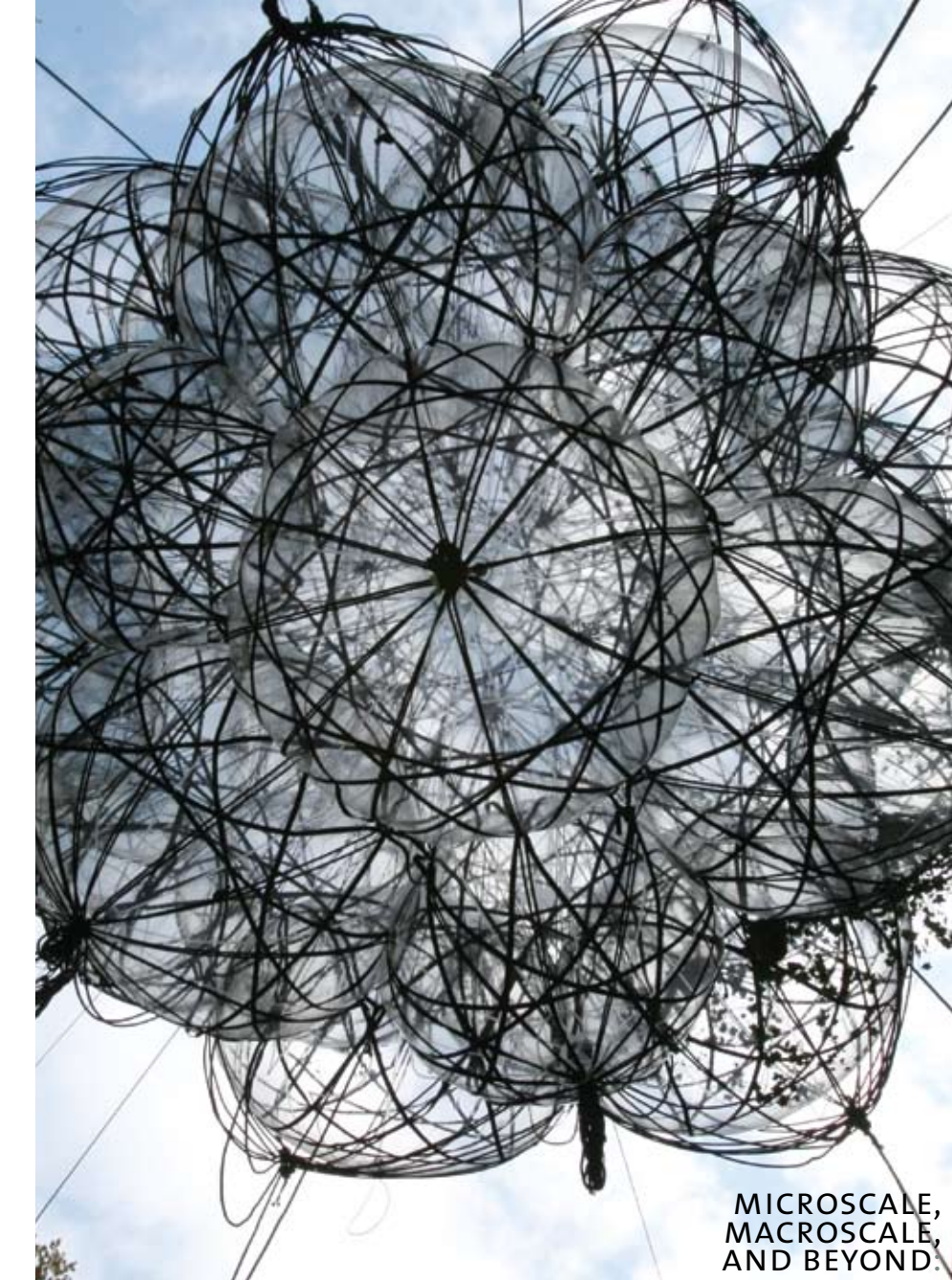
Sunday, November 18, 3:30 p.m.
Reception to follow
Free admission

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FRONT Tomás Saraceno: *32MW*, 2007; installation view, *Biosphere MW32 Air-Port-City*, Pinksummer Contemporary Art, Genoa, Italy, 2007; 12 elliptical PVC pillows, air, polyester webbing, flora and fauna, and people; dimensions variable; courtesy of the artist.



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LARGE-SCALE
IMPLICATIONS
OF SMALL-SCALE
EXPERIMENTS

TOMÁS SARACENO

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