AI and research

edited by

ute meta bauer & thomas d. trummer

ecology of the place – river as recording device

gediminas urbonas & nader tehrani

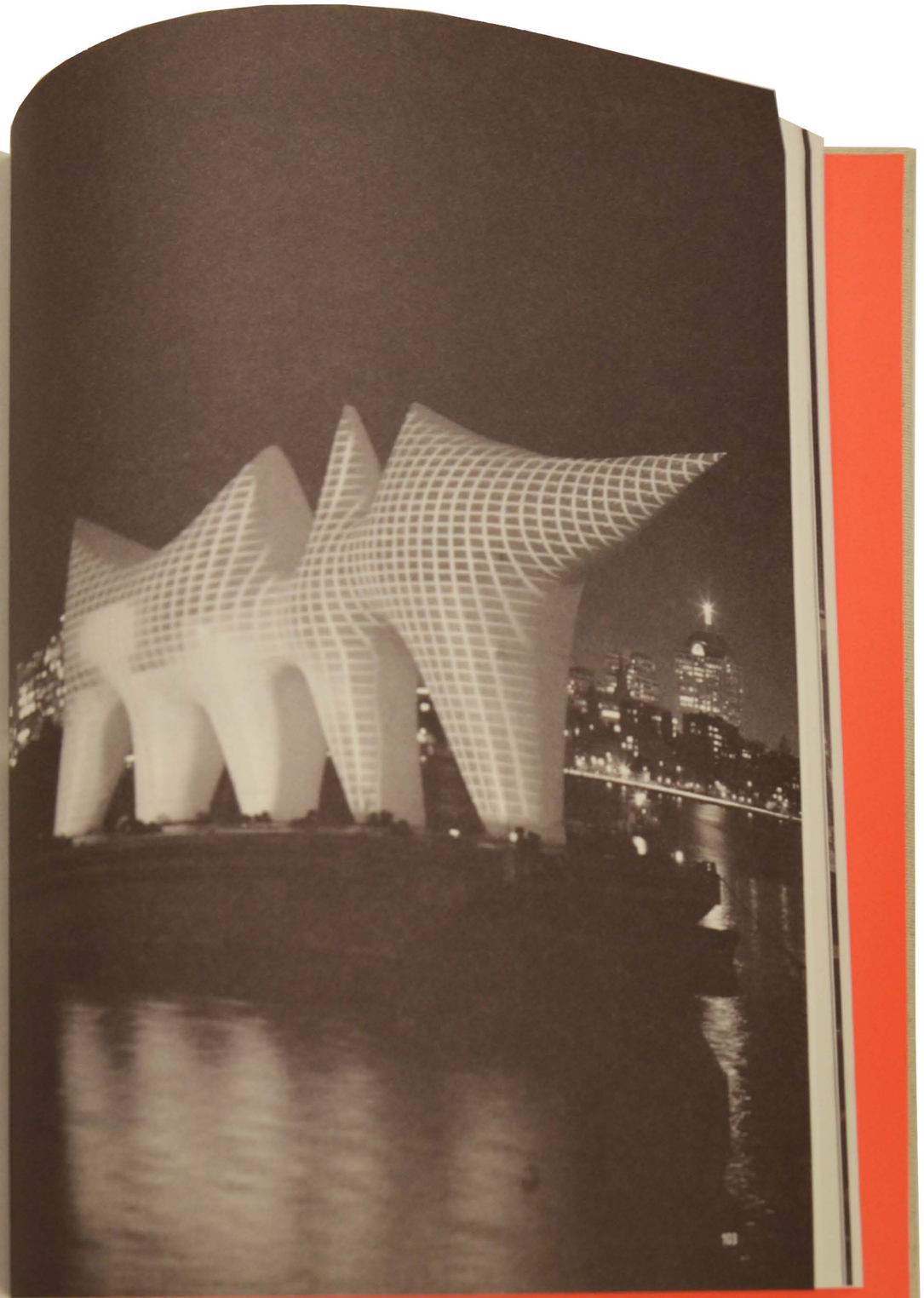


fig 1

fig 2

fig 3

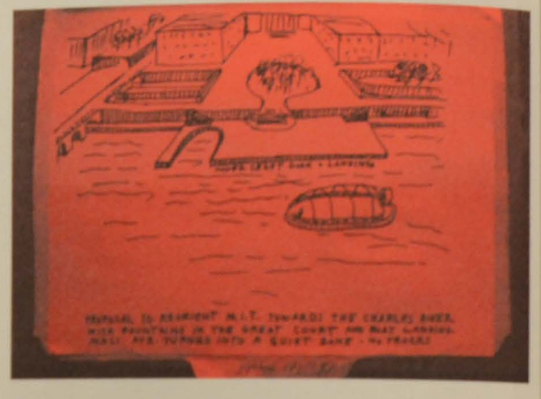


fig 4

fig 5

fig 6

fig 1 Gediminas Urbonas and Nader Tehrani NADAAA, LIQUID ARCHIVE, 2010-ongoing, barge anchored in the Charles River, inflatable, interactive video projection, infrared tracking system, hacked Kinect. FAST–Festival of Art, Science and Technology for MIT 150, May 2011.

fig 2 Gediminas Urbonas, LIQUID ARCHIVE, sketch for public space with water purification and swimming pool at the Charles River, FAST–Festival of Art, Science and Technology for MIT 150, 2010.

fig 3 Gediminas Urbonas, LIQUID ARCHIVE, sketch for public space with water purification and swimming pool at the Charles River, FAST–Festival of Art, Science and Technology for MIT 150, 2010.

fig 4 River Research file: Ted Kraynik, CHARLES RIVER CULTURE AND SCENIC EXPRESS, CHARLES RIVER PROJECT, 1975.

fig 5 River Research file: Athena Tacha, STEP SCULPTURE FOR THE BANKS OF THE CHARLES, CHARLES RIVER PROJECT, 1974.

fig 6 River Research file: [Student] Milbury, CHARLES RIVER MODEL, CHARLES RIVER PROJECT, 1974.

"... Participants would experience many audio, tactile, and rhythmical characteristics of water while keeping dry. Events such as swimming in pockets within the containers, sliding, jumping, [and] relaxing all would be accented by the reverberating motion of the container. As individuals move on one area this motion would reverberate throughout the entire container thereby all participants sharing the movement of others ..."[1]

That is how Howard York described his proposal *Topographic Water Landscapes* for a public intervention at the Charles River in Boston in 1972. Responding to György Kepes's invitation to address the inhuman scale of urban development that took place during the 1950s and 1960s in American cities—and Boston in particular—artists, architects, and designers developed suggestions aiming to mitigate the enormous scale of environmental damage that came along with it.

These proposals are at the core of the Center for Advanced Visual Studies (CAVS) Archive at Massachusetts Institute of Technology (MIT), constituting the collection of idea-scenarios for the *Charles River Project*. It was a major collaborative effort centered upon a large-scale environmental project "aiming to give rich contemporary meaning to a river that interfaces a densely populated urban area."[2] According to Kepes, the "river is the only aspect of our urban environment that has not yet been parceled out into real estate or butchered by human insensitivity and carelessness." Thus the project aimed to address public attention on the neglected aesthetic and human significance of the Charles River and contribute to higher awareness of environmental values.

Kepes approached the river as a recording device that renders "distant memories and thus gives to the urban citizens a most needed sense of freedom." His project explored five aspects, including: "... the first was the development and combination of long overdue pollution abatement measures with form solutions that offered a more intimate and richer visual connection with the river. ... The second aspect of the project sought to develop ways of utilizing water as an artistic medium by creating individual forms and events that could bring joyful focal points to the banks of the river and help to transform the river surroundings into a new kind of water park, a contemporary democratic Tivoli ..."[3]

Some proposed and never-realized idea-scenarios comprised the starting point of our research work, grounded in an interest in rendering agencies that move towards the "civic and environmental" as forms that resonate and reflect Kepes's ethics.[4] Aiming to produce a proposal for an intervention on a "civic scale," we started from examining the history of interventions to the Charles River—be they industrial, military, scientific, pedagogical, or artistic. We were looking for projects that embraced the "environmental" and what was suggested by Kepes as the "civic" dimension of art. We were looking for speculative forms that try to question the "contemporary democratic Tivoli."[5]

Central to these debates, especially within the context of the CAVS, was the role that new technologies could play in mitigating the hazards of industrialization and developing a more sustainable human environment. Informed by the cybernetic discourse of self-regulation, feedback loops, and homeostasis, advocates of the links between art and technology such as Kepes saw the potential for artists to collaborate with scientists and engineers to create what he called "ecological feedback machines that sense our danger and work toward resolving the problem of man's relations with his surroundings."[6]

fig 7 River Research file: Juan Navarro-Baldeweg, ECHO SYSTEMS, application of a climatic control system floating in New York Harbor, CHARLES RIVER PROJECT, 1971.

fig 8 River Research file: Michio Ihara, FLOATING WALKWAY SYSTEM, CHARLES RIVER PROJECT, 1974.

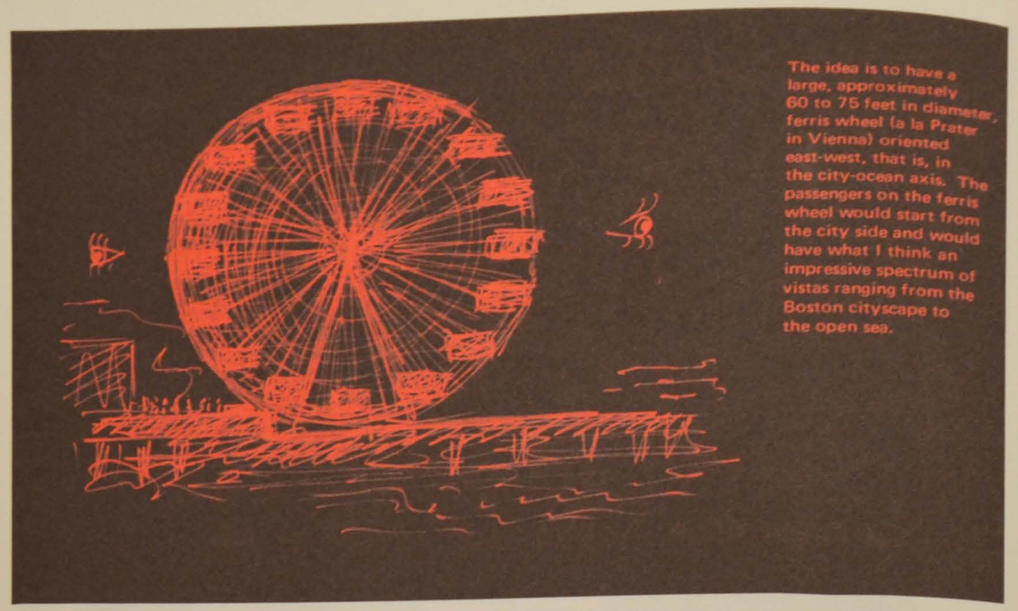


fig 9

fig 10

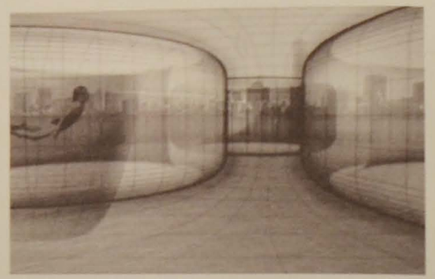


fig 11

fig 9 River Research file: György Kepes, FERRIS WHEEL, IDEA TRIAL SKETCH, 1976.

fig 10 Nader Tehrani: NADAAA, Proposal for inflatable public space with water purification and swimming pool at the Charles River. FAST–Festival of Art, Science and Technology for MIT 150, 2010.

fig 11 Nader Tehrani: NADAAA, Proposal for inflatable public space with water purification and swimming pool at the Charles River. FAST–Festival of Art, Science and Technology for MIT 150, 2010.

In an essay entitled "Art and Ecological Consciousness," which was published as the introduction to *Arts of the Environment*, Kepes writes: "The human body has an inbuilt self-defense, a physiological mechanism that protects it from extreme imbalance. We have begun to see that our extended body, our social and man-transformed environment, must develop its own self-regulating mechanisms to eliminate the poisons injected into it and recycle useful matter. Environmental homeostasis on a global scale is now necessary for survival. Creative imagination, artistic sensibility, can be seen as one of our basic, collective, self-regulating devices."[7]

He thought that one such device would be a water purification system that could replace public art at the river, at the same time exposing the relentless process of labor to visualize the ecological condition of enslaved and contaminated nature. Thus the large-scale environmental form could become an educator of sensibilities where the layers of human intervention recorded in the sediment and other toxic traces would provide material for the archive. The public could be engaged as an "active participant in the educational setting and thus help to develop a long overdue ecological consciousness."

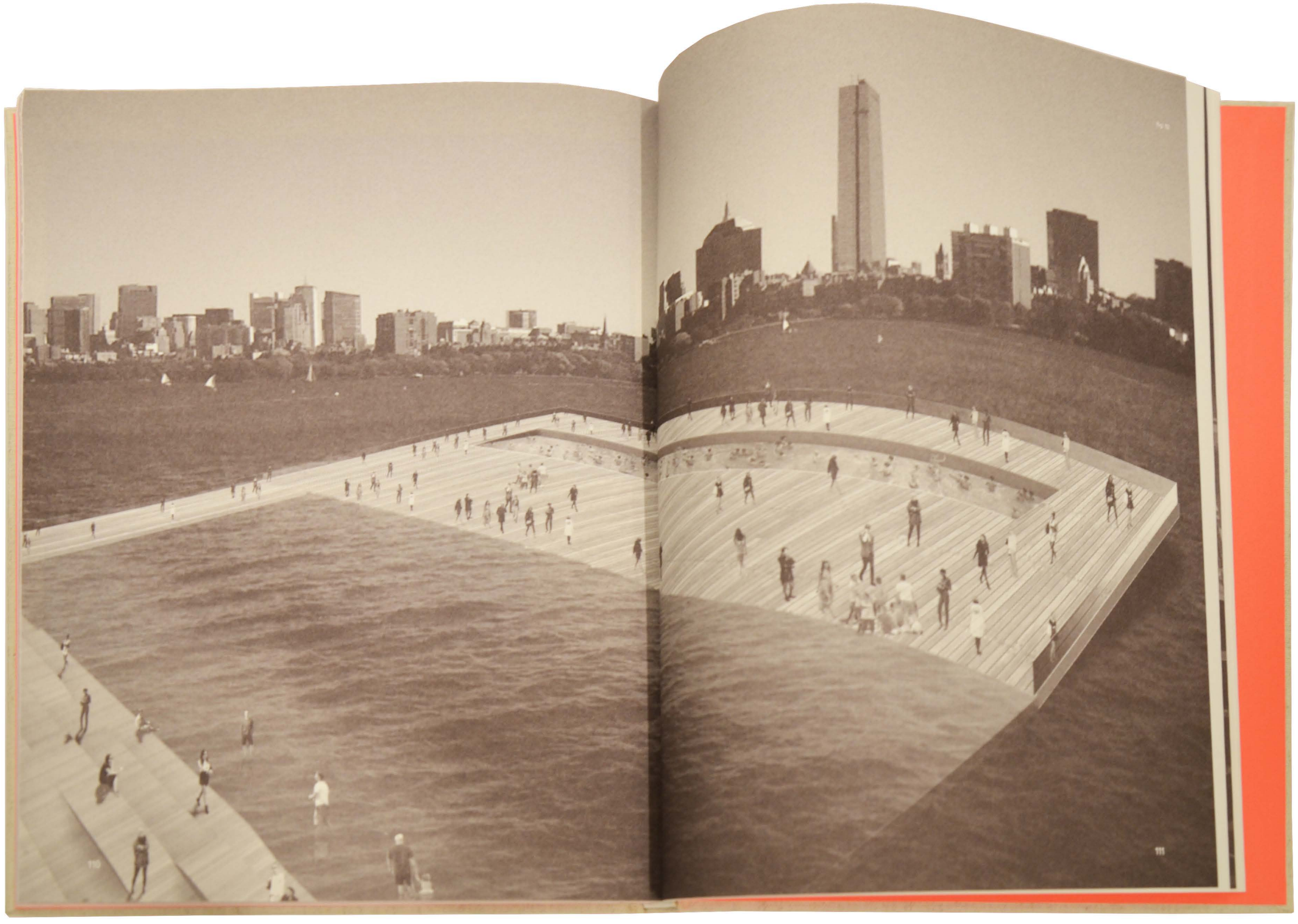
The first iteration of *Liquid Archive* (2010–ongoing) was conceived as a water (purification) pavilion and participatory program for the Charles River, opening up from Memorial Drive as a continuation of MIT's Killian Court. Project insisted on closing Memorial Drive—the federal road that blocks MIT access to the river and turns off the public life of the institute with its back to the river as catalyst for visual, recreational, and social imagination. In the context of MIT's 150th anniversary, the aim of *Liquid Archive* was to research the understanding of the techno-ecological turn as recorded in the CAVS project, an ecological condition they attempted to develop at the time, and their unrealized attempts to develop public awareness on the Charles River by creating a series of participatory and spectacular scenarios. During May to August 2011, the *Liquid Archive* program was to animate the pavilion, performing a "score" composed of unrealized idea-scenarios.

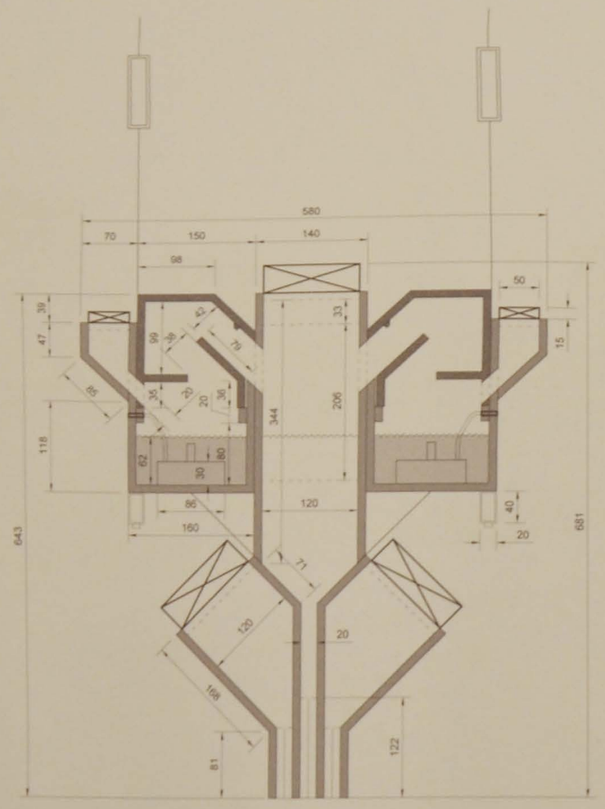
Mirroring MIT's Great Dome, the pavilion is envisioned as an inverted half-cylinder that presses into the water of the Charles River, allowing visitors to be physically and conceptually submerged in the river. The form of the pavilion—co-designed by NADAA (Nader Tehrani) and Urbonas Studio (Nomeda and Gediminas Urbonas)—resonates the idea of an "acoustic mirror." In the act of "listening to the environment," the pavilion captures the ripples of 1970s environmental art—equally significant for the history of MIT and the CAVS and to designers, artists, and community groups concerned with contemporary forms of techno-ecology.

The program unfolds through three acts:

ACT 1—Scenario: A "score" is composed using project proposals from the CAVS Archive that is performed over the course of one hour. A "steam" cloud accumulated from a steam generator will be rendered as a 3-dimensional projection screen for laser screenings. Artists whose proposals may be included are: Otto Piene, Takis, Wen-Ying Tsai, Harold Tovish, Jack Burnham, Red Kraynik, William Garnett, Satn Vanderbeek, Michio Ihara, Lowry Burgess, Charles Frazier, Maryanne Amacher, Rockne Krebs, Bill Parker, Douglas Davis, Athena Tacha, Friedrich St. Florian, Juan Downey, Alejandro Sina, Paul Earls, Stanley Resnicoff, and others.

The performance of the score will showcase the reanimated technologies enabling the pro-





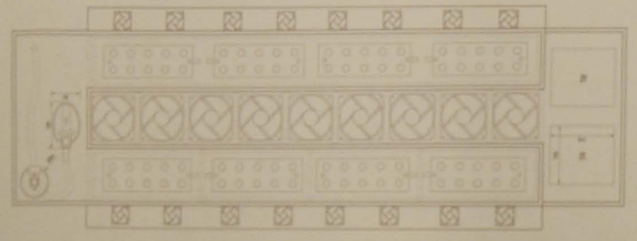


fig. 13

fig. 11 Gediminas Urbonas and Nader Tehrani: NADAAA, CAVS Archive. Proposal for water purification, swimming and public space at the Charles River. MIT 150, 2010.

fig. 12 Urbonas Studio with Gediminas Stoskus, Design drawings for MIST MACHINE, water purification and viewing system for screening, 2012.

jections (many of them further developed at MIT such as holography, laser, and video) and collaborations between artists and scientists that made their use possible. Aiming to integrate not only the past but also the future of the archive, the pavilion will also engineer creative encounters between the former CAVS fellows who helped establish transdisciplinary artwork at MIT, and a younger generation that continues to benefit from this legacy, including current students and residents of wider Cambridge and Boston.

Also available for public use during the grand opening will be a set of custom-designed body wear (helmets, suits, and water walkers) equipped with speakers resonating low frequencies and vibrations, enhancing the audience's experience of the archive floating in the water. The body wear will render data regarding water conditions in the Charles River, translating it into vibrations stimulating the brain and parts of the body, and exploring a wide range between above and under the water.

ACT 2—Learning the CAVS Archive: Events held by invited community groups

Over the course of a three-month period, the large-scale environmental form of the pavilion will be transformed into an "educator of sensibilities" by presenting unrealized material from the CAVS Archive in imaginative, highly stylized forms. Through the participation of several community groups and agencies, the pavilion will become a public educational setting, deepening civic and artistic responses as a literal and metaphorical extension of MIT's educational mandate. Invited groups will interpret and activate unrealized works from the CAVS Archive, which will then be presented as public events scattered throughout the summer.

ACT 3—Floating environmental project and sound-light laboratory

Scenario: The lab will be utilized to educate young and old regarding pollution problems in the Charles River, as well as projects underway to mitigate these issues. Pollution monitoring and interpreting devices would be on board, allowing the facilities to be used for various educational and recreational purposes.[8] Another aspect is re-thinking of mitigation and the reclamation of artists' legacies. Extending the research of various CAVS fellows (for instance, Elisabeth Goldring, Wendy Jacob), an event engaging children and adults with learning or attention difficulties, autism, and spectrum disorders will be organized.[9] Using the facilities of the floating lab, participants will explore and interrogate the legacy of environmental mitigation, as advanced by Kepes.

"Sound and Light Water Dome

Under a large (60'–100' dia.) clear pneumatic dome filtered water from the Charles River would be pumped above the dome. Sounds of water under its own weight and the visual sensation of the refracted and reflected light would be the prime experiences under the dome. The sensation of viewing the cosmos from an underwater environment should magnify the participants' personal reactions towards earth and space, while reuniting him with the personality of water."[10]

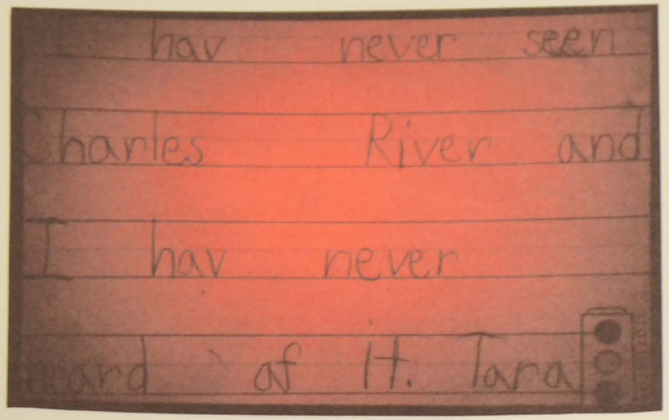


fig 14

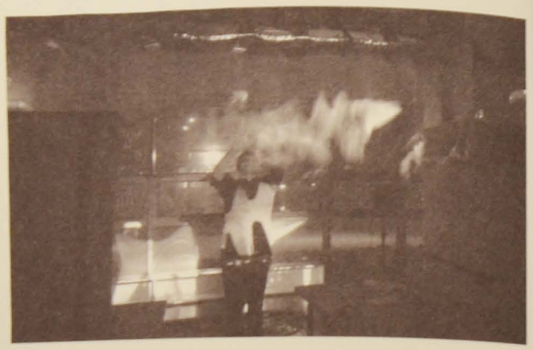


fig 15

fig 14 River Research file: CHARLES RIVER PROJECT, 1970–1972

fig 15 Urbonas Studio, MIST MACHINE, water purification and misting system for screening. Prototype test no. 1, ACT, MIT, 2012.

fig 16 Urbonas Studio and Nader Tehrani: NADAAA, LIQUID ARCHIVE, MIST MACHINE, water purification and misting system for screening, video projection of CHARLES RIVER PROJECT slide collection. Installation view, THE FUTURE ARCHIVE, Neuer Berliner Kunstverein (n.b.k.), Berlin, 2012.

1 Howard York, "Proposals For The Charles River" (1972). CAVS Archive, ACT, MIT. (Consulted 07.01. 2010.)
2 György Kepes, "A report on the work in progress at the Center for Advanced Visual Studies" (1972). CAVS Archive, ACT, MIT. (Consulted 07.01.2010.)
3 Ibid.
4 György Kepes, "Toward Civic Art," in EXPLORATIONS, part 2 (exh. cat.) (Washington, DC: National Collection of Fine Arts, Smithsonian Institute, 1970), unpaginated.
5 Kepes, "A report on the work in progress at the Center for Advanced Visual Studies" (1972).
6 György Kepes, ARTS OF THE ENVIRONMENT (New York: George Braziller, 1972).
7 Ibid.
8 Ted Kraynik, "Proposal for the Charles River Project" (1972). CAVS Archive, ACT, MIT. (Consulted 07.01.2010.)
9 In 1972 Immo Red organized workshop with children ages 5–10, asking them to write a short essay about the Charles River. The slide show recording their impressions was proposed to be screened during an open-air festival near the Charles River. Immo Red, "Proposal For The Charles River" (1972). CAVS Archive, ACT, MIT. (Consulted 07.01.2010.)
10 York, "Proposals For The Charles River" (1972).

fig 16