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Limits of Control

FELICITY SCOTT ON *RAIN ROOM* AND IMMERSIVE ENVIRONMENTS



Opposite page: Random International, *Rain Room*, 2012, water, injection-molded tiles, solenoid valves, pressure regulators, custom software, 3-D tracking cameras, steel beams, water-management system, grated floor. Installation view, Museum of Modern Art, New York, 2013.

Right: Random International, *Rain Room*, 2012, water, injection-molded tiles, solenoid valves, pressure regulators, custom software, 3-D tracking cameras, steel beams, water-management system, grated floor. Installation view, Barbican Centre, London. Photo: Oli Scarff/Getty Images.

"DON'T RUN!" exclaimed a Museum of Modern Art press rep, as a young woman who had entered the field of falling water in *Rain Room*, 2012, began to take flight and was promptly soaked. Other visitors were evidently more comfortable within the setup of this "carefully choreographed downpour," as the museum called it, wandering playfully within the interactive environment and marveling at the way in which the dense field of water droplets paused in the vicinity of their bodies, as if *they* had stopped the rain. But what was the fleeing woman responding to, consciously or otherwise, within this enormously popular and quite literally fantastic environment? Maybe she had simply become uneasy about the prospect of getting wet, or maybe she felt a foreboding drop of water, which—in a setting whose acoustics are reminiscent of a major New York downpour—triggered her instinct to take cover. Yet water is, in retrospect, the least threatening environmental force in this monumental work. Perhaps her anxiety was really a response to the manner in which she was being scanned and tracked, her behavior monitored and fed back into the work's less-visible apparatus. Or perhaps she even wanted to test the notion that *Rain Room* "offers visitors the experience of controlling the rain" by reversing its protocols and making it rain on her. For in short-circuiting the mechanism, making the system fail, a viewer might come closer to gaining a degree of control within this unsettling milieu—if only momentarily.

Rain Room is the brainchild of Random International, a London-based collective founded in 2005 by Hannes Koch, Florian Ortkrass, and Stuart Wood. They debuted this technically impressive (if far from random) environment at London's Barbican Centre in October 2012 before installing it at MOMA within a large, orthogonal black tent in the lot adjacent to the museum building this summer. Temporary metal barriers snaked in front of the structure to corral the long lines of excited viewers waiting their turns, heightening its resonance with an amusement-park or fair attraction. This echo was not incidental. *Rain Room* was a component of MOMA PS1's "Expo 1:



Environments such as *Rain Room* embody the tensions in new technologies—which promise liberating forms of participatory experience while circumscribing users within increasingly sophisticated mechanisms of control.

Random International, *Audience*, 2008, sixty-four mirrors, metal-cast base units, motors, custom software by Chris O'Shea, camera, computer. Installation view, Royal Opera House, London.



New York,” a multipart exhibition billed as “a festival-as-institution,” while it simultaneously “imagines a contemporary art museum dedicated to ecological concerns.”

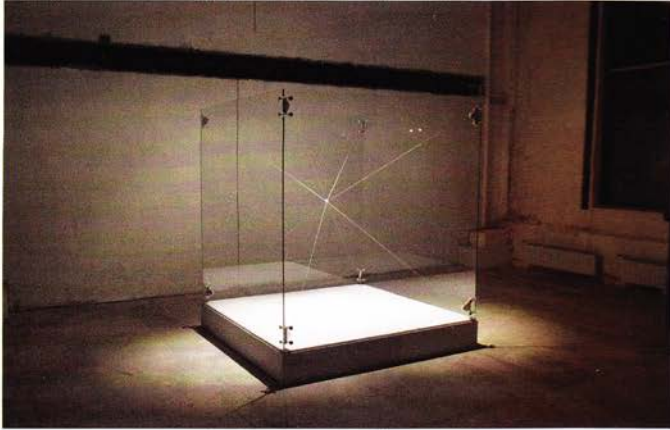
These appeals to the spectacular logic of the expo or to the urgency of environmental problems are hardly unusual or unprecedented. But in bringing the two together, the museum torqued institutional parameters, producing a symptomatic topology whose contours begin to throw *Rain Room* into a strange relief. Its presentation revealed the intersecting stakes emerging from the decades-old dream, shared by both art and architecture, of engaging postindustrial technologies to create interactive environments. Such environments have long embodied tensions inherent in the implementation of these technologies—which promise new, liberating forms of participatory experience while simultaneously circumscribing their users within increasingly sophisticated mechanisms of control. Today, in the face of looming environmental crises and the rise of omnipresent data mining and surveillance, *Rain Room* reveals the links—and also the distinctions—between our contemporary moment and the moment in the late 1960s and early '70s when the convergence of media technologies and environmental systems emerged as tropes of planetary connectivity.

Avowedly staged in the wake of Hurricane Sandy and the havoc it wreaked in New York this past

October, “Expo 1” brought together works believed to resonate with environmental pressures, catastrophes precipitated by climate change, and economic and political volatility, while at the same time holding out a sense of hope for a better world—hope born, as the press release announced, of “technological innovation” and “architectural initiatives.” Capturing this equivocal tone, MOMA PS1 presented its portion of the expo under the title “Dark Optimism,” a notion coined by the collective Triple Canopy, who organized a program of lectures and events as part of the exhibition. “We know all the ways the world will end. And yet, we continue,” they explained. “Our action in the present implies an optimism about the future, even if that optimism is skeptical, worried, or dark.” Ranging from Olafur Eliasson’s refrigerated glacier fragments in *Your waste of time*, 2006, to John Miller’s gilded ruins of classical columns and contemporary cultural artifacts in *A Refusal to Accept Limits*, 2007, the works in “Dark Optimism” offered a diverse, perhaps irreconcilable, set of connections to such concerns. Many pieces did, however, share an entropic temporality that collapsed science fiction and archaeology, waste and resources, toxicity and promise.

Random International was not necessarily an obvious choice for such a project. Their work to date has not overtly addressed environmental concerns such as climate change, pollution, ecological destruc-

tion, decay, and the like. More closely aligned with practices exploring information engineering and its subjective effects, the group’s earlier works traffic in the production of empathy between viewers and inorganic technical devices operating within monitored environmental systems. For example, *Audience*, 2008, deploys a field of mirrors that track and respond to a targeted person’s movement, evoking emotions through the animated, “inquisitive,” face-scaled mirrors; *Fly*, 2011, presents an abstract, robotic fly trapped within a post-Minimalist glass cube, its passage along a matrix of cables programmed by custom algorithms to simulate the behavior of a real fly responding to the presence of humans; *Future Self*, 2012, captures coordinates from a viewer’s moving body to produce an animated figure within an adjacent light sculpture. In each, we find an environment that seeks to “know you,” a space staged for interaction that simultaneously serves as a matrix for the extraction of data about a subject and her behavior. Curiosity is, of course, good business: In other words, these environments model the mechanisms at work within what Michel Foucault theorized during the '70s as biopolitical techniques of power. “Biopolitics’ last domain,” he speculated, was “control over relations between the human race, or human beings insofar as they are a species, insofar as they are living beings, and their environment, the milieu in which they live.”¹



Random International, *Fly*, 2011. glass, cable, aluminum, pulley, custom control system and software, 78 1/4 x 78 1/4 x 78 1/4".



Random International in collaboration with Wayne McGregor and Max Richter, *Future Self*, 2012. Performance view, Made, Berlin, April 29, 2012. From left: Fukiko Takase, Alexander Whitley.

Despite the undeniable association of heavy rain with the powerful storms informing our experience of climate change (it has been raining almost continuously in New York as I write), *Rain Room* is not at first glance much more ecologically oriented than these previous works. But its inclusion in "Expo 1" constitutes a curatorial recontextualization that reminds us of the work's complicated resonance with the art and technology collaborations pioneered more than four decades ago, which often brought together information and media technologies with ecology, *environment* with *environments*. In his landmark 1968 *Artforum* article "Systems Esthetics," the critic Jack Burnham famously described these practices—whether concerned with "maintaining the biological livability of the Earth" or with the "growing symbiosis in man-machine relationships"—as shifting their focus from "material entities" to more immaterial "relations between people and between people and the components of their environment."² In the context of "Expo 1," *Rain Room* returns us to this nexus, pointing to a contemporary slippage between "natural" phenomena—whether rain or humans—and information, and raising the question of the degree to which the work renders visible emergent forms of power, particularly those affiliated with state and corporate mechanisms of data tracking.

Rain Room's visitors are not, of course, walking into a cloud of rain. Rather, they are entering into and interacting with a field of data processed by invisible electronic circuits (for which their bodily movements serve as input) whose visual and acoustic expression or output is a spatiotemporal, three-

dimensional matrix of droplets. What they encounter is information embedded in, or materialized as, water. *Rain Room* reminds us that even if cybernetic systems have long been modeled after "natural" ones, and even if we use such scientific paradigms to model complexity—whether in environmental, social, economic, or technological domains—this does not mean that all these systems actually operate in similar ways, only that we understand them to do so. Indeed, the project speaks not only of our desire to control nature but also of our dependence upon science and technology to understand and occupy it, of our condition of being always already immersed within a media-technological condition for which *Rain Room* is a symptomatic reflection. Faced with the material and subjective effects of transforming relations between humans and their environment, Burnham had called for a certain artistic didacticism and Foucault for the articulation of counterconduct or dissent. But *Rain Room* is situated within a historically distinct postindustrial milieu. It responds to such transformations with a different sensibility, one indelibly tied to the increasing ubiquity and fluidity of data.

HOW, THEN, can we read *Rain Room*, or at least what we can know of it? Some components are straightforward. After entering the tent and passing around a partition, visitors find themselves within a five-thousand-square-foot space, at the center of which a field of water streams from ceiling to floor at the rate of 260 gallons per minute. The walls are lined with matte black fabric, while the floor is a grid of metal grating, off of which the large drops bounce dra-

matically and through which the water eventually drains. At the far end is a vividly bright spotlight, heightening the sense of theatricality. The carefully calibrated beads of water—guided by an algorithm to cease their flow whenever a visitor's body passes underneath—emanate from a field of sculpted gray plastic hexagons, which form a second grid suspended from the ceiling. Hidden from view are the 3-D cameras that, as Koch notes, watch the installation continuously and search for the presence of visitors. The water, or rather its absence, follows the visitor in real time, like the anthropomorphized mirrors in *Audience*; similarly, an outline of the participant is transmitted, reminiscent of the illuminated body-ghost in *Future Self*. Yet here the viewer's body is quite literally embedded within its data shadow, endlessly trapped within a closed space.

As with these earlier works, the *Rain Room* installation is a classic black box—both in the technical and social-scientific senses—its input and output known but its internal mechanism opaque. Wood explains, for instance, that "the idea came about from the idea of exploring people and people's behavior in different environments." But *Rain Room* would not necessarily be more radical if its apparatus were rendered more transparent. If the custom software were revealed, the cameras made visible, the wiring and infrastructure exposed, the behavior monitoring acknowledged in a wall text, we would still be blind to most of its workings; the institutional, socioeconomic, and political systems through which it operates—and within which visitors remain inscribed—would not necessarily become less inscru-



Above left: Logo for the Prism program operated by the US National Security Agency.

Above: MoMA PS1's VW Dome 2, Rockaway Beach, NY, March 29, 2013. Photo: Charles Rousset.

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table. Such transparency would require interpretation—not only intellectual but of a kind including other types of “performance” than those anticipated by the museum, interactions that self-reflexively open onto new types of social space and through which a viewer might decide how to respond. There is little to suggest that Random International wanted to script this encounter to reveal articulations within such systems, or to put them into doubt, provoking the subject to think. We are very far from institutional critique.

Yet that is precisely why the glitches in *Rain Room* are so arresting. Although most accounts repeat the claim that you walk into a field of water without getting wet, for many visitors, including myself, the system fails, just slightly, at keeping them dry. Even if you don't run, mechanisms occasionally lag and drops of water hit you; something unscripted happens that may or may not be the result of your behavior. The system exhibits what appears to be a degree of noise or entropy, an unanticipated effect that is presumably undesirable, but which actually produces a nominal encounter with the work.

MOMA's website, in fact, offered warnings about the system's limits, what it cannot see or detect: “In order for the technology to work most effectively, visitors are discouraged from wearing dark, shiny, reflective fabrics, fabrics made of raincoat material, or skinny high heels.” The alert was an uncanny reiteration of the apparatus's behavioral norms, deliciously hilarious in its implications: No fetish queens, no dominatrixes, please! It's a prohibition that all but begs us to get dressed up. “Since security functions so often by making you visible,” Michael Hardt and Antonio Negri remind us, “you have to escape by refusing to be seen. Becoming invisible, too, is a kind of flight.”³ Whether or not this glitch knowingly problematizes the proclaimed virtuosity of media technologies or environmental management, those unsettling drops remind the viewer that he or she remains inescapably bound within an environment of insecurity or risk. In revealing that our actions still have consequences, the glitch calls upon us to decide how to act.

Rain Room's resonance with paradigms of security and risk was thrown into sharp relief by two events that occurred while it was on view at MOMA: the revelation of the US National Security Agency program of digital surveillance and data collection, somewhat nefariously called Prism, and New York mayor Michael Bloomberg's announcement of an extensive infrastructure program to deal with the city's exposure to environmental risk and climate change. Both initiatives demonstrate that ecological concepts, media technologies, and data-mining practices also have political stakes, feeding into the global

regulation and management of environments and populations. Many media accounts of the Prism leak focused on the lack of “transparency” or “visibility” in data collection as a threat to consumers' trust in data-driven technology.⁴ But the Internet's erosion of privacy and lack of transparency are not exactly news, nor is our collective desire to participate in self-exposure through social media. The very power and profitability of such technologies lie in the promise, as proponents of Prism acknowledge, that to be more secure in a bodily sense one has to render oneself less so in other ways, particularly in terms of the circulation of personal data. To participate, one has to assume risk—knowingly or otherwise, as perfectly allegorized by visitors' imaginative assumption that they manage the rain as they playfully participate in *Rain Room's* system of data collection and feedback.

IT IS EASY ENOUGH to be either naive or cynical about the power generated by technological development, whether manifest in environmental control mechanisms or apparatuses of security. But how might artistic practices using such technologies position themselves beyond a dialectic of affirmation or simplistic refusal? At issue is not whether artists engage with technology or science, let alone with environmental concerns, but rather what they achieve in doing so. How might they articulate or render legible our inscription within scientific discourses and environmental systems?

Such questions are not new, of course. In the '60s, Marshall McLuhan famously argued that contemporary environments were “imperceptible” or “invisi-



Geodesic dome structures, Drop City, Trinidad, CO, 1967. Photo: Carl Iwasaki/Time & Life Pictures/Getty Images.



Interior displays, Organization for Economic Cooperation and Development Pavilion, Expo '67, Montreal. Photo: Shawn Nystrand.

ble”; to him they were conditioning mechanisms whose “power to impose their ground rules on our perceptual life is so complete that there is no scope for dialogue or interface.”⁵ He proposed that art (and at times science) could, however, produce “anti-environments,” archaisms or refractions that sought not to seamlessly solve technical problems but to render contemporary environmental forces perceptible without simply reducing art to the logic of electronic programming. If in the '60s it still seemed possible to interrupt such logics and their perceptual training through “responsive environments” produced in the domain of art, *Rain Room* begs the question of whether any such denaturalization might be possible today, and whether still other forces are needed in order to effect critical traction.

In seeking an answer, we might do well to remember another aspect of McLuhan’s thesis: his contrast between “good news”—which was not news, since it “tends merely to picture the situation passively”—and “bad news,” which, he posited, “reveals the lines of force in an environment.”⁶ For both Bloomberg and Klaus Biesenbach, director of MOMA PS1, chief curator at large at MOMA and a primary organizer of “Expo 1,” Hurricane Sandy was the bad news that rendered environmental—both technological and ecological—forces legible. Here we can begin to understand why, along with technological innovation, “architectural initiatives” were pitched as a source of hope in “Expo 1,” and why Bloomberg’s long-term response to Sandy is essentially architectural as well as infrastructural. Beyond its aesthetic dimensions, architecture retains a professional man-

date to offer defense against unwanted environmental conditions: keeping out the rain, minimizing risk. Moreover, it is at this meeting point of advanced technology, risk, and experimental media environments that we can begin to understand why both “Expo 1” and *Rain Room* appear haunted by the legacy of the alternative architecture of the '60s. Random International in fact makes a direct appeal to architecture and design when describing the interdisciplinary matrix of their work. In “Expo 1,” *Rain Room* was explicitly situated within the domain of architecture in tandem with VW Dome 2, a Volkswagen-sponsored, Buckminster Fuller-inspired temporary geodesic dome hosting events in the Rockaways, and “Colony,” a demonstration of alternative-dwelling technologies staged by Argentine architectural studio a77 in an outdoor courtyard at MOMA PS1 as a “model for future living and communal utopia.” If VW Dome 2 reminded us of Fuller’s powerful mixture of futurology, techno-optimism, and Cold War fearmongering as it played upon the cultural imaginary, “Colony” recalled postapocalyptic visions of the Vietnam era, a moment when alternative architecture became obsessed with mobile dwellings, Latin American favelas, ecology, and recycling. In the latter, we found the adoption of self-consciously “primitive” modes of dwelling as strategies to test new forms of life.⁷

But *Rain Room* seems even more closely aligned with the environmental logics and media interfaces developed by the Architecture Machine Group (Arch Mac), founded at MIT in 1968. Arch Mac’s vanguard research brought architecture into an inti-

mate—if at times unholy—alliance with artificial intelligence (AI), computerization, robotics, management, and the political and social sciences, and even into the institutional context of art. In 1970 the group contributed to the exhibition “Software,” curated by Burnham at the Jewish Museum in New York, which aimed to point out the pervasive nature of communications technology in the environment. Arch Mac presented *Seek*, 1969–70, a computer-controlled “responsive” environment comprising hundreds of two-inch cubes arranged within a large glass vitrine, which served as the habitat for a colony of gerbils. Put forward as a demonstration of AI or the simulation of an environment that knows you—and serving in retrospect as a powerful allegory of contemporary subjects’ relation to environmental control mechanisms—*Seek* aimed to read the “desires” of the animals by monitoring their random displacement of blocks, and then to adapt by recalibrating the blocks’ organization according to this newly detected set of parameters. That is, the gerbils (conceived as miniature proxies for humans) facilitated the computer’s learning process and hence its control over their habitat. Arising from the very heart of Big Science, *Seek* was not only experimental architecture making its way into an art institution as a technologically mediated environment; it was also, unapologetically, a behavioral experiment.

Small wonder, then, that corporations and governments have long been attracted to experimental environments, many of which they funded in the context of expos and world’s fairs. Such venues have served not only to present the world in miniature but

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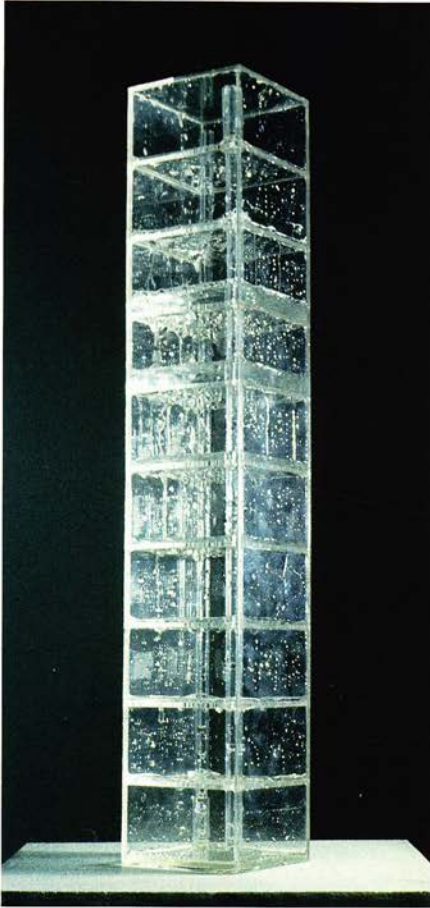
Hans Haacke, *Water in Wind*, 1968, digital C-print, 33¼ x 22¼"



to stage encounters with technological vanguards, to offer a seductive glimpse into the future and then test subjective responses and market reactions to it. As exemplified by Expo '67 in Montreal and Expo '70 in Osaka, under the rubrics of entertainment or education, cultural production—whether art, film, architecture, or intermedia environments—gained access to large-scale funding and advanced scientific and technical resources, garnering large test audiences and publicity for its sponsors in the process. And so these projects risked naively serving as research and development for what President Eisenhower so memorably termed, in his 1961 exit speech, the military-industrial complex.

But then as now, artistic practice engaging information technologies also included more heterodox trajectories, those seeking to resituate or recast techno-scientific and environmental forces, to cut across vectors of power of the era, to make them function differently. (Architectural counterenvironments of the period such as Arata Isozaki's *Electric Labyrinth*, 1968, or Ant Farm's *Truckstop Network*, ca. 1971, sought similar ends.) Indeed, it was another set of works from a few years prior to "Software" that most powerfully rerouted the instrumentalized feedback loops, the systems and surveillance, of *Seek*. Hans Haacke's *Photo-Electric Viewer-Controlled Coordinate System* and Les Levine's *Electric Shock*, both 1968 (pictured side by side in Burnham's "Systems Esthetics"), each reflected on and perturbed media-technological conditions. Haacke installed a room lined with motion sensors, in which viewers' movements would trigger corresponding flashes of light; Levine went so far as to expose passersby to mild electric shocks. If, as critic Luke Skrebowski has argued, "the rigid grid of motion sensors and the harsh glare of naked lightbulbs in *Photo-Electric* constituted a clear warning about the advanced surveillance made possible by technological development rather than a technophilic promotion of liberatory play and viewer participation," Levine's *Electric Shock* overtly literalized the risk of any such participation to one's body. Both projects foretold the convergence of technological systems and institutional structures. And, like *Rain Room*, these works pushed the logical implications of Haacke's early systems-based works, which engaged atmospheric conditions as integral components—think *Rain Tower*, 1962; *Rain Box*, 1963; *Condensation Cube*, 1963–65; *Water in Wind*, 1968; or his artificial-climate works—rendering environmental systems not only visible but as structurally echoing institutions of art.⁸

Haacke and Levine showed us that relationships between humans and environments are never natural; they are historical, institutional, and political. At stake is what steps in to mediate those relations—art.

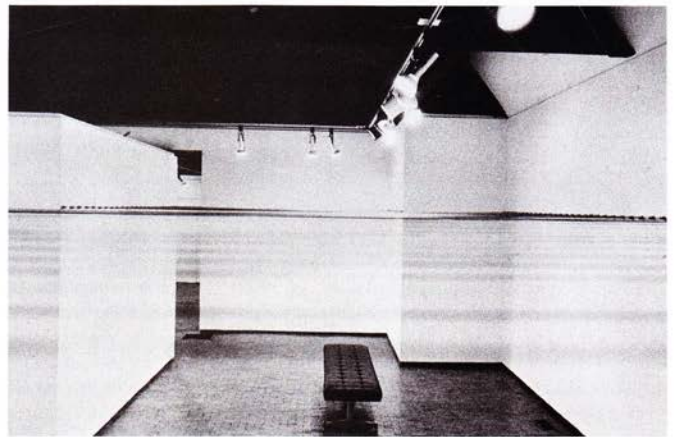


Left: Hans Haacke, *Rain Tower*, 1962, acrylic, water, 32 1/4 x 4 x 4".

Right: Hans Haacke, *Photo-Electric Viewer-Controlled Coordinate System*, 1968, mixed media. Installation view, Howard Wise Gallery, New York, 1968.



Right: Les Levine, *Electric Shock*, 1968, metal wire, custom electronics, static electricity. Installation view, Douglas Gallery, Vancouver.



architecture, technology, business, management, behavioral science—and to what ends. In the case of *Rain Room*, with its purported capacity to allow visitors to “feel the forces of nature” (according to Biesenbach), we find ourselves in a complicated fog of “bad news” about information engineering and climate change. But to make environmental “lines of force” visible today may be far more difficult than McLuhan could have ever imagined: Communications technologies have not only become smaller and more embedded within our everyday environments, but given their ubiquity, speed, and ability to know us, they now seem all but natural. The fundamental question about *Rain Room* is whether its curatorial context might allow it to avoid naturalizing its techno-scientific mediation.

In a recent tour of “Expo 1,” Biesenbach suggested that *Rain Room* offers the “illusion of controlling the rain,” a slight recasting of the notion that it offers the “experience” of doing so. It is true that a visitor’s control of the rain—or retention of any agency within this system—remains an illusion. Yet *Rain Room*’s immense popularity attests to its ability to harness and reflect contemporary desire for seemingly direct “participation” and spectacular forms of exposure. In its reception, *Rain Room* thus also becomes a powerful allegory, if not simply a demonstration, of the manner in which the autonomy of the humanist subject (and her perceptual modalities) has been integrated into the wider networks of communication—into the apparatus. Perhaps it all depends on our response. Do we have

fun, learn from it, attempt to escape it, or make it fail? I keep thinking about that potential guest in a shiny black outfit and skinny high heels. It is she who reminds us, to recall Foucault, that “it is not that life has been totally integrated into techniques that govern and administer it; it constantly escapes them.”⁹ MOMA’s representative was perhaps right to caution the viewer not to run, for we cannot simply escape an apparatus to which we belong in so many ways. Repeatedly faced with technologies offering us the illusions of both free play and mastery, taking flight requires a more tactical understanding of such systems and their limits, their glitches, their possible—if momentary—openings. □

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