

event horizon: olafur eliasson's *raumexperimente* caroline a. jones

I saw those things, which the rude Mariner
(Who hath no *Mistresse*, but *Experience*)
Doth for unquestionable *Truths* aver,
Guided belike by his *externall* sence¹

Luiz Vaz de Camões, *Os Lusíadas* (*The Lusíads*),
1572; Canto V, Verse 17, in Sir Richard Fanshawe's
translation from 1655

Cozening the Eye

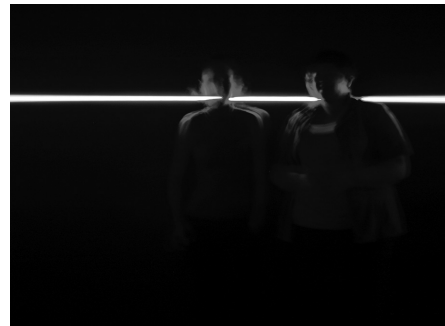
We are convinced that horizons exist, even if we never reach them. Relational and species-specific, horizons take on very different forms for the scurrying beetle, the preying hawk, and the navigating shark. The etymology for the word itself is rooted in a “limiting circle,” yet we also learn, in living with it, that the horizon is limitless and untouchable: it is just over there, where the future promises to reveal itself, and there, where the past recedes—eternally morphing as we approach, eternally disappearing behind us.



Olafur Eliasson wants the cognitive topology of *human* horizons (rather than those of beetles, hawks, or sharks), yet neither does that imply a limit, since ours is a rare species capable of conceiving multiple horizons, well beyond our capacity to physically experience them. We may begin like Camões's mariner, depending on that fickle “mistress, Experience”—yet we are also built to test each moment of perception that cozens the eye. We do this intuitively but also consciously, calling on inferential operations that cognitively concertize all the sensations experienced by our familiar bodies in resonance with the world, compiling and checking the accumulated knowledge that we have built of that world (what Eliasson refers to as an “expectancy register”).² Negotiating these boundaries between expectancy

and experience is what the artist aims to test, and to expand upon. His research practice, the large population of co-workers in his studio, the pedagogy he has described as “*Raumexperimente*” (spatial experiments)—all of these navigate a spectrum from empiricism and test protocols to play, accepting the expectations and conventions of the everyday viewer and transforming them through the experience of art.

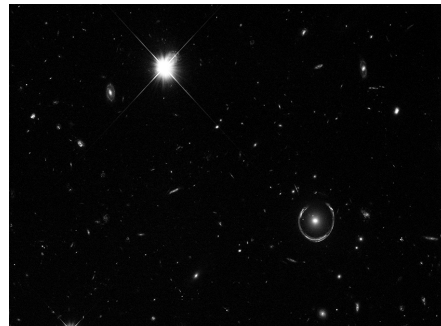
From the horizon of expectations to the event horizon of a black hole, our theorization and materialization of horizons touches on metaphor, measure, and metonymy. The concept is wholly abstract and yet fully embodied; it maps a perimeter of perception even as it stretches the compass of our comprehension through movement and encounter. Eliasson has noted before that there is a radical difference between the horizon as a picture, and the horizon as an experience.³ This essay aims



to trace out what difference that difference might make.

The artist's many works that invoke experience (and horizons) make this point viscerally [fig. 1, 1 alt]. *Your black horizon*, for example, was set up in a pavilion designed by the architect David Adjaye specifically for the artwork; it opened during the 2005 Venice Biennale with the support of a commission from Thyssen-Bornemisza Art Contemporary Foundation (TBA21), Vienna, Austria. Adjaye's architecture led visitors on a path into darkness, within which they encountered a room embedded with strips of occluded, but indirectly visible LED lights. This light-line at standard viewing height dimly illuminated the space (when not interrupted by other people bumping around in the blackened interior). After some time, it would have

become apparent that the lights waxed and waned in a repeating twelve-minute cycle; one could discover that the lights cycled as a function of photon levels measured at this site in the Venetian lagoon from dawn to dusk. Suddenly this horizon was animated by questions about the compression algorithm. Was it temporal—a minute for every hour? Or was it a stochastic sampling, one minute *sampled* every hour? Both possibilities fit within the human capacity to comprehend changing phenomena, but neither could be ruled out by perception alone. Similarly, Eliasson's spectacular and discursive *Weather project* in the Tate's Turbine Hall in 2003 both lulled its visitors into sunning themselves on its artificial beach, and mobilized them to discuss the mechanisms of the illusion (mono-frequency light, mirror foil stretched to cover the ceiling, a continual haze of mist)—and everyone as usual “talking about the weather;” but this time



with the potential consideration of the politics of anthropogenic climate change.

By now, such works also form a corpus; a body of aesthetic provocations that begin to have their own conceptual force in our collective understanding—Eliasson's contribution to an evolution in the common sense. We sense, we feel, we think, and eventually we act. “The spectacle” about which the art world was so worried a few decades ago is now revealed as one kind of material asserting itself in our increasingly virtual ways of life; not always pernicious since it must address a body, in a space. Spectacle has always been just one aspect of how art works; Eliasson in particular is not afraid of it, since he insists on the discursive and conceptual workings of his projects.⁴

fig. 2
An interesting galaxy has been circled in this NASA / ESA Hubble Space Telescope image. The galaxy—one of a group of galaxies called Luminous Red Galaxies—has an unusually large mass, containing about ten times the mass of the Milky Way. However, the real prize in this image is actually the blue horseshoe shape that circumscribes the red galaxy.

The exhibition planned for the new Fondation Louis Vuitton building promises to carry on with such explorations; pushing the envelope between picture and experience, the virtual and the real, shadow play and serious cognition, inviting us into disorienting architectures in which we might navigate the horizon as *transformative event*. The concept of a durational horizon allows me to pursue throughout this essay the cosmological category of the *event horizon* in space-time, something currently on Eliasson's mind as he produces and explores somatic experience.

The event horizon functions here as a metaphor, but it is also allusive for the scientists who coined the term in attempting to describe the limiting edge of what can be observed. (The black hole can be conjecturally observed but is not yet open to empirical experiment, although in 2008 physicists claimed to have produced an “analogue” black

hole—a white hole—in laboratory conditions.)⁵ Gravitational black holes were predicted by Einstein's theory of relativity, and there is consensus that their existence is confirmed by astronomical observations of particles accelerating faster than any other force can explain. Also observed are deformations to light and other electromagnetic particles that show the powerful effect of gravitational lensing, sometimes caused by the massive gravitational force of one galaxy that happens to be in front of another with respect to us as observers [fig. 2], and sometimes from the otherwise invisible presence of a black hole. Some might find the word “hole” to be an awkward name for what is neither empty nor cylindrical. Schematized instead as a roughly spherical attractor detectable only through its

This blue horseshoe is a distant galaxy that has been magnified and warped into a nearly complete ring by the strong gravitational pull of the massive foreground Luminous Red Galaxy. To see such a so-called “Einstein Ring” required the fortunate alignment of the foreground and background galaxies, making this object's nickname “the Cosmic Horseshoe” particularly apt.

intense gravitational field (black holes are thought to exist at the centers of all galaxies, for example, with one in the center of our own Milky Way), the hole exists as something that pulls nearby matter and energy on a one-way trip to its interior. The black hole's event horizon designates the threshold of no return. The gravitational pull is simply so immense that at a certain proximity, nothing can overcome it. What happens to information on the threshold of a black hole (and indeed, what are the precise conditions at that threshold)? On the observer's (out-)side, the particle or light wave is seen to slow down (this slowing is observable as the “redshift” in which recognizable spectral lines edge toward red, at the slower end of the wavelength spectrum). On the other (in-)side, no energy from the light wave can escape—in other words, once the particle or photon passes into the hole, nothing more can be observed from the outside—the space is

“black.”⁶ The horizon marks the boundary between what can be seen as event, and non-event.

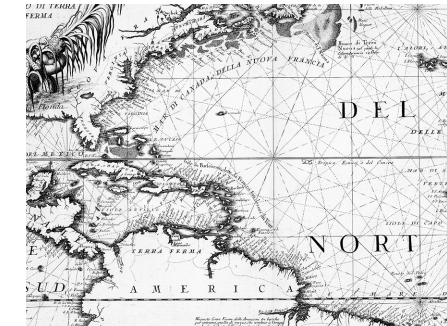
Let us go back to an even more basic question: why the horizon? The concept began as an optical illusion, the curved earth “cozening” or fooling the human eye into seeing a line that crisply divides two realms (conventionally, heaven and earth, atmosphere and *terra firma*, the medium through which we move and the material on which we stand). Personally, I will not have seen the installations that the present text accompanies, and in that sense I am cozening you with another illusion—I am pretending that I know what I *would have experienced*, had I been there with you, in the future, to share your experiences of Eliasson's horizon effects. Described by Suzanne

Pagé as “a *Gesamtkunstwerk* [which] will explore the relation between the universe and the individual body; the local and the global; creating profound somatic sensation and abstraction,”⁷ the art work seems to have begun with a simpler thought from the artist: “There is a tradition of the horizon as the boundary between the known and the unknown. But as you approach, it fades in, or comes into your experience. You can think of it as a space.”⁸ Here, Eliasson imagines plunging us into this modality of spatial “fading in,” a space in which “your reality is relative.” Yet how does the crispness of the concept “horizon” conjure that aesthetic? What is the history of horizon-infused narratives, of horizontal visual culture, and of relations to space that the horizon might be seen to entail?

The Loxodromic Gaze

Camões's *Lusíadas* (the source of my epigram) offered an epic to its original Portuguese readers in which the Truth of the horizon was not relative but revealed, unfolding to mariners as the first-hand experience of God-given land at the end of their watery travail. The horizon was a miraculous mirage, beckoning Europeans to their temporal “discovery” of what was, for them, an utterly new and unexpected world, fully inhabited yet “given” to European monarchs as divine proof—in Camões's case, of a “Lusian” or Portuguese promised land. Unlike the indigenous peoples who had settled those lands from Asia long ago, seafaring explorers from Europe followed maps. They sailed along loxodromic (oblique or “rhumb” /

rhomboid) lines of nautical travel that had been empirically established over centuries, laid down by men sliding on boats propelled by prevailing winds over the Atlantic Ocean, heading toward whatever had then become their horizon along compass coordinates. These were courses that cut across meridians at preset angles in order to reach specific ordinal destinations, first drawn onto precious parchment and later printed onto portolan charts. Loxodromic lines related to the horizon in purely instrumental terms; they were expressions of commercial and navigational interest, generated by the unique spatial relations between small vertical beings standing on the horizontal decks of ships (or climbing up masts to gain the slight advantage of the “crow's nest” in seeing beyond the roughly seven-mile limit of their horizon). This human vantage point was hardly stable, lurching and tossing in relation to a much vaster horizontal



surface of ocean. Yet it was good enough. The loxodromic gaze was further empowered by purpose-built tools such as rigging, spy-glasses, compasses, sextants, and eventually clocks [fig. 3]. Data bloomed from coastlines and plumed ports; the charts as a rule said nothing about the vagaries of individual experience, the fruits of anthropological encounters, or the vast interiors of continents. Their instrumentalized views instead supported the science of navigation and constituted the “unquestionable Truth” that mariners' souls depended on for survival.

Horizontally obtained, the data fueling these portolan charts was repurposed to constitute the main achievement of early modern cartography: to eliminate horizons. The idea was to abstract from the lived

fig. 3
Vincenzo Coronelli (1650–1718), *Mare del Nord*, 1690–1696, copper engraving (detail). The Alan M. Voorhees Collection at the Library of Virginia.

experience of particular horizons in order to map a surface in which information could spread laterally as if seen from above—divine, horizon-less generality. We were neither birds nor gods, but we somehow evolved the capacity to think as if we were. This cartographic move was intriguingly at odds with simultaneous developments in fine art. As Western societies both detached from religious symbolism and invested their energies in an imperative to generate “single-point perspective,” producing conviction around horizons depicted in paintings by featuring specific features of architecture or terrain. Conventions seduced a foveal and monocular gaze, made to converge on an implied “vanishing point” that became, in the practice of Brunelleschi for example, a geometric and technical tool for architects. Well before, maps had eliminated any such reference to the horizon in favor of the compass



rose and the aerial view. The relation of Renaissance map-makers to evolving landscape conventions in paintings was thus complicated, as cartographers both mimicked the misty landscapes from devotional paintings (presented as “vignettes” around their functional maps) and adopted hard data and calculating tools from navigators, surveyors, mathematicians, and astronomers, vouchsafing the scientific accuracy of the map itself [fig. 4].

These two regimes of spatial imaging could sometimes fuse.⁹ We see this in a masterful colored woodcut from 1530, a plate illustrating yet another edition of Ptolemy's long-lived *Geographia*, presenting the “*Universalis Tabula Iuxta Ptolemaeum*.” With its curved meridians and horizon-less aerial view, the map floats, aggressively

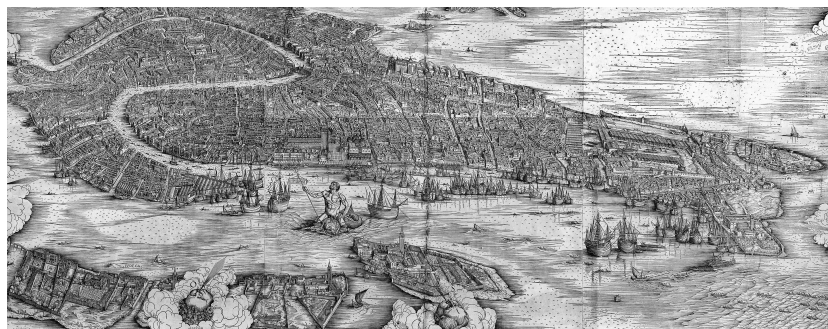
fig. 4
Claudius Ptolemy, “*Universalis Tabula Iuxta Ptolemaeum*,” from *Tabulae geographicae, Orbis Terrarum, veteribus cognitae* (Utrecht NL: François Halma, 1695). Collection of the Musée Stewart, Montréal, Canada.

fig. 1
Pavilion for *Your black horizon*, designed by David Adjaye, Thyssen-Bornemisza Art Contemporary, Vienna, Austria.

fig. 1 alt
Olafur Eliasson, *Your black horizon*, 2005, Thyssen-Bornemisza Art Contemporary, Vienna, Austria.

event horizon

framed off from the landscape in which a luminous horizon separates heaven and earth for a set of mythological inhabitants. The extraordinary map of Venice by printmaker Jacopo de' Barbari represents an even more impressive (and earlier) fusion. Barbari's remarkable six-sheet woodcut from 1500 offers a gigantic bird's-eye view of the maritime republic—of Borgesian proportions—compressing conventional landscape scenography to the edges of an exhilarating, otherwise loxodromic panorama [fig. 5]. Within the genre of "moralized geography," Barbari's luxury cartography allowed the human viewer to envision the city as Olympians saw it—bird's-eye shading to gods'-eye view—in this case the titular deities of Mercury (commerce) and Neptune (ocean), both having pledged to smooth trade and travel for Venice and its mercantile elites with empyrean ease.¹⁰



Many of Eliasson's early photographic suites adopt this freedom from the horizon, toward markedly different ends. In the context of his oeuvre, in fact, relations to the horizon provide a kind of epistemic "tell." Whether pointed directly at the horizon from the transparent cupola of his customized all-terrain van, aimed out the window of a small airplane flying over Iceland to take aerial views, or hanging off the side of a rubber dinghy bobbing on a river, the viewfinder of Eliasson's camera emphasizes the multi-ocular aspects of relationality. We are given series of waterfalls or glaciers to compare, or grids of frames enclosing images of faintly steaming crevices (details of Icelandic geothermal activity), or "scenes" of a river that are not scenes at all, but reports on micro-vortices captured from a body that is

fig. 5
Jacopo de' Barbari (1445–1516), *Bird's-eye View of the City of Venice*, 1500, woodcut made for Antonio Kolb, Nuremberg. Museo Correr, Venice.

suspended barely a foot above the water's surface. [fig. 6, 7] It is difficult to orient oneself to these suffusing views, and even less possible to get a sense of scale. (Is that a river or a rivulet? A mountain or a mound of rocks? A tsunami or an eddy?) Departing from the tropes of Renaissance mastery, such images refuse to grant the viewer "ownership" of a scene; they neglect to produce a landscape ("scape" from sketch, arranged tastefully for the eye, replete with a *repoussoir* or framing device, *staffage* or mid-view humans or animals, "background" of distant hills to give us our human scale and orientation). Even Barbari had been careful to provide distant Alps at the edge of his city view, in addition to the compass rose and aeolian cardinal points. Barbari orients us as Occidental. By contrast, Eliasson's dissolution of horizons and proliferations of scale remind us that a whole different episteme is at hand: "things that are emotionally

verifiable but not quite articulable yet" [fig. 8].

Along with the relativizing of our realities, Eliasson offers plenty of images that are seemingly obsessed with "truing" the horizon. This split between suffusing, immersive, scale-less views and images organized by a neat horizon amounts to something like a dialectic in the artist's earlier work (which may or may not be synthesized by the 2014 installation). On the same Goose Lake Trail on which the previous image was captured, many more photographs were taken, a number of them enlarged, cropped, and given a print layout that suggests a panoramic format. Here, without ambiguity, the horizon dominates and determines both the orientation of the image and the visual

positioning of its viewer [fig. 9]. In the book where these photographs from the *Iceland series* (2005) appear (titled *The Goose Lake Trail*), the "limit circle" between sky and earth is often arranged just above the midline of the page; one expects it would also be hung at the putative eye level of viewers in a gallery or collectors in their homes. That slight disproportion between the thinner band of sky and the thicker band of ground gives a satisfying weight to the image that flatters our gravitational relationship to the earth, which is further reinforced by bright skies on top and dark, continuous, often barely inflected terrain on the bottom. That bifurcation is internal to these pictures. On the other hand, the dialectic mentioned earlier between horizon-less immersion and horizon-specific orientation is outside the pictures but evident in Eliasson's work as a whole. Such extremes are themselves interesting to the artist:



fig. 6
Olafur Eliasson, *The waterfall series*, 1996

contributes to Eliasson's destabilization of the viewer. This commitment also informs his installations at the Fondation Louis Vuitton. To what purpose are we destabilized—or, stated more provocatively, what are the politics and ethics of this effect?

The Ductility of Time

Recall that what is to be destabilized by Eliasson's spatial experimentation is "the usual conception of time." Temporal ductility—the phenomenological reality of time's extension or compression, time "flying" or "dragging"—is a quality of experiential space-time that Eliasson manipulates, as well as an invitation that he customarily extends. (*Take your time* is a favorite title for publications and exhibitions alike.) This gesture constitutes Eliasson's generosity, and it is also, less noticeably, his critique of traditional relations to the horizon, and his allusion to



Einsteinian relativity's most shocking truth, that time is bound to space, and both are subject to gravitation. You may choose to "take" your time, but depending on where you are in gravitational space-time, it will also *take you*. Having generationally come of age in the afterglow of postmodernism, the artist inherited this relativistic framework. As a matter of course he also encountered both Maurice Merleau-Ponty's *Phenomenology of Perception* and its post-structuralist critique (as implying a singular "subjective" viewer or universal subject). He was likely less aware of the American experimental psychologist James J. Gibson, who was active during this same period, busy generating a profound critique of "vanishing point perspective" as it had been embedded in European Gestalt

fig. 7
Olafur Eliasson, *The river-raft series*, 2000

theories of perception (in which the world is apprehended as an image or figure—*Gestalt* in German). To radically simplify the position of Gestalt psychology, the static "picture" was understood to be both grasped and formed by the mind as it confronted confusing stimuli, resolving the world in favor of "good Gestalt:" a clear figure that could stabilize restless vision. Their epistemic favoring of this figure/ground relation also conformed to the Gestaltists' preferred experimental set up: the head pinned stationary in a vise while various two-dimensional still images were shown to the human subject. Scanning, peripheral vision, or hypnagogic states were not in this protocol.¹² Gibson, who trained pilots for part of his career, found Gestalt theories wholly inadequate to the dynamism of perception. In Gibson's new "ecological" theory of visual perception, new concepts were needed; they included



"affordances"—the human body's equipment for perceiving—which evolved on this particular earth, with vision happening in a body that was more or less constantly in motion: the eyes blinking, focusing, and turning in their sockets, the head rotating on its neck, the neck twisting on a torso, and the legs mobilizing the entire apparatus (human + environment) into a continuous, flowing array. Space and time were yoked in perception, subject to all the constraints implied by the human body: mid-level scales, perceptual affordances, and the happenstance of available experience (likely encounters): "The flow of abstract empty time, however useful this concept may be to the physicist, has no reality for an animal. We perceive not time but processes, changes, sequences [...]. There

fig. 8
Olafur Eliasson, *Iceland series*, 2005

are events within events, as there are forms within forms, up to the yearly shift of the path of the sun across the sky and down to the breaking of a twig. Hence there are no elementary units of temporal structure."¹³

Gibson's classic illustration of a bird navigating this flowing array (explicitly analogized to the human pilot) produced a compelling metaphor of the animal in space-time as perceptual navigator of a spherical *universe* of dynamic sensation [fig. 10]. The spherical edge of Gibson's imagined array can be seen as a kind of perceptual event horizon, in which the capacity of the animal to perceive meets the edge of available information (the energy of light reflecting from interpretable surfaces and perceptual "events," infinitely coming into awareness and rapidly slipping out of perceptual range). Time is the material out of which space is shaped before immediately



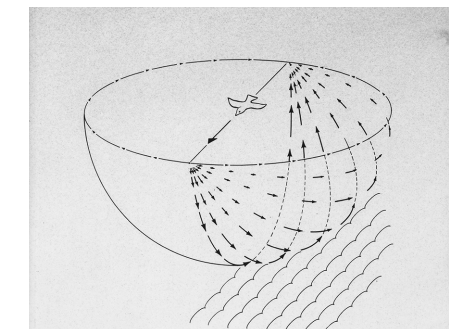
morphing into another spatio-temporal configuration through "processes, changes, and sequences" that live in us as ecological events. Art, of course, can induce such events, and we construct this cultural category precisely to provide a space for time to happen to us.

Infinity Conductors

Eliasson has built up his Berlin studio as a kind of sensory/mediation/technology laboratory, where he is the art's first experimental subject. This kind of research was further instantiated in his five-year teaching model, the Institut für Raumexperimente (Institute for Spatial Experiments, 2009–2014) directed for the Berlin University of the Arts. Designed to probe the horizon between perception and

fig. 9
Olafur Eliasson, *Iceland series*, 2005

the "self," it was a research program based on the post-structuralist idea that the self is always in active formation and is sometimes amenable to conscious transformation through what Foucault called *pratiques de soi*. In Eliasson's multi-story Pfefferberg facility (a former brewery), glass and metal shops explore the technologies of lighting and the physics of mono-frequency light, while architects and engineers test the parameters of surface and load, and discourse workers manage the flow of data and philosophy (channeled into many publications, such as this one). Various collaborators show up to contribute to filming, movement at the edge of dance, or hard-core engineering. The feeding of everyone at the communal lunch table is a materialization of Eliasson's commitment to the yeasty interaction between art, science, and fabrication, and a community of makers and thinkers;



it is a performative instantiation of the "micro-cosmos of ideas and actions and their networked relations to the world."¹⁴ With the research of his studio propelled into provocations and art-as-experience, Eliasson brings us figuratively and literally "to the table."

On offer are the distilled products that we call art, but of course there is no "product" other than our own processing of the situations that Eliasson has arranged for us to enter. Referring back to Gibson, an Eliasson installation offers "processes, changes, and sequences" in dynamic surroundings that challenge our affordances and expectations. What does he promise for the Fondation Louis Vuitton? The Frank Gehry signature architecture seems to exhibit no

fig. 10
Anonymous drawing reproduced on the cover of James J. Gibson, *The Ecological Approach to Visual Perception* (Hillsdale NJ: Lawrence Erlbaum Associates, 1979).

Euclidean or Platonic geometries. Eliasson responds with simple circles and triangles, forming curved walls that define two large galleries bound together with smaller connecting spaces that have been purpose built for transitions. Various ingredients will include mono-frequency lights, large orbs made of glass, walls wrapped in black sandpaper and fitted with mirrors. ("Should you bounce your arm there, it actually examines the boundary of your skin.") Each of these elements responds to prior studio experiments but also plays a role in extending Eliasson's own practice into a risky perimeter, near his own horizons. The mariner metaphor with which I opened is suggestive—his plans for the visitor put the artist "at the helm," but might reveal him to be "out on a limb," or even perhaps "walking the plank." His fate is in our hands. The glass orbs, set into the wall like jewels (an anxiety-provoking simile in this



enterprise funded by the Fondation Louis Vuitton), are meant to function like floating planets that also produce upside-down versions of our own world (recalling the popular medieval print tradition, active well into the nineteenth-century, of *le monde renversé*) [fig. 11]. Thus the blandishments of follies and bling are put under the proverbial microscope, enlarged to looming significance and thereby (in a trick familiar from Surrealism) forcing us toward deeper truths. Their simple geometries of refraction and inversion mark out the liminal cultural space of carnival and the revolutionary reversal of cultural roles that the "world reversed" always interrogated. As one primitive nineteenth century woodcut on the subject indicates (there are thousands in this popular genre), the mixes and exchanges that the

fig. 11
"The Madness of Men or the World Upside-Down," detail of a plate from *Le Recueil d'imagerie populaire des Frères Deckherr à Montbéliard*, (1820–1838). Prints and Photographs Department, Bibliothèque Nationale de France, Paris.

event horizon

“topsy-turvy world” sets in motion transform their subjects—in this case the African and her master who produce, as offspring, the bifurcated and miscegenated subjects who physically constitute the new world.

The mingled lessons of maps and new worlds, reversals and black holes, add up to a suggestion of cosmological import: our conceptual imperative to *evolve and build a solution from our own monde renversé*, making a culture of self-transformation that might avoid the total instrumentalization of the planet and annihilation of “the world as we know it.” Typical of Eliasson’s art and how it works, these most austere ingredients—black walls, white light, glass, piercing monochrome light frequencies, shadows—combine to become the mysteriously simple engines that generate cultural meditations of the most extensive kind. Planetary horizons, the

universe with its black holes and strange attractors, the “unbelievably cold white light of the sun seen from outer space” are all appropriate associations to have, upon entering a room with 3,000 Kelvin light emanating from a fluorescing gas fixture.¹⁵ “I hope it will work,” says the artist, but he has a fairly good idea that much of it *will*—the space of darkness with cool illumination from one or many sources, setting up multiple light sources and horizons that will leave you, the viewer, with “nothing else to do” but “act upon your shadow,” using it “to recompose your body” in spaces of disorientation and destabilization. “I’m thinking of letting it rotate,” Eliasson says of the light, “to convey a huge amount of distance, and to give three-dimensionality to the shadows.” Of these small gestures, worlds are

conjured, and relations to our planet are productively reimagined.

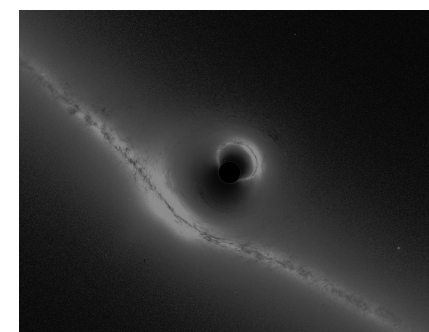
We are put in the place of experimental subjects in an Eliasson installation, but because this is the art world, we are also the recipients of a gift. In science, the experimental subject is preferentially left uninformed (post-experiment “debriefing” becomes a matter of ethics boards and disciplinary protocols, not community discussion). The subject of the art experience, by contrast, is swathed in discourse and imagery, blogs and press kits, reviews and opinions. The shape of one part of Eliasson’s installation is explicitly formed as an infinity loop (∞), “strongly readable as a symbol.” Likewise, as I have insisted here, is the horizon itself. Symbolic, suggestive, and indicating specific modes of being (*Take your time*), Eliasson’s interventions never pretend to dissolve the core mystery of human perception and

its cultures of metaphorical meaning-making. If they succeed, they do so by making us think *and* experience; the art works on us, over time, as an event that stretches our capacities for both affect and cognition.

Eliasson likes working at the edge of his own scientific comprehension, using art to push the metaphors of science into disorienting materializations. Imagine that as you enter the installation you pass into the attraction zone of a black hole, but instead of a person, you are a bundle of charged particles released into a fractal “infinity conductor.” In this thought experiment, physicists imagine placing an electric charge “at infinity” and then measure where the test electrons land—“you” will have been through infinity, and returned

to tell the tale. When artists engage such metaphors it is legitimate to ask whether they are merely thieves of scientific language or participating in the shared production of knowledge. Metaphor, analogy, imaginary “infinity conductors”—*this is what we have* to span the distance between what we experience and what we have been able to conceive. Occasionally, we also have materializations and visualizations that bring us exhilaratingly close to touching the universe, as when the startlingly clear images from the Hubble space telescope began to arrive [fig. 2], providing an almost haptic sense of a distant black hole at the center of one galaxy warping the light from another, as photons from star clusters narrowly escape those attractors to whip around interruptions and wend their way to our tiny, mobile, temporarily unblinking eyes.

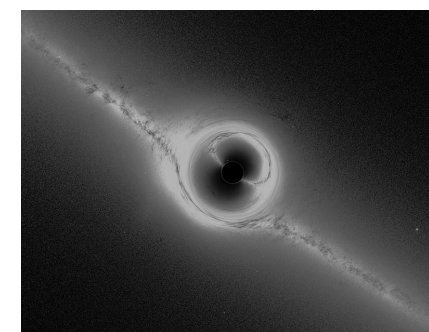
Like the animator of astronomical



simulations who must imagine, moment after moment, the lensing of light by the otherwise invisible black hole, [fig. 12] Eliasson thinks of sequences and passages. The visitor enters blackness, and is as blind as a prisoner in Plato’s cave. Then she begins to constitute herself through shadows. Or she moves up a gentle curved surface to encounter a horizon that emanates a pure yellow light, like the flaring edge of a solar eclipse seen from Mercury—if only Mercury had a moon. That room will have its complement of black sandpaper (the visual equivalent of an acoustic soundproofing), but it will also have walls that are seamlessly mirrored to remove the information about entrance and exit and produce the horizon as an encircling surround. Perhaps that is the metaphorical black hole’s perceptual event

fig. 12 Simulation of gravitational lensing (two frames of an animation by Alain Riazuelo) showing the bending of light from the disk of the Milky Way caused by an intervening black hole. These images are generated according to the mathematics of the laws of relativity.

horizon, an infinity conductor made of recursive reflections. We will know how we got there; will we figure out how to get out? The hospitality of the situation asks that we suspend the calculations of our “expectancy registers” long enough to entertain some alternatives. Perhaps, like the Little Prince, we will be lonely in this universe, possessor of the asteroid curving comfortably beneath our feet, but little else. Or perhaps we will see others enter the space, forming moving black holes around which the available light lenses and haloes the participants. Or perhaps the whole experiment will fall flat for some visitors, who will be restless for “something” to happen (without realizing that what happens here is only interesting if you personally become aware of how it is happening, and happening to you). As Eliasson recognizes, this is part of the ethics embedded in aesthetics: “the responsibility that I have, or my generation have,



is to be able to talk about something amazing, a beautiful color for instance, without imposing these universal value systems onto our contemporaries—the way former generations did.”¹⁶ In that spirit, for now I, as the author of this essay, am strictly bound to stay outside the event horizon Eliasson has produced for Paris. Take your time, feel something or nothing, bend and negotiate this little universe or leave it untouched. See the sunset forty-four times in a day, like the Little Prince. Or don’t. If you do, then you can ask yourself: is it different, every time? What difference, that difference?

All the difference in the world.

Notes

1. Luiz Camões, *The Lusíads*, Canto V, Verse 17, in Sir Richard Fanshawe translation, 1655, as cited by Helen Wallis, “Map-Making and Geography,” in David M. Stewart Museum, Montréal CA, Elizabeth Hale, *The Discovery of the World, Maps of the Earth and the Cosmos* (Chicago: University of Chicago Press, 1985), 19. The verse immediately following the one in the epigram puts my own position into question, since I cannot have experienced Eliasson’s installation before having to write “authoritatively” about it: “But ACADEMICKS (who can never err, Who by pure Wit, and LEARNING’S quintessence, Into all NATURE’S secrets dive and pry) Count either Lyes, or coznings of the Eye.”
2. Olafur Eliasson in conversation with Hans Ulrich Obrist, *The Goose Lake Trail (Southern Route)*, (Cologne: Walter König Verlag, 2005), 47.
3. Olafur Eliasson, *Goose Lake Trail* (2005), 9. “Of course, the physicality of a landscape like this cannot be depicted in a single photograph; the vast dimensions are best experienced by traveling through it.”

4. These issues are explored in depth in my forthcoming book, *The Global Work of Art* (Chicago: University of Chicago Press).
5. Thomas G. Philbin, Chris Kuklewicz, Scott Robertson, Stephen Hill, Friedrich König, and Ulf Leonhardt, “Fiber-Optic Analogue of the Event Horizon,” *Science*, 7 March 2008: 319 (5868), 1367–1370. [DOI:10.1126/science.1153625].
6. Strictly speaking, there would be quantum effects at the threshold that could be observed (“Hawking radiation” that spews out as particles are taken in), but their radiation is so weak that the background noise of the universe more than swamps them.
7. Email to the author, June 20, 2014.
8. Olafur Eliasson, Skype discussion with the author, August 4, 2014. Unless otherwise indicated, quotes from Eliasson are from this discussion.

9. For an important account of an entire visual culture based on this fusion, see Svetlana Alpers, *The Art of Describing, Dutch Art in the Seventeenth Century* (Chicago: University of Chicago Press, 1983).
10. Juergen Schulz, “Jacopo de’ Barbari’s View of Venice: Map Making, City Views, and Moralized Geography before the Year 1500,” *The Art Bulletin*, 60: 3 (September 1978), 425–474. Per Schulz: “The subject, in other words, is the commonwealth of Venice rather than the physical city: Venice, the premier trading and maritime power of Europe. Her physical features are exhibited as the material manifestation of this state, just as the figures of Mercury and Neptune are the incarnations of its numen,” (468).
11. Olafur Eliasson, *Goose Lake Trail* (2005), 16.
12. For more on this, see the brilliant and influential anti-Gestaltist Anton Ehrenzweig, *The Hidden Order of Art* (1967), in continuous publication ever since.

13. James J. Gibson, *The Ecological Approach to Visual Perception* (1979; Hillsdale, NJ: Lawrence Erlbaum and Associates, 1986), 12.
14. Part of Suzanne Pagé’s brief to this author regarding Eliasson’s studio operation, email June 20, 2014. See also Jones, “The Server / User Mode: The Art of Olafur Eliasson,” *Artforum International*, Vol. 46, No. 2, October 2007.
15. Kelvin numbers describe the color temperature of light, expressed as heat because this color is determined in relation to a theoretical object called a “black body radiator.” As the heat of the hypothetical radiator increases, its visible color changes like that of a flame, moving from black to red, then yellow, white, and all the way to blue. Confusingly, these “temperatures” are merely metaphorical; fluorescent lights can be high Kelvin but will remain cool to the touch. Low Kelvin numbers indicate reddish or “warm” lighting, higher Kelvin bluer or “cool” lighting.
16. Olafur Eliasson, *Goose Lake Trail* (2005), 30.

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