INTO THE LIGHT

JAMES TURRELL

MASS MoCA

James Turrell: Into the Light

The speed of light—186,000 miles per second—is almost unfathomable. That's 47 circumnavigations of the earth, at its equator, in the time it took to read this sentence.

Traveling with incomprehensible velocity, visible light cycles across the universe within a razor thin margin of bandwidth. Only a sliver of entire electromagnetic spectrum is perceptible to human vision—pulsing from the spectrum segment we perceive as deep reds, at a wavelength of 700 nanometers, to the violet hues running at a wavelength of 400 nanometers. Across that tiny, 300-nanometer interval of electromagnetic energy unfolds the totality of human vision: the light that is reflected off solid objects or absorbed within them, the light refracted by air and water, the intergalactically fast, multidirectional light that washes and illuminates the entirety of our world.

James Turrell's art gathers this infinitesimally thin, unimaginably fast electromagnetic force and slows it down, contains it. Transfixing light's presence within our optical-neurological system, he transforms it from a source of illumination to a discrete, physical object with "thingness."[1] Sometimes, as in *Guardian*, 2017 [2] or *Raethro II, Magenta,* 1970 [3] Turrell conflates space with light, compressing light-filled volumes into what at first appear to be planar shapes. At other times he manipulates edges and flat surfaces with cast light, inventing apparent spaces of almost indefinite perceptual depth. In all cases, the light that interests Turrell is not an accessory to vision, but rather the fact of vision. [4] Like all facts, Turrell's works carry within them the power of inherent truth, as certain as the frequency and amplitude of each light wave. But, like all facts, they are also subject to the forces of adjacency, context, memory, and the proclivities and beliefs of those who take the time to look with care and patience.

A pioneer in the Southern California Light and Space movement of the 1960s and '70s, Turrell began using light as a sculptural medium in 1966, using blinds and paint on the windows of his studio in Santa Monica to seal the space from unwanted external light, experimenting with projecting light onto the walls and floors. In *Afrum,* 1967,[5] one of Turrell's earliest works on view at MASS MoCA, a glowing white cube seems to float in the corner of the room, generated by the light of a precisely placed projector.

Since those early experiments, Turrell has continued to explore new possibilities for manipulating viewers' perceptions of architecture through the use of light. His Wedgeworks use light to create the illusion of a solid wall or scrim-like barriers. His Magnetrons,[6] meanwhile, play on viewers' expectations: what appear to be television screens are in fact apertures opening into a deep space filled with oscillating light (generated from an

[1] Edward Lifson, "James Turrell Experiments With The 'Thingness Of Light Itself,'" *Weekend Edition*, NPR, September 7, 2013.

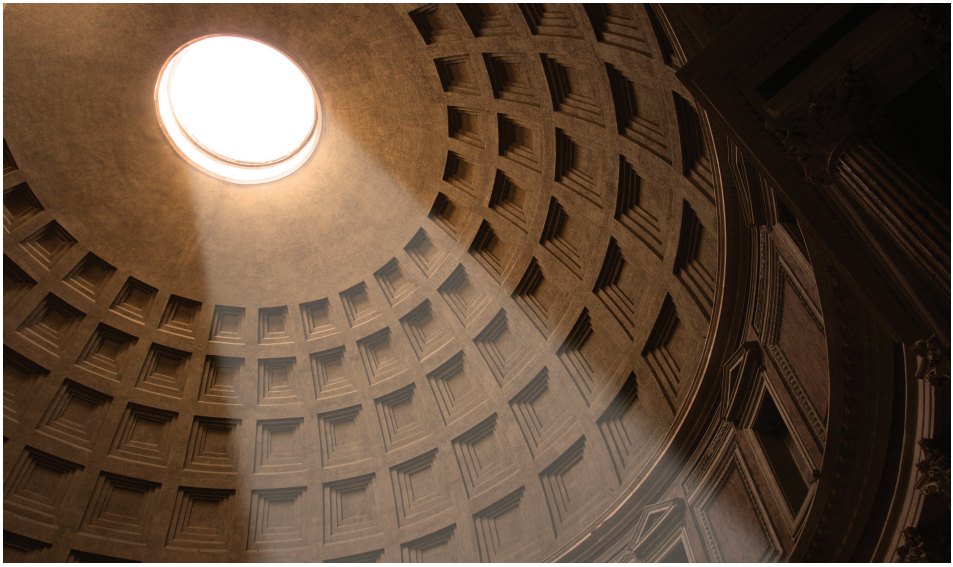
[2] *Guardian*, 2017, Wedgework on loan from Danica Pietrzak.

[3] *Raethro II, Magenta*, 1970, Corner Shallow Space, on loan from Myffanwy Anderson.

[4] Turrell believes that his medium is not light, however, but human perception itself. He explains, "I want to use light as this wonderful and magic elixir that we drink as Vitamin D through the skin—and I mean, we are literally light-eaters—to then affect the way that we see." (James Turrell interview by Michael Govan, *Interview*, June 20, 2011.

[5] *Afrum*, 1967, projection, on loan from the Solomon R. Guggenheim Museum.

[6] These works take their name from a magnetron, which is a microwave-creating device similar to the glass cathode-ray tube in an old television set. A cathode-ray tube makes images appear on the screen by using a positively charged anode to direct beams of electrons at a phosphor-covered screen at one end of the tube, causing the areas hit by the electrons to glow.



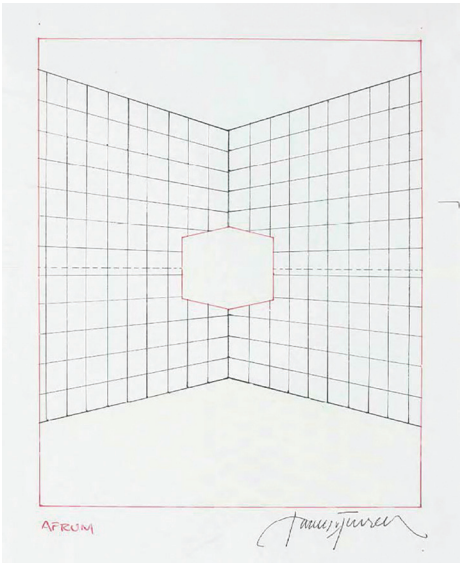
Inside the Pantheon in Rome, Italy.

old-fashioned tube TV, carefully hidden from view). These works frame space as a canvas of infinite depth. Where historically there have been many works of art about light and its effects, Turrell's works are made of light itself, suddenly made into visible, solid-seeming things.

Turrell's interest in the light of televisions stemmed from a childhood realization that he could often identify the show that a neighbor was watching on a television from outside, by observing the particular pattern of flickering color and light cast by the television on the window blinds. The ability of light to convey information remains central to Turrell's practice, but so too does the uncertain quality of this information: light's color comes, Turrell argues, from juxtaposition. Like the Impressionists, Turrell is interested in the way that placing two colors next to one another can change our perception of both. With his Skyspaces, he says, "I can make the sky any color you choose."[7]

In Turrell's Skyspaces, an aperture in the ceiling of a room carves out a small piece of the sky, surrounding it with a ceiling onto which light is cast.[8] As the color of the light on the ceiling shifts, so too does the color of the sky seem to change. These works are particularly nuanced at dawn and twilight, moments when the sky shifts from a deep expanse of stars to a vast blue dome, and back again. The crisp edges of the aperture seem to bring the sky closer to the viewer, encouraging us to experience light and space not only visually but also physically, as though we could almost reach out and grasp the sky with our hands. Through them—as through his other works—Turrell seeks to provide space for an "expansion of the territories of the self,"[9] connecting "this light outside us with the light inside us."[10]

The aperture in a Skyspace is an analogue for the pupil of the eye, the threshold between the light outside the body and its interior. Fittingly, the Skyspaces have their roots in the architectural feature of the oculus, which comes from a Latin word meaning "eye." An oculus is a circular or ovoid window or opening, which is often said to symbolize light itself, or the life-giving sun. This figuring of



Afrum I projection sketch, James Turrell.

James Turrell, Afrum (White), 1966, cross-corner projection: projected light. Los Angeles County Museum of Art. © James Turrell. Photo: Florian Holzherr.

what would usually be identified as an absence (a hole) as a presence (the sun) instead is fundamental to Turrell's use of light.[11] He has also noted that, in a way, the human eye—because of its dense neural network links to the brain—is almost like "the brain exposed."[12]

Turrell's interest in viewers' perceptions is partially founded in an interest in the relationship between perception, light, and time. Many of his works are thus best experienced over long periods. His Dark Spaces, in particular, make duration (and patient looking) both the object and subject of the work; the installation seems to the viewer to be utterly black at first, but in fact contains an extremely dim light which becomes barely perceptible only after 10 or 15 minutes, as the viewer's eyes become acclimated to the darkness. In a Dark Space, light occupies a space between visible and invisible. It becomes both over time, pushing at the boundaries of the frequencies of light that human eyes are able to detect. The experience of a Dark Space is, in a way, that of looking at oneself looking.

Testing the parameters of light's visibility is also at the root of Turrell's Holograms, for which he records light waves on a thin layer of transparent gelatin emulsion. Unlike traditional holograms, Turrell's works use light not only as the activating force, but also as the subject matter. They are created with a "full parallax," with the shafts of light inscribed on their emulsions appearing to have a fully three-dimensional presence, confounding viewers' perception of the panels' otherwise flat surfaces.

Ganzfeld

Between 1968 and 1969, Turrell participated in the Los Angeles County Museum of Art's Art and Technology program through which he collaborated with artist Robert Irwin and psychologist Dr. Edward Wortz of the Garrett Aerospace Corporation, an aerospace firm consulting for NASA, on experiments with a *ganzfeld* chamber. *Ganzfeld* is a German word referring to the loss of depth perception that arises when experiencing a lack of aural and visual stimulation, as in a whiteout. Turrell, who holds a degree in perceptual

Roden Crater Project, view toward northeast. © James Turrell. Photo Florian Holzherr.

psychology, has since created a number of works that he calls Ganzfelds, using curved corners and walls in combination with colored light to shape viewers' understanding of space and depth. For MASS MoCA, Turrell has installed his largest Ganzfeld by volume to date, titled *Perfectly Clear,* 1991, a two-story installation that viewers are able to enter, becoming immersed in the work.

For Turrell, "This world that we inhabit has a lot to do with the reality we form through vision. So I am interested in how we create this world that we inhabit, and general koans nudging us into this newer landscape, the landscape without horizon, without left or right, up or down."[13] Turrell, who is a licensed pilot, has compared this horizonless landscape to "IFR flight, which you don't enter naively." Specially trained pilots operate aircraft under Instrument Flight Rules (IFR) in conditions that do not allow for the navigation by means of outside visual reference: situations in which the ground, the horizon line, and other geophysical markers are not visible.[14] This type of navigation—during which pilots must rely on navigational equipment inside of the cockpit to remain in control—can be physiologically destabilizing, leading to a total loss of spatial awareness. "Feeling light in the seat of the pants" is a feeling marked by unease, even dread, for most pilots.

Visitors to Turrell's Ganzfelds often have a parallel experience: without familiar visual markers, the entire apparatus of physical reality becomes unsteady. In *Perfectly Clear,* curved corners make it difficult to discern where the floor ends and walls begin, and the back of the space sometimes seems to recede infinitely, without a vanishing point or horizon line to guide our sense of depth. With the dematerialization of these spatial markers, light rushes in, filling our optical field, and our sense of our location in space and time may shift.

Roden Crater

Turrell's interest in the horizon's relationship to our perception of space has led him to study and exploit the phenomenon of celestial vaulting, by which we perceive the sky as a solid vault or dome stretching from horizon to horizon, rather than as a limitless void of space. For *Roden Crater*, Turrell's most ambitious work to date, 1.3 million cubic yards of earth were removed from within the cinder cone of a vast volcanic crater in order to heighten the visitor's perception of this phenomenon when viewing the heavens from within the crater.[15] Turrell acquired the site in 1977, and has since worked to shape it into the culmination of his work with light and perception. This monumental project—literally a landmark visible from space—includes not only the shaping of the crater's topographical surfaces and edges, but also the creation of an interconnected series of tunnels and apertures, which are shown in the model in the atrium at the center of his installation at MASS MoCA.

Turrell's work on *Roden Crater* has been informed in part by his experiences as a pilot, and by his youthful perusals of his father's library of books about aeronautics and space, accumulated through his work as an aeronautical engineer and pilot. The challenging perspectival shift that comes with viewing the earth from an airplane (what Turrell refers to as "plan view," as opposed to the "maze view" experienced on the earth's surface) has become, for Turrell, a metaphor for the function of art. Like flight, art "takes us and broadens our perspective,"[16] a feat which Turrell seeks to accomplish through the use of light, as the very means by which we perceive, as a material.

With his work, Turrell argues for light as a threshold—between space and time, perceiver and perceived, visible and invisible, inside and outside. In perceiving his work, we are invited to occupy that same liminal space.

—Joseph Thompson and Alexandra Foradas

James Turrell (b. 1943, Pasadena, CA) studied psychology and mathematics at Pomona College before pursuing graduate studies in art at the University of California, Irvine, and Claremont Graduate University. His work has been shown extensively in museums across the world, including solo exhibitions at the Museum of Modern Art, New York; the Los Angeles County Museum of Art, Los Angeles; the National Gallery of Art, Washington, D.C.; Centre Georges Pompidou, Paris; and the National Gallery of Australia, Canberra. His work is included in numerous public collections, college campuses, and other public and private sites throughout the world, including permanent installations at MoMA PS1, Long Island City, NY; University of Texas, Austin, TX; Chestnut Hill Friends Meeting, Philadelphia, PA; Louis Vuitton, Las Vegas, NV; and the Walker Art Center, Minneapolis, MN. In 1984, Turrell received a 'Genius' award from the John D. and Catherine T. MacArthur Foundation, and in 2013 he was awarded a National Medal of Arts.

[7] James Turrell, quoted in Anna Madeleine, "Artist James Turrell: I can make the sky any colour you choose," *The Guardian*, December 15, 2014.

[8] Turrell has developed plans to retrofit a now-abandoned cylindrical concrete water tank on MASS MoCA's campus into a Skyspace, which the museum intends to complete once funding is available.

[9] James Turrell, quoted In Mark Holborn, *Air Mass: James Turrell* (London: South Bank Centre, 1993), 21.

[10] James Turrell, interview with Christine Y. Kim, March 28, 2012, quoted in Christine Y. Kim, "Sky Light," in *James Turrell: A Retrospective* (Los Angeles: LACMA and DelMonico, 2013), 135.

[11] In *Curved Glass,* the shape of the room and the aperture of the curved glass screen are also reminiscent of the shape of the eye.

[12] Conversation with Joseph Thompson, April 2017.

[13] James Turrell interview by Michael Govan, *Interview*, June 20, 2011. Turrell has also compared the Ganzfeld to cyberspace for similar reasons.

[14] Navigation based on outside visual reference is called Visual Flight Rules (VFR). Under VFR, pilots use their observations of the natural landscape outside of the cockpit—particularly the horizon line—to navigate.

[15] See rodencrater.com for more information on *Roden Crater*.

[16] James Turrell interview by Michael Govan, *Interview*, June 20, 2011.

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Cover photo: James Turrell, *Breathing Light*, 2013
LED Light into space
Dimensions variable
Los Angeles County Museum of Art
Photo: Florian Holzherr

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