

Evan Kahn

HSA 10: Minimalism

May 9, 2014

James Turrell: The Transformative Properties of Light As A Medium

Plato's allegory of the cave is an ancient metaphor that has fascinated deep thinkers for millennia. Its main premise is that of a group of prisoners who have been trapped in a darkened cave since birth, unable to move freely and able to see only the flickering shadows of puppets held by performers moving to and fro before a fire. Although the allegory of the cave was originally intended as a metaphor for education and enlightenment, it is also a valuable representation of human perceptual limitations. An existence limited to flickering shadows on a stone wall forces Plato's prisoners to reconsider the validity and completeness of their shallow lives inside the cave, should they ever escape to discover the real world, in which objects have color, texture, and exist in three dimensions. Since at least Plato's time, human beings have been trying to comprehend the extent of the gap between what we perceive and objective reality – and since long before that time, artists have been creating art in order to show their audiences the spaces that exist in their own subjective realities. Through his extensive portfolio of characteristic, minimalist artwork, James Turrell uses the medium of light to take his audience into a dreamlike, hallucinatory state, thereby forcing them to question the legitimacy of their senses, and by extension their own realities.

Mr. Turrell has been creating art since 1966, experimenting since the beginning with what he has called the “thing-ness” of light. Most of his works consist of open spaces

with physical fixtures that use clever lighting to distort our perception of depth, causing us to see physical forms where there really are only monochromatic expanses of light, and fields of light where perhaps there are physical objects (Adcock 12). By treating light as a medium rather than a framing device, Turrell allows us to appreciate light itself rather than the objects it illuminates; this approach also has the added benefit of introducing a significant degree of perceptual confusion into the way we experience his exhibits. He likens the experience of viewing light-centric artwork to “the difference between watching football and playing it” (Sculpture).

Turrell discusses the necessity in his art of having “a light that inhabits space, so that you feel light to be physically present” (PBS). This necessity is apparent in his artwork, in which light appears to occupy three-dimensional spaces via clever tricks of projection and shadow. For instance, his piece *Afrum I (White)* depicts what appears to be a floating, glowing cube in the corner of a room, created by a two-dimensional projection of a hexagonal figure across two walls (Ferro). The brain interprets the light nearer to the viewer as either a concave corner or a protruding edge, lending an eerie three-dimensionality to what is actually a two-dimensional projection. His piece *Aten Reign* takes advantage of the rate at which our eyes are able to discern between varying colors by combining a number of concentric chambers lit with slowly changing, slightly varying light. By separating the different colors of light into discrete, physical chambers, there is no continuum of light; simply a number of definite separations between variants of the same color, to striking effect. Additionally, *Aten Reign* fascinates and disorients the viewer because after looking away from the colored continuum, one’s eyes are forced to readjust – leaving lingering, illusory colored regions in one’s vision afterwards (Ferro).

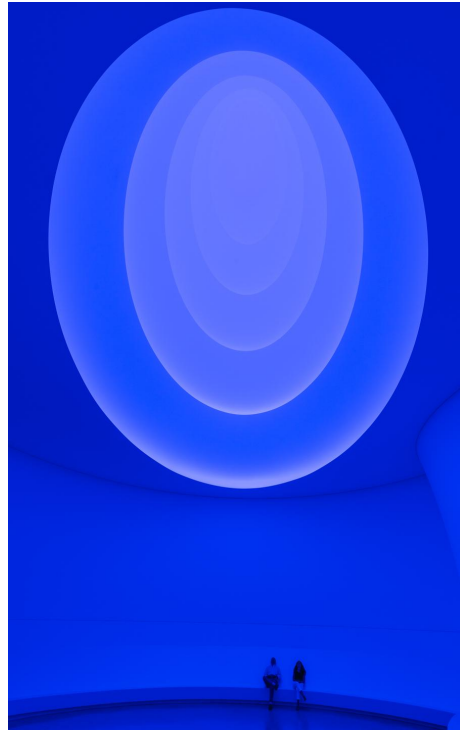


Fig. 1. Heald, David. *Aten Reign*, James Turrell. 2013.

Turrell's use of light is not limited to the light that he can manipulate with cleverly placed fluorescent tubes or LEDs. One of his most well known series of art pieces are the Skyspaces, which are environments, usually outdoors, consisting of an open seating area and a ceiling with a partially open, square hole with a view of the sky. The backlighting of the skyward window changes according to the color of the sky, showcasing not the architectural basis of the surroundings but rather the beautiful mutability of the sky itself; creating “the idea that the sky actually comes down right on top of us and that we’re at the bottom of this ocean of air” (PBS). The lighting has the effect of turning the sky itself into an object worthy of artistic consideration, by filling the visual field of the viewer with a

colorful, square space, apparently filled with sky, floating in neutral, monochromatic surroundings (Lifson).



Fig. 2. Holzherr, Florian. *Skyspace*, James Turrell, 2012.

When our visual field is consumed by light in such a way, we are subject to a well-documented psychological phenomenon – the Ganzfeld, or “whole field” effect. The visual cortex is sufficiently unprepared for the existence of such a uniform, monochromatic, empty field that when presented with this type of field it will cast about for some sort of visual signal that can be interpreted. In doing so, it amplifies random neural noise into repetitive, hallucinatory patterns, which we perceive as present wherever there is a bright background and no visual detail (Dunning 3).

The Ganzfeld effect is the most well-studied of the psychological eccentricities that one experiences upon visiting a Turrell exhibit, because it has a historical basis of use going back thousands of years. The followers of Pythagoras would hide themselves away in dark caves for hours, gaining wisdom through the visual hallucinations they would experience in the total absence of light (Dunning 2-3). Companies such as Mindplace also sell “mind machines”, or Ganzfeld generators: glasses with embedded LEDs that cycle through colored lights in front of closed eyes to generate a shifting, monochromatic visual field and trigger these types of subtle hallucinations.

This disorienting psychological effect lends itself easily to a sense of mysticism – and it is little wonder, then, that the altered state of mind associated with the Ganzfeld effect is so frequently associated with parapsychology and the study of the world beyond the perceptible. The phenomenon even gives its name to the Ganzfeld experiment, a famous investigation in which participants covered their eyes with pieces of translucent plastic, stared at a diffuse light in order to create a Ganzfeld, and attempted to send and receive telepathic messages. Supposedly, the absence of visual input combined with a blank visual canvas that allows the brain to express itself subconsciously via hallucination is particularly conducive to telepathy (Corliss).

The dreamlike state into which one enters when exposed to a Ganzfeld, one of Turrell’s installations, or, as we might imagine, the caves of the Pythagoreans, reflects the state into which Plato’s hypothetical cavemen must have entered in stepping out into the light – beginning to doubt the existence of a direct relationship between what we perceive and what is. Turrell speaks to this effect in discussing his own work and the importance of an artist’s intent to literally transform the reality that his viewers experience.

“The example I like to give is the experience of sound when you are wearing good earphones or have a good stereo system. You find yourself in a music space that’s larger than the physical space you’re in. It’s the same when you’re reading: you become so engrossed in the book that you’re more in the space generated by the author than you are in the physical space where you are sitting ... The extension to the physical, awake state, a kind of daydream space that we superimpose on it, is the space that we should really discuss, because it’s actually the space of our reality” (Sculpture).

Turrell’s use of light to make us question our senses allows us to explore Turrell’s own, subjective version of reality. In his own words, “we live within this reality we create, and we’re quite unaware of how we create the reality” (Interview Magazine). If our senses are faulty – if objective reality is irrelevant and immeasurable – Turrell’s use of optical illusion and perceptual tricks such as the Ganzfeld effect allows him to mold the reality that his audience experiences. In creating a space that undermines his audience’s trust in their own senses, he is able to convince us much more readily that his optical illusions have weight, substance, and three-dimensionality. Just like a writer or a recording artist, Turrell brings his audiences into a space of his own conception; his reality, by fooling the brain on a low level, allows him to transport the viewer to a much more immersive, believable space than a piece of fiction or music ever could.



Fig. 3. Holzherr, Florian. *Shops at the Crystals*, James Turrell, 2013.

In some cases, Turrell's complete control over the perceptual limitations of his audience actually proved to be dangerous: several visitors to his exhibit *City of Arhirit* sustained broken bones and other injuries after leaning on "the dense leading edge of the Ganzfeld - what they took to be a solid wall surface - and tumbling into the space of the chamber" (Adcock 140). Undoubtedly Turrell's sensory manipulation has powerful physical effects as a result of its psychological ones. Experiencing a Ganzfeld subjects one to perceptual deprivation, a close cousin to sensory deprivation - the primary difference being that perceptual deprivation relies on the perpetuation of an unchanging stimulus (the Ganzfeld itself) rather than the removal of a source of sensory input (for example, neutralizing vision with a blindfold, or neutralizing hearing with noise-canceling headphones). Sensory and perceptual deprivation both have powerful psychological effects, and tend to have similar effects: closed- and open- eye hallucinations, a sense of

disorientation, and brainwave patterns similar to what one sees in a dreaming subject or one in a state of intense meditation (Fan). Just like the perceptual deprivation of Turrell's Ganzfeld work led to dangerous consequences in the case of *City of Arhirit*, sensory deprivation has equally nefarious uses: it has been widely cited as a form of cruel and unusual punishment, perhaps most famously through "white torture" – in which victims are imprisoned alone in surroundings that, as much as possible, approximate a silent, colorless, odorless environment (Newton). Being subjected to sensory deprivation torture leads to a sense of dehumanization, a loss of identity, and an increase in suggestibility – much like the disorienting effects of Turrell's Ganzfeld exhibits make his audiences more suggestible, thus making it easier for him to impose his illusory version of reality.

Turrell relates a formative experience early in his career, in which he was subject to a disorienting environment similar to a Ganzfeld, which subjected him to serious perceptual deprivation and led him to question the reliability of his own senses (Adcock xxi – xxiii). In hopes of finding a location for an outdoor art installation, Turrell flew his plane across Southern California, landing in remote locations and camping for the night before taking off for the next one. After settling down on a tiny island a few miles from Santa Barbara, Turrell woke up in the middle of the night and realized that it was so stormy outside that he needed to sit inside his small airplane and continually adjust its wings in order to keep the plane from lifting off and being carried away by heavy wind. After getting in the cockpit and doing his best to keep the airplane on the ground, Turrell couldn't stop himself from falling asleep, and awoke several hours later, still in the plane, airborne in what he was sure was the midst of a storm with no visibility.

After struggling to reach land in the wind-tossed plane, Turrell realized after several hours that the plane had never even taken off – the consistent, dark visual field outside and the plane’s constant rocking had tricked him into thinking that he had been flying through a terrible storm when in fact he had never left the ground.

Turrell’s disorientation, in this case, was augmented by the fact that he had fallen asleep, and awoken at some indeterminate moment – in other words, for a period of time the disorienting optical illusions outside the cockpit caused him to question whether he was awake or dreaming.

“When I woke up in those horrible circumstances, I had wanted the reality to be the dream, because the actual situation was so bad. But more than that, there was something that was important, and I tried to hang on to it: the space between the awake and the dream state. That special quality of consciousness is what I’m really interested in. It’s what I want to get into my art” (Adcock xxiii).

Clearly, Turrell has been successful in capturing this state: his Ganzfeld work, which brings the viewer into that state between waking and sleeping via perceptual deprivation, has a similar, characteristic quality of being simultaneously soothing and disorienting. Arctic explorers, who, upon becoming lost in monochromatic snowstorms, frequently report visual hallucinations and a severely altered state of mind, commonly report a similar mental state.

“Almost unreal, I can only really liken those hours of marching to that of a fever. I felt truly trapped and disorientated in an endless landscape. The wind, pushing me forward like an invisible enforcer made patterns in the snow beneath my feet and triggered vivid hallucinations. Often I had to check the most simple of things with my teammates to keep my bearings on reality” (Neale and Bruce, *First Time Polar Explorer*).

The disorientation experienced by Jay Neale and Andy Bruce caused by a constant visual field, as well as the absolute visual consistency of the snow, from horizon to horizon, triggered effects very similar to those caused by the Ganzfeld effect in Turrell’s exhibits, Pythagoreans hiding themselves away in darkened caves, or, for that matter, Turrell’s own experience in his plane.

For millennia, humans have deliberately explored alternate perceptual spaces that cause us to doubt the reliability of our own sensory input - approximating the disorienting state of consciousness between sleeping and waking. People enjoy this altered state for different reasons, and seek it via different routes – through sensory and perceptual deprivation, drug use, and meditation, among others. Sensory and perceptual deprivation are integral parts of the equation through this state, and they have been taken advantage of for millennia, both for positive, empowering contexts, such as in artwork or therapy, and negative contexts, such as torture. Why do we seek this mental state? Possibly because we believe it helps us to perceive the enormity of the abyss between some intangible, objective world, and what our senses (impaired or unimpaired by apparent illusion) deliver to our brains. The association of this dreaming state with parapsychology and the extrasensory

perhaps originates in our hypotheses about what resides in this abyss. Plato was an early philosopher to suggest that objective reality extends far beyond what we are able to perceive – and like his allegory of the cave, which suggests that what we perceive as our world could be nothing but an optical illusion, Turrell's art fools the mind to suggest that our senses provide a less than fully functional, or even entirely broken connection to reality. This idea isn't necessarily negative, however, according to Turrell himself – since objective reality is not measurable and lacking in intrinsic meaning, creating a beautiful, aesthetically significant, subjective perceptual space is the ultimate goal of any artist, writer or musician. In a sense, Turrell as an artisan inhabits the role of the performers in Plato's cave – by manipulating the subjective reality of a captive audience and allowing them to inhabit the perceptual space of his own design, he forces them to consider the divide between what we perceive and what is real.

Works Cited

Ferro, Shaunacy. "The Mind-Bending Science of James Turrell's Art." *Popular Science*. 24 09 2013: n. page. Web. 11 Apr. 2014. <<http://www.popsci.com/science/article/2013-07/james-turrell-psychology>>.

Adcock, Craig. *James Turrell: The Art of Light And Space*. Oakland: University of California Press, 1990. Print.

Turrell, James. "Interview with James Turrell." *Egg: The Arts Show*. PBS. Web. 11 Apr 2014. http://www.pbs.org/wnet/egg/215/turrell/interview_content_1.html.

Turrell, James. Interview by Michael Govan. "James Turrell." *Interview Magazine*. . Interview Magazine. Web. 11 Apr 2014. <http://www.interviewmagazine.com/art/james-turrell/>.

Turrell, James. Interview by Edward Lifson. "James Turrell Experiments With The ." *NPR*. 07 09 2013. NPR. 07 09 2013. Web. 11 Apr 2014. <http://www.npr.org/2013/09/07/219367766/james-turrell-experiments-with-the-thingness-of-light-itself>.

Plato, and Benjamin Jowett. *Plato's the Republic*. New York: The Modern library, 1941. Print.

Holzherr, Florian. *Skyspace, James Turrell*. 2012.

Dunning, Alan. "ColourBlind: Machine Imagination, Closed Eye Hallucination and the Ganzfeld Effect." *13th Generative Art Conference* (): n. pag. Print.

"MindPlace - Official Home Page." *MindPlace - Official Home Page - The Leading Mind Machine Maker*. N.p., n.d. Web. 9 May 2014. <<http://www.mindplace.com/>>.

"James Turrell's Ambitious Light Installation Leaves Wright's Guggenheim in the Dark." *Gwarlingo*. N.p., n.d. Web. 9 May 2014. <<http://www.gwarlingo.com/2013/james-turrell-at-the-guggenheim/>>.

Fan, Shelly. "Floating Away: The Science of Sensory Deprivation Therapy." *The Crux*. Discover Magazine, 4 Apr. 2014. Web. 9 May 2014. <<http://blogs.discovermagazine.com/crux/2014/04/04/floating-away-the-science-of-sensory-deprivation-therapy/>>.

Newton, Paula. "Iranian exile speaks out on colorless 'white torture'." *CNN*. Cable News Network, 29 Oct. 2008. Web. 9 May 2014. <<http://www.cnn.com/2008/WORLD/asiapcf/10/29/amir.fakhravar.iran.torture/>>.

Neale, Jay, and Andy Bruce. "First Time Polar Explorer." . Take A Challenge, n.d. Web. 9 May 2014. <<http://www.takeachallenge.org/First-Time-Polar-Explorer>>.

Corliss, William. "Ganzfeld experiments: do they prove telepathy exists?." *Ganzfeld experiments: do they prove telepathy exists?*. Science Frontiers Online, 1 Sept. 1993. Web. 9 May 2014. <<http://www.science-frontiers.com/sf089/sf089p15.htm>>.