

**A New Kind of Art Experience:
*Immersive and Interactive Art***

An essay submitted in partial fulfillment of
the requirements for graduation from the

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Art, Art History, and Architectural Studies

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A handwritten signature in black ink, appearing to read "Marian Mazzone", with a long horizontal flourish extending to the right.

Advisor: [Enter Name]

Marian Mazzone

Abstract

Immersive and interactive art are two relatively new phenomena in the context of contemporary art. Sparked by technological growth, immersion and interactivity have changed the way our contemporary society experiences art, in efforts to engage audiences for longer periods of time. In installations that utilize contemporary technology, artists explore new forms of art and create new art viewing experiences. When participants enter into rooms of immersion or interactivity, they are required to involve themselves through one of their five senses. In cases of new media exhibitions, participants enter the rooms with some familiarity of the technology used in the creation of the project. However, these rooms utilize this technology in unfamiliar ways, transporting the participant into a new world. In rooms of interaction, participants are often asked to interact with the work in unfamiliar ways. During this exposure, participants experience a perceptual change or sudden awareness [be it unconscious or conscious]. Increased activity in the brain begins when the participant consciously or unconsciously attempts to place where this exhibition can exist, understand their own role in the exhibition, and the context of the exhibition itself. Once the physical or mental interaction of the viewer begins, it creates an experience which many artists will to cross the into transcendental.

In an increasingly technological world, the artistic experience has evolved from a passive process into an active event that often requires attention and involvement. Immersive and interactive art forces participants to undergo perceptual changes that encourage the participant to reflect, grow, and potentially change due to what they are seeing in front of them, yielding a new kind of experience that proves to be more lasting than ever before.

Art can communicate meaning in a multitude of ways. Throughout Art History, artists have created artwork as representations of reality, investigations of the everyday, creations of grandeur, exploitations of political movements, and consecrations of the divine. Art itself has continued to evolve in meaning. Today, in an increasingly technological world, art has taken on a role unlike ever before. The intermingling of art, technology, and interaction has expanded the notion of art solely as object to include *art as experience*. Many of these experiences come into fruition through the creation of spaces of immersion and interactivity. These rooms have changed the art viewer from a passive role into a new more active participant. Many of these immersive and interactive environments utilize technology in new and dynamic methods, giving participants opportunities to explore technology in entirely new ways.¹

Artists began using technology as a medium for art in the twentieth century. In the 1960s these technologies were accepted as new established mediums.² During this time, many computer scientists began crafting ‘art’ from new programs that existed only on computers. Since the genesis of computers, software has continued to exponentially develop giving artists more opportunities to investigate creativity through technology. Recently, there has been a

¹ Kwastek, Katja. introduction to *Aesthetics of Interaction in Digital Art*. (MIT Press, 2013), xviii-xix.

² Noll, A. Michael. "Early Digital Computer Art at Bell Telephone Laboratories, Incorporated." *Leonardo* 49, no. 1 (n.d.): 55-65. *Arts & Humanities Citation Index*, EBSCOhost (accessed April 16, 2018).

widespread recognition of immersive and interactive technologies as art forms.³ What it means to understand the aesthetic experience in contemporaneity has become more and more a question as these technologies continue to expand, because historically aesthetics has represented the nature of beauty, art, and taste in a pure form. Theorists of the aesthetic experience often associate the sublime, picturesque, and divinity as subcategories of the mysterious aesthetic experience.⁴ In contemporary times, the aesthetic experience has evolved and now more acutely represents the experience of wonderment and awe. Immersive and interactive technologies often transport viewers into worlds unknown, encouraging them to reflect on their personal and individualized reception of the unknown.

When participants enter into immersive or interactive rooms of art, they are most often somewhat familiar with the technology used to create the art itself. Artists re-contextualize this technology to create work often with the intention of transporting participants into new unfamiliar worlds.⁵ Many artists even ask art-goers to directly participate in an activity they have either never experienced before or never experienced as part of the “art-viewing process” before. The participants, during their initial exposure to the installation, will most often experience a perceptual change or heightened perceptual awareness. This may be a conscious or unconscious reaction. This perceptual change is the product of the viewer’s exposure to a new unfamiliar environment.

In a world of dominated by technological development, the newest generation of art viewers has grown up inundated with technology. Widespread accessibility to the internet on

³ Blueff, Andrew. "Interactive Art, Immersive Technology, and Live Performance." (2017) 1-8. *University of Technology Sydney*. (accessed April 16, 2018).

⁴ Kwastek, Katja. introduction to *Aesthetics of Interaction in Digital Art*. (MIT Press, 2013), vii-viii.

⁵ Bartlem, Edwina. “Reshaping Spectatorship: Immersive and Distributed Aesthetics.” *The Fibreculture Journal*, 7. (2005) Seven Fibreculture. (accessed 26 Sept. 2017.)

computers and cell phones has allowed for people to search and receive immediate answers to any questions fathomable. Children and millennials, at the cost of this incredibly quick technology, have become impatient. The immediacy of the internet has caused younger generations to lose focus because of their familiarity with and expectancy of quick responses. One potential reason artists have initiated the creation of work that digresses from the singular visual art viewing process and becomes an entirely new sensory experience may be because it is a way for artists to engage their audiences in a more embodied and physical way. When asking viewers to physically participate in an exhibition rather than passively look at a work of art, artists are guaranteed to maintain attention for the duration of the participant's involvement.

Interestingly, the interactive portions of these exhibitions have proven to have a rather lasting effect on participants. This is often due to the physical aspect of the installation. "At a neurobiological level, experiences are often manifested as activation of corresponding neural networks,"⁶ meaning that during the experience of these exhibitions, participants are unknowingly undergoing an incredible amount of brain activity due to their physical and mental interaction and engagement in the environment. When humans experience art we process the art through what is called embodied simulation. Embodied simulation involves the internal human dialogues that occur when looking or interacting with a piece of art.⁷ Often when first seeing a work of art, we attempt to understand the context of the artwork and we may go so far as to try and place ourselves in the piece by recalling certain memories that congruently align with the

⁶ Preminger, Son. "Transformative Art: Art as a Means for Long-Term Neurocognitive Change." *Frontiers in Human Neuroscience*, no 6 (2012), doi: [10.3389/fnhum.2012.00096](https://doi.org/10.3389/fnhum.2012.00096).

⁷ Gallese, Vittorio., and Di Dio Cinza. "Neuroaesthetics: A Review." October 2009. *Research Gate*. Web. (accessed Oct 7, 2017.)

context of the work. During an embodied simulation our brain's activity is heightened which often leads to a more memorable experience for the participant.⁸

Art & Art Reception

Art is unique in its ability to express a multitude of meanings. In philosophical terms, art has existed to reveal a multiplicity of esoteric truths to humanity. In creative terms, art has existed as an outlet for those interested in revealing new perspectives of the world. In decorative terms, art has embellished simple architectural spaces. In societal terms, art has challenged humanity to directly confront issues of poverty, war, corruption, and hate. In historical terms, art has documented the world as it has evolved into its twenty-first century state. And in the most personal forms, art exists for whatever reason we choose to allow it to exist. Art has the capacity to become deeply personal for each viewer and it is through the process of art reception where this meaning is created.

In scientific terms, “art is an important stimulus that reveals core insights about human behavior and thought.”⁹ When looking at the reception of immersive and interactive art, this definition of art is exceptionally important. Art reception is the term coined to describe a viewer's experience of art. It “is often considered one of the few uniquely human phenomenon whereby we process multiple types of information, experience myriad emotions, make evaluations, and where these elements not only occur but dynamically combine.”¹⁰ Art reception

⁸ Gallese, Vittorio., and Di Dio Cinza. “Neuroaesthetics: A Review.” October 2009. *Research Gate*. Web. (accessed Oct 7, 2017.)

⁹ Pelowski, M., Forster, M., Tinio, P. P. L., Scholl, M., & Leder, H. “Beyond the lab: An examination of key factors influencing interaction with ‘real’ and museum-based art.” *Psychology of Aesthetics, Creativity, and the Arts*, 11(3), 245-264. (2017). EBSCO. (accessed 26 Sept 26, 2017.)

¹⁰ Pelowski, M., Forster, M., Tinio P.P.L, Scholl, M., & Leder, H. “Beyond the Lab: An examination of key factors influencing interaction with ‘real’ and museum-based art”, 245.

involves the immediate art viewing process followed by the analysis of a work of art. This analysis may “evoke memories, judgements, and encourage meaning making.”¹¹ This quality of art allows the artistic experience to be individualized for each viewer.

The ‘artistic experience’ namely focuses on two processes: the experience of the artist in the act of creating the work itself and the experience of the viewer in understanding and viewing the work themselves.¹² In this paper, the phrase ‘artistic experience’ will focus solely on the experience of the viewing in apprehending the work. In the paper *Beyond the Lab: An Examination of Key Factors Influencing Interaction with ‘Real’ and Museum-Based Art*, the authors successfully developed a meticulous model of the process of art viewing. Creatively deemed the “Cognitive Model for Art Processing” this method sets out five steps that occur almost instantaneously when a viewer observes a work of art. The five steps consist of: initial pre-classification, perceptual analysis, memory integration, explicit classification, and cognitive mastering.¹³ These steps are helpful in translating the ways in which the art viewing process for visual art is similar to the art viewing process of immersive and interactive art.

The first step of the Cognitive Model for Art Process is the initial pre-classification of the work of art. This step occurs the first moment a viewer’s attention is given to a piece of art. It generally involves a viewer understanding the presentational context of the work itself. The second step in the Cognitive Model for Art Processing is the perceptual analysis, which explains the moment when the viewer becomes attune to specific features of the work of art. This moment is generally when the viewer decides if the piece merits more attention. The third step in the

¹¹ Pelowski, M., Forster, M., Tinio P.P.L, Scholl, M., & Leder, H. “Beyond the Lab: An examination of key factors influencing interaction with ‘real’ and museum-based art”, 245.

¹² Kwastek, Katja. *Aesthetics of Interaction in Digital Art*. (MIT Press, 2013), vii-x.

¹³ Pelowski, M., Forster, M., Tinio P.P.L, Scholl, M., & Leder, H. “Beyond the Lab: An examination of key factors influencing interaction with ‘real’ and museum-based art”, 249.

Cognitive Model for Art Processing is the implicit memory integration. During this step, a viewer attempts to place the work of art into their own memory. This step involved a viewer bringing to mind their own embodied simulation, their own personal experiences. The fourth step titled explicit classification occurs when a viewer begins to place the work of art in its historical, political, artistic, or other subject of impersonal significance. The final step titled cognitive mastering involves a viewer “combining all the elements of classification to create meaning.” This step also involves “culminating the outputs of understanding aesthetic judgement and affective response.”¹⁴

It is important to remember these steps when analyzing the art viewing process in interactive and immersive settings. Although the experience of an immersive installation differs greatly to the experience of a visual work of art like a painting, both experiences follow the Cognitive Model for Art Processing. This model is applicable because with each art experience, viewers bring forth and apply their previous life experience and knowledge into the piece.

What is this new world?

The purpose of art has shifted immensely in the new world of contemporary art, especially with the rise of technology. Today art exists in a world of possibility. Roy Ascott, is a widely accepted practitioner and theorist in contemporary telematics. His work has been recognized as some of the most accurate predictions of the contemporary technological world of art. In his essay titled, *Behaviorist Art and the Cybernetic Vision* (1966-1967), Ascott explains the changing features of art from modern art to contemporary,

¹⁴ Pelowski, M., Forster, M., Tinio P.P.L, Scholl, M., & Leder, H. “Beyond the Lab: An examination of key factors influencing interaction with ‘real’ and museum-based art”, 248.

“The dominant feature of art of the past was the wish to transmit a clearly defined message to the spectator; as a more or less passive receptor, from the artist, as a unique and highly individualized source. This deterministic aesthetic was centered upon the structuring or “composition” or facts of concepts of this essence of things, encapsulated in a factually correct visual field. Modern art, by contrast is concerned to initiate events and with the forming of concepts of existence. The vision of art has shifted from the field of objects to the field of behavior... the artist, the artifact and the spectator are all involved in a more behavioral context... These factors... draw the spectator into active participation in the act of creation; to extend him, via the artifact, the opportunity to become involved in creative behavior on all levels of experience - physical, emotional, and conceptual. A feedback loop is established, so that the evolution of the artwork/ experience is governed by the intimate involvement of the spectator.”¹⁵

The art of the past focused on the communication of the artist to the viewer, giving a general sense of a single completed concept. Today that vision of art has shifted to encompass a world focused on art reception, where the role of the viewer has become an integral part of the art’s existence. No longer are artists creating work for the purpose of aesthetics but they now see the work as a method of ongoing, dynamic, and purposive communication.

In order to create work that goes beyond the traditional methods of communication, artists can no longer employ objects to symbolize their messages. Contemporary artists create meaning by giving viewers the opportunity to become involved in the experience. With the exclusion of a specific art object, viewers have been forced to acquaint themselves with new ways of engaging, understanding, and interacting with the art. One example of this can be seen in Doug Wheeler’s *PSAD Synthetic Desert III*.¹⁶ The installation, which was shown at the Guggenheim Museum in New York this past summer, transforms a room into a “‘semi-anechoic chamber,’ designed to minimize noise and induce a sensate impression of infinite space.”¹⁷

¹⁵ Ascott, Roy. “Behaviorist Art and the Cybernetic Vision.” in *Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness*. (Los Angeles, California: University of California Press, 2003), 110-111.

¹⁶ See Figure i.

¹⁷ “Doug Wheeler, PSAD Synthetic Desert III,” Guggenheim, <https://www.guggenheim.org/exhibition/doug-wheeler-psad-synthetic-desert-iii-1971> (accessed April 2, 2018).

Stripping the artwork of any physical object, Wheeler asks viewers to enter into his room of silence and have an experience in that room. Even though audiences experience the same room with the same conditions in the same amount of allotted time, each viewer's individual experience will differ from the next because each participant brings forth their own knowledge and background and applies that information to their art viewing process to yield an individualized embodied experience.

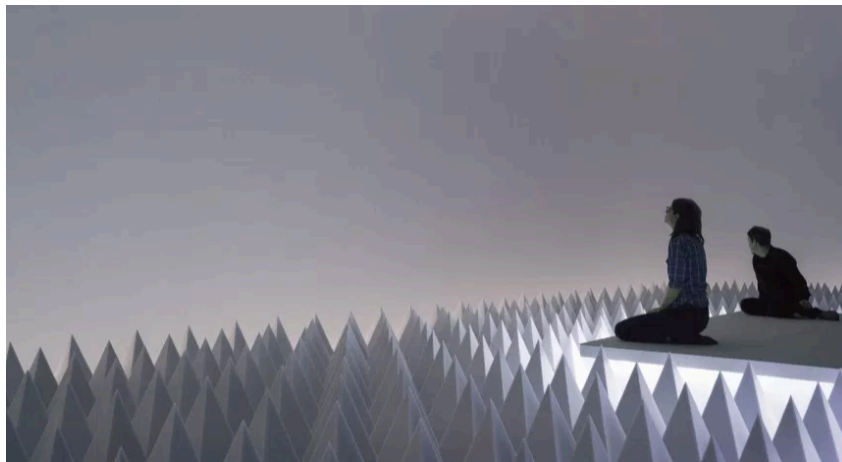


Figure 1: Doug Wheeler, "PSAD Synthetic Desert III"

Although Wheeler sets up the artwork to allow for the viewer to have an experience similar to what a person would experience in the vast deserts of northern Arizona, each viewer's experience is guaranteed to be different. In this way, the sound minimizing chamber becomes a room of abstraction. The work does not reference any part of the natural world, rather it attempts to give people the opportunity to experience a phenomenon they might have never experienced before - complete and total silence.¹⁸ The immersive environment encapsulates the viewer into a space that allows for complete mental discovery and introspection. As Ascott theorized, *PSAD II*

¹⁸ "Doug Wheeler, PSAD Synthetic Desert III," Guggenheim, <https://www.guggenheim.org/exhibition/doug-wheeler-psad-synthetic-desert-iii-1971> (accessed April 2, 2018).

Synthetic Desert allows for viewers to have “the opportunity to become involved in creative behavior on all levels of experience - physical, emotional and conceptual.”¹⁹ The feedback loop in this installation relates to the many ways in which the artist intends for viewers to experience the work compared to that variety of ways that viewers actually experience the work. A conversation begins once people begin to understand the experience of *PSAD II Synthetic Desert* in ways in which Wheeler never imagined. Our presence as viewers can change the way the work exists by contributing new meanings to the work based on the experience that different participants had and later shared. Here lay the ways in which individual behaviors affect art reception in the contemporary world.

Where does this new world exist?

Often immersive and interactive exhibitions exist outside the traditional museum space. Frequently these exhibitions will be on view in large warehouse spaces, theaters, or public spaces all of which can accommodate the audio-visual technology and space allotted for interaction. This often augments the art viewing process because viewers do not bring their “museum etiquette” into these spaces as they would if they were entering a place like the Metropolitan Museum of Art. Although many times these venues offer different modes of viewer reception than the traditional museum space, the artistic experience of immersive and interactive art remains the same as the Cognitive Art Processing Model because it also is apparent that very often these large spaces imbue a greater sense of importance and significance and often

¹⁹ Ascott, Roy. “Behaviorist Art and the Cybernetic Vision.” in *Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness*. (Los Angeles, California: University of California Press, 2003), 111.

communicate feelings of the sublime to the viewer.²⁰ One example of this is the contemporary art museum *The Tate Modern*.

The structure of the Tate Modern includes the massive entrance “Turbine Hall.” The building was built in 2000 by Swiss architects Jacques Herzog and Pierre de Meuron. Turbine Hall, measuring 152 meters long, 22 meters wide, and 35 meters high, greets visitors into a massive construction of space. Although a museum, the Tate Modern acts as a perfect example of the contemporary interactive stage as the building was adapted from a previously existing warehouse. The structure of the building mimics a fortified space communicating different messages to viewers than the traditional museum space, therefore audiences are not interacting in the space with their “museum etiquette.” Turbine Hall has functioned at the Tate Modern as “the site of artistic production beyond functioning as a space of exhibition pre-created works.”²¹ In this way, artists commissioned to exhibit work in this massive void must be prepared to “cope with an immense scale of emptiness” that exists before the work is installed.²²

This site has also challenged audiences to view art in entirely new ways. This past autumn, that Tate Modern hosted the Danish artist collective Superflex to create an installation in Turbine Hall. The exhibition titled *One, Two, Three, Swing!*²³ created an environment of play, organizing lines of swings weaving their way through Turbine Hall.²⁴ The swings of each were

²⁰ Pelowski, M., Forster, M., Tinio P.P.L, Scholl, M., & Leder, H. “Beyond the Lab: An examination of key factors influencing interaction with ‘real’ and museum-based art”, 256.

²¹ Baek, Jin, and Yoon-Jeong Shin. "Accidental yet transformative: site-specificity of the Turbine Hall of Tate Modern." *Arq-Architectural Research Quarterly* 19, no. 1 (n.d.): 49. *Arts & Humanities Citation Index*, EBSCOhost (accessed April 5, 2018).

²² Baek, Jin, and Yoon-Jeong Shin. "Accidental yet transformative: site-specificity of the Turbine Hall of Tate Modern." 50.

²³ See Figure ii. & Figure iii.

²⁴ “Hyundai Commission: Superflex: One, Two, Three Swing!,” Tate Modern, <http://www.tate.org.uk/whats-on/tate-modern/exhibition/hyundai-commission-superflex> (accessed April 2, 2018).

created with three seats; Bjørnstjerne Christiansen, co-founder of Superflex explains, “When you swing alone, you feel gravity, you feel freedom - but when you swing in three, you have to balance, you have to collaborate to make it work, to get the motion, and then you experience a force that is much greater than with one person. [The core of the whole installation lays in these] three people existing as this collaborative, collective power.”²⁵ The installation also incorporated a playful rug sitting atop of the ramp as you enter into the building with a large, mirrored hanging pendulum swinging from side to side. Walking into the exhibition, people swung on the swings with strangers or laid on the rug contemplating the pendulum. Children ran up and down the rugged ramp chasing one and other to the swings and later swinging with new and old friends. The audience was not limited to an age group but rather encouraged young and old to channel their inner playfulness and enjoy interacting and spending time together with strangers.

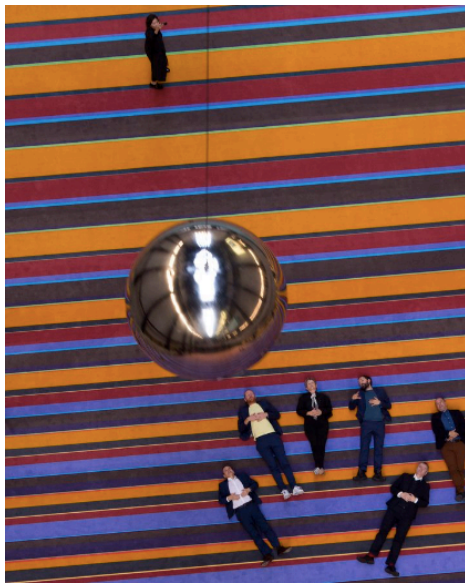


Figure iii: Superflex, "One, Two, Three Swing!"

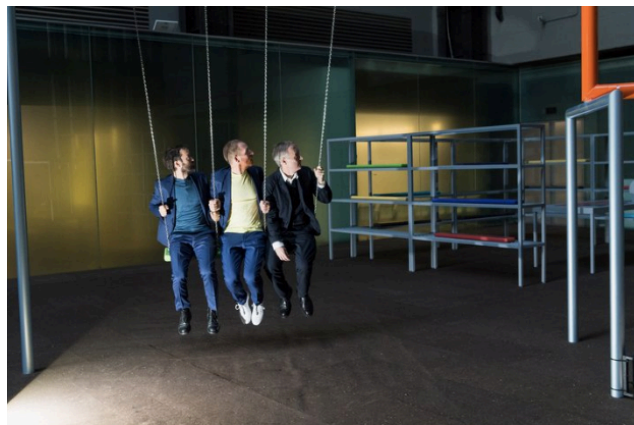


Figure ii: Superflex, "One, Two, Three Swing!"

²⁵ Jansen, Charlotte, "Superflex swings into action transforming the Turbine Hall into an Artistic Playground." 4 Oct 2017. *Wallpaper*. <https://www.wallpaper.com/art/superflex-turbine-hall-hyundai-commission-2017> (accessed March 12, 2018.)

This exhibition could not have existed in the traditional museum space. The simplicity of Turbine Hall's interior space allowed for Superflex to transform the site into a space for play. Although there is a collaborative nature to each interactive artistic experience, the collaborative factor of this installation stressed the need for audiences to accept one another and learn to work together in order to make something happen. This exhibition focused on creating an environment where audience members were able to connect on some level with the others that were involved in the work themselves. The artistic experience became part of a group experience, a built community of art viewers. This exhibition simply could not exist or communicate its message without the teamwork of art viewers involved in it.

In 2003, Olafur Eliasson was commissioned to create an expansive installation in Turbine Hall. The project titled, *The Weather Project*,²⁶ was an investigation of the concept of weather in relation to ideas about meditation, experience, and representation.²⁷ The installation included massive representations of the sun and sky at the epicenter of Turbine Hall's space. Upon first entering the building viewers observed a mist continuously accumulating into cloud-like formations above them creating the illusion of clouds moving through the sky. Eliasson constructed a ceiling of mirrors that reflected the Hall and directed viewers' attention to the semi-circular screen that was backlit by 200 mono-frequency lights. "The semi-circle and its reflection created the image of a massive indoor sunset seen through the artificial mist emitted into the room."²⁸

²⁶ See Figure iv.

²⁷ "About the Installation: *The Weather Project*," Tate Modern, <http://www.tate.org.uk/whats-on/tate-modern/exhibition/unilever-series/unilever-series-olafur-eliasson-weather-project-0> (accessed April 2, 2018).

²⁸ Eliasson, Olfaur. "The Weather Project, 2003," Olafur Eliasson, <http://olafureliasson.net/archive/artwork/WEK101003/the-weather-project> (accessed April 2, 2018)



Figure iv: Olafur Eliasson, "The Weather Project"

The experience of this exhibition was unlike anything that had ever been shown at the Tate Modern. The theme of the exhibition - weather - and how we relate it to our everyday lives is not one often interpreted by contemporary artists. Eliasson was interested in identifying the multitude of ways that weather affects city dwellers. This exhibition also differed in the way that it was shown. Glowing in the void of Turbine Hall, *The Weather Project* allowed people to have the space to experience the work as they wished. The show, “along with [its] thematic shift, [changed] the mode of perception too. People lie down voluntarily, as if they were bathing under the sun in a park.”²⁹ The giant hall permitted people to have intimate physical experiences with the installation whether it be glaring up at the faux sun, or swirling around dancing in the mist. All modes of perception were not only accepted but encouraged.

With these two different exhibitions, “the immensity of the internal space’ arouses the perception of ‘the absolutely empty, infinite, and autonomous space of God and in turn the recognition of the ant-like, minuscule condition of the human being overwhelmed by the

²⁹ Baek, Jin, and Yoon-Jeong Shin. "Accidental yet transformative: site-specificity of the Turbine Hall of Tate Modern." 58.

vastness.”³⁰ The goal in a space like Turbine Hall is that viewers are able to recognize their part in the world. Spaces like the Tate Modern allow for modes of perception to be challenged and expanded and helps viewers to understand their world and broaden their perspectives in new and different ways.

How have artist & viewer roles changed in this new world

The role of the artist has increasingly shifted in the contemporary technological world as well. Artists are no longer the sole creators of the work but propose engagement for viewers thereby making them co-contributors to the meaning and creation of the work itself. “The boundaries between making art, the artifact itself, and the experience of the work are no longer clearly defined,” as often the viewer is given a physical experience rather than just an experience of visual appreciation.³¹ Tim Murray-Browne’s experiential work *Movement Alphabet*³² is a perfect example of this shift. *Movement Alphabet* is a work where the viewer actively becomes a participant in the art viewing process.³³ The project explores the way that humans move their bodies throughout their day to day life. Murray-Browne developed a system to analyze how the body moves and draw images of the moving body to create a personal portrait of the participant’s movement. In order to create this portrait, a blindfolded participant is asked to walk through the

³⁰ Baek, Jin, and Yoon-Jeong Shin. "Accidental yet transformative: site-specificity of the Turbine Hall of Tate Modern." 55.

³¹ Ascott, Roy. “Behaviorist Art and the Cybernetic Vision.” in *Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness*. (Los Angeles, California: University of California Press, 2003), 111.

³² See figure v.

³³ Murray-Browne, Tim. “Movement Alphabet” Tim Murray-Browne, <http://movementalphabet.com/> (accessed October 12, 2017)

designed Interaction Pod and address personal memories through their physicality. The participants are given questionnaires and asked to respond to the questions by telling stories with their body. The guide who leads the participant in the space controls a 3D camera that allows her to capture certain moments of movement that will then algorithmically generate images of a participant's live immersive journey through the artwork. At the end of the experience, the participant is given a printed copy of their own "movement map"³⁴, allowing each person to walk away from the work with an personalized artifact. The project invites participants to connect with the technology in a more embodied and physical way.³⁵



Figure v: Tim Murray-Browne, "Movement Alphabet"

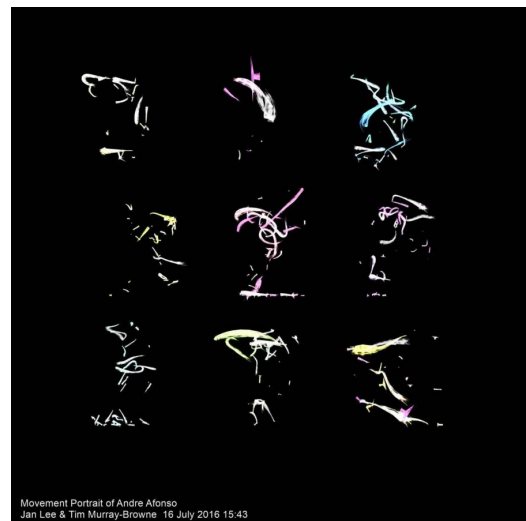


Figure vii: Tim Murray-Browne, movement map of "Movement Alphabet"

³⁴ See figure vi.

³⁵ Murray-Browne, Tim. "Movement Alphabet" Tim Murray-Browne, <http://movementalphabet.com/> (accessed October 12, 2017)

The boundaries of the art object in *Movement Alphabet* are severely blurred in this experiential work. In one sense, the art object can be defined as the physical *movement map* that is generated by the participants. Here, participants are the artists of the work, and Murray-Browne exist as facilitators of the participant's journey in becoming artist. This work will never exist in the same way as each participant that enters into the Interaction Pod will have a different experience communicating their life journey through their own physicality. Therefore, the art object, in this case, will never exist in the same form and will yield a new version of the "*movement map*" for each participant. In another sense, the "art object" can be seen as the experience that is given to the viewer. Although the physicality of the art object exists in the form of 3D camera technology and an Interaction Pod, the experience given to the viewer becomes the artwork itself.³⁶ Tim Murray-Browne in this artwork utilizes familiar camera technology to create a rather unfamiliar environment onto which a viewer projects their own life experiences.

Visual art has long existed first and foremost as a visual experience. In the past, art was created in order to communicate a "clearly defined messages to the spectator; as a more or less passive receptor, from the artist, as a unique and highly individualized source."³⁷ Artists created works that didn't allow for viewers to have interaction beyond the visual. When studying works of art like the paintings of Picasso or Matisse, we are taught about the compositions and its methods of communication to the viewer. In the past the viewer was positioned only to gain that knowledge through observation. Today, artists demand viewers enter into new worlds of

³⁶ Murray-Browne, Tim. "Movement Alphabet" Tim Murray-Browne, <http://movementalphabet.com/> (accessed October 12, 2017)

³⁷ Ascott, Roy. "Behaviorist Art and the Cybernetic Vision." in *Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness*. (Los Angeles, California: University of California Press, 2003), 110-111.

immersion and interaction in order to gain that knowledge. No longer are passive viewers expected to understand a message in one simple way, rather these rooms, like the one we saw in Doug Wheeler's *PSAD II Synthetic Desert*, encourage people to have intimate, individualized experiences which yield a variety of messages to the viewer based on the had experience.

How is this new world changing the way we think?

This new world of experiential art encompassing immersive and interactive installations brings forth a great deal of change in the art world. Not only is it changing the way art is presented to the public, but it is also changing the way we think about the concept of art itself. There are a variety of changes occurring in the way that audiences are interacting with art and artists in contemporary times, and many of these changes are affecting the way that we see and interact with the world. Interactive and immersive installations allow audiences to become more aware of their senses and often heighten their levels of perception through exploration of the five senses. These exhibitions also allow audiences to form deeper connections with the art because of the intimate, physical experience the viewer has. Immersive and interactive art integrate art into life more as most of the exhibitions are installed in public spaces.

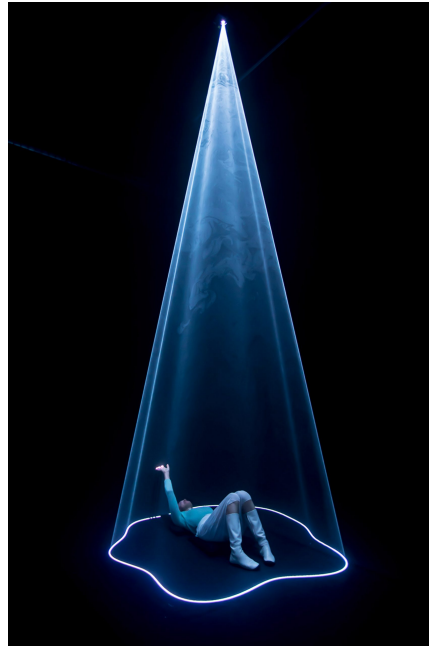


Figure vii: Nick Verstand, "Aura"

Interactive and immersive exhibitions allow viewers to use the five senses unlike ever before. One example of this can be seen in the Dutch artist Nick Verstand's audiovisual installation titled *Aura*³⁸. The exhibition itself allows for audiences to experience their emotions as organic, pulsing light compositions of various forms, colors, and intensities. *Aura* proposes a setting where a viewer becomes participator by watching their emotions materialize into perceptible, physical form. For this project, Verstand partnered with the Netherlands Organization for Applied Scientific research to develop a scientific system that transforms emotions into light. This exhibition begins once a viewer is hooked up to a variety of wearable biosensors that register brainwaves, heart-rate variability, and galvanic skin response.³⁹ A viewer enters into the space with the sensors and becomes center stage as light beams above them

³⁸ See figure vii.

³⁹ Verstand, Nick. "Aura" Nick Verstand, <http://www.nickverstand.com/projects/aura/> (accessed December 14, 2017)

casting a spotlight around their figure. Music plays in the background, regularly switching from pop to opera to heavy metal in order to evoke changing emotions of the viewer. As the viewer reacts to the various musical sets, their emotions are transcribed into light via the spotlight. The emotions can cause the light to change colors or pulsate depending on what the biosensors detect.

This installation allows for participants to uncover an entirely new phenomenon of sensing their emotions in a physical, tangible way.⁴⁰ The participant is engage in an auditory, visual, and emotional experience as they listen to the music and watch as their inner self controls the movement of the light. This experience permits participants to understand a fundamental concept of their self – their emotions – in an entirely new way.

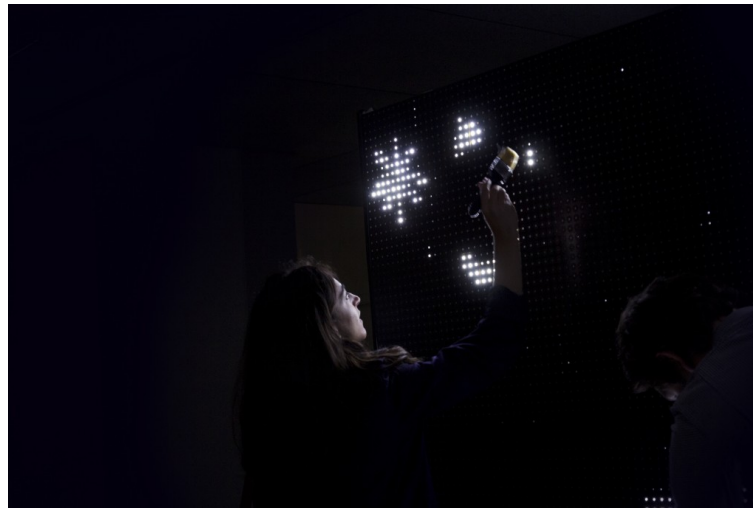


Figure viii: Antonin Fourneau, "Waterlight Graffiti"

With many of these new forms of art, the art itself has become more integrated into life. No longer does one need to journey to a museum to have an encounter with a work of art, rather it is becoming more and more apparent that art is integrating itself into everyday life. One example of this can be found in the work of Antonin Fourneau. His site-specific installations

⁴⁰ Verstand, Nick. "Aura" Nick Verstand, <http://www.nickverstand.com/projects/aura/> (accessed December 14, 2017)

titled *Waterlight Graffiti*⁴¹, include a variety of LED panels that become integrated into public spaces and light up when touched by water. *Waterlight Graffiti* was created by Fourneau to exist as a contemporary experience which gives viewers the opportunity to use water in a way that yields a product which water has never created before - messages made of light. The project allows for passerby's to graffiti the walls of the LEDs by spraying water, painting with damp fingers, or watching as the rain creates incredible patterns of light messages. The interactive installation creates a new situation where a natural element was used to activate contemporary technology in an unfamiliar way.⁴² This work of art exists in the public sphere encouraging random engagement with viewers walking by.

Finally, interactive and immersive exhibitions also allow artists to uncover new concepts that we have never experienced before. One example of this is Japanese artist Ryoji Ikeda's *Test Pattern*⁴³ series. Ryoji Ikeda is a contemporary Japanese new media artist working with sound and light. As a leading electronic composer, Ikeda inputs sounds into his artistic creations in dynamic ways that challenge viewers to focus on not only the visuals of the work. *Test Pattern [N° 12]* is the latest iterations of Ikeda's series titled *Test Patterns*. Beginning in 2006, Ikeda has abstracted, re-contextualized, and converted data into music, sound, photo, and video. Generated in real time, *Test Patterns* encapsulates the viewer into a "disorientating, highly-charged kinetic environment."⁴⁴

⁴¹ See figure viii

⁴² Fourneau, Antonin. "Water Light Graffiti" Antonin Fourneau, <http://www.waterlightgraffiti.com/about-wlg/> (accessed April 21, 2017)

⁴³ See figure ix.

⁴⁴ Spice, Anton, "Ryoji Ikeda's new a/v artwork test pattern [N°12] is now open at The Store X." 5 Oct 2017. *The Vinyl Factor*. <https://thevinylfactory.com/news/ryoji-ikeda-test-pattern-n12-store-studios/> (accessed October 17, 2017).

In a new age of contemporary telematics, *Test Patterns* stands out as an iconic work that exemplifies the qualities of a successful telematic project. Integrating data into the composition but abstracting its form allows viewers to understand an abstract set of data as a flurry of



Figure ix: Ryoji Ikeda, "Test Patterns"

overwhelming sound and light - a concept never conceived as possible before. Upon entering the room of *Test Patterns*, viewers realize a perceptual change where the dark black room suddenly is flowed with rapidly streaking bands of white light compiled with loud computerized sounds. The perceptual change is uncomfortable as viewers must become acquainted with an unfamiliar band of sounds. Once situated, individuals can cater their own experience. Some members of the audience lay down to allow the vibrations of the data illuminate through their body. Other viewers stand still watching as the light tempers through the room. Most viewers sit in silence as they experience a fully new approach to understanding data.

What is the impact of this new way of thinking?

Every interaction a person has with a work of art leads to a unique experience for the observer, but works of immersion and interaction lead to experiences more lasting for the viewer. “At the neurobiological level, such experiences manifest as activation of corresponding neural networks” especially because of the physical involvement of participants in these installations.⁴⁵ The idea of human experience has been widely studied in the field of neuroscience. Much of this research has demonstrated that experiences, particularly repeated experiences, can cause a long term change in the brain networks involved, a concept called *experience-dependent plasticity*. The article “Transformative Art: Art as a Means for Long-Term Neurological Change” written by Son Preminger, describes the many ways art is changing the ways in which we think and act.

The idea of art being a neurocognitive experience is one a bit far-fetched for art historians, though neuroaesthetics is becoming more widely accepted as a proper discipline. Neuroaesthetics is “an emerging discipline that investigates the biological underpinnings of aesthetic experiences. These aesthetic experiences include emotions, valuation, and actions engendered by art objects, as well as processes that underlie their interpretation and production.”⁴⁶ In recent years, the field of neuroaesthetics has continued to develop and leaders in the field have created theories that offer knowledge in discovering the ways in which art is impacting our neural networks and causing permanent change to our everyday engagements.⁴⁷

⁴⁵ Preminger, Son. “Transformative Art: Art as a Means for Long-Term Neurocognitive Change.” *Frontiers in Human Neuroscience*, Vol. 6, No. 96 (2012), doi: [10.3389/fnhum.2012.00096](https://doi.org/10.3389/fnhum.2012.00096).

⁴⁶ Chatterjee, Anjan & Vartanian, Oshin. “Neuroaesthetics.” *Trends in Cognitive Sciences*, Vol. 18, No. 7. (2014) doi: <http://dx.doi.org/10.1016/j.tics.2014.03.003>.

⁴⁷ Gallese, Vittorio. “The Empathetic Body in Experimental Aesthetics - Embodied Simulation and Art.” July 2017. *Research Gate*. Web. (accessed Oct 2017).

As stated before art has existed throughout ages for a variety of reasons, generally as an agent for some type of message for viewers from artists. Although all art experiences engage the brain in some way, classic art forms such as sculpture and painting, rely primarily on perception to drive the artistic mental experience. Whereas interactive arts involve perception, motor functions and behavioral controls as part of the experience which is a cited reason for these art forms inducing a more impactful response.⁴⁸

Experience-dependent brain plasticity plays an incredible role in the way art reception has changed in contemporary times. “The key characteristic of our brain is its capacity to change as the result of an experience.”⁴⁹ With each experience had in life, people reflect and grow. The same could be said about individual’s artistic experience. Immersive and interactive installations drive the viewer to engage physically in some way. In many immersive exhibitions, this physicality manifests itself by having a person walk through an exhibition and watch as the installation projects itself onto them. In interactive installations many times this physicality is represented by having the viewer become participant and engage their body in the artwork somehow. These types of exhibitions are having a different impact on the brain than the traditional exhibition of visual arts because of the variety and heightened amount of brain activity.

Immersive and interactive art is not only changing the way viewers see and engage with art but it is also proving to have a more lasting impact on the ways they think about art. Experiential art takes people out of the museum space and into the real world. The work becomes relatable and familiar. People feel a sense of involvement and belonging in works of

⁴⁸ Preminger, Son. “Transformative Art: Art as a Means for Long-Term Neurocognitive Change.” *Frontiers in Human Neuroscience*, no 6 (2012), doi: [10.3389/fnhum.2012.00096](https://doi.org/10.3389/fnhum.2012.00096).

⁴⁹ Preminger, Son. “Transformative Art: Art as a Means for Long-Term Neurocognitive Change.” *Frontiers in Human Neuroscience*, no 6 (2012), doi: [10.3389/fnhum.2012.00096](https://doi.org/10.3389/fnhum.2012.00096).

immersion and interaction because their physical or mental body is asked to contribute in some capacity to the work. As Ascott predicted, this involvement is allowing art to become "...a more strident agent of change, jolting the whole human organism, a catalyst that sets up patterns of behavior, of thought, and of emotion that are unpredictable in any fine sense."⁵⁰ The lasting effects of this art causes people to exhibit behaviors that reflect their artistic experience involved in the decision making of that specific behavior.

Artists are using interactive and immersive art as a way to successfully engage viewers in the artistic experience. The art viewing process has evolved into a process that mimics that same visual viewing process, but it has expanded to include methods of interaction and immersion. These methods are grasping hold of viewers by introducing them to new concepts through physicality. The interactive components of these exhibitions encourage viewers to engage as participants and have more lasting impacts because of the viewer's bodily involvement.

As demonstrated above from the variety of examples including Ryoji Ikeda, Nick Verstand, Doug Wheeler, Tim Murray-Browne, and Antonin Fourneau, immersive and interactive installations are giving viewers an entirely new way to experience art. Not only are these artists expanding the boundaries of what can be deemed art, they are challenging viewers to directly input their physical being into the art itself. Some artists use perception as a way to create new sensations for viewers, whereas other artists play on interaction. Both of these methods have proven successful to grasp a viewer's full attention through the duration of the embodied immersive or interactive experience. Exhibitions like *Waterlight Graffiti* and *Aura* give audiences the opportunity to uncover a process that they might have never experienced

⁵⁰ Ascott, Roy. "Behaviorist Art and the Cybernetic Vision." in *Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness*. (Los Angeles, California: University of California Press, 2003), 111.

before. In both exhibitions participants are able to find connections between the natural world and technology. In installations like *Movement Alphabet*, *PSAD Synthetic Desert III*, and *Aura* audiences are able to individually cater their experience and contribute to the artwork through their personal involvement and embodied simulation. *Test Patterns*, *The Weather Project*, and *One, Two, Three, Swing!* allow for audiences to experience large spaces in new ways and have connections with the work that artists hope to be transcendental.