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Art Experience in the Digital Age: Augmented Reality as a Medium

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Abstract

This thesis examines augmented reality (AR) art, a newly emerged medium that challenges the mental and physical passivity that viewers have developed in relation to established spaces, institutions, and devices. AR artists have been challenging and broadening our understanding of these spheres by creating interventionist works that allow viewers to use their mobile devices to access their works. This thesis evaluates the practices of AR artists as an expansion and continuation of what conceptual artists have been exploring in their practices since the 1960s. The history and significance of AR art is not limited to its technological nature, and it is imperative to acknowledge and discuss its value to expand our understanding of art experience after the advent and rapid spread of the mobile device. The discussion of the development of this practice shows that AR art is not a mere product of technological development but an active participant in shaping contemporary understanding of newly emerged media.

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Introduction

Augmented Reality (AR) is at the forefront of technological progress¹ and is utilized by artists who engage with its interactive and ubiquitous qualities. AR is a product of numerous groundbreaking advancements in cameras to detect, scan, and collect data on real-time environments, GPS technology to easily detect the location of the user, and digital imaging techniques to formulate the appropriate output. In addition, mobile-based AR is rapidly becoming a widespread presence in our lives through social media platforms and gaming applications. The different face filters or the dancing hotdog that are projected through your front camera on Snapchat? That's augmented reality. The crazy number of steps you had to put in to trap another Pokémon for Pokémon Go²? That's also augmented reality. As one can see, AR is rapidly overtaking the experience we have through our mobile devices with its simple yet engaging qualities. The advancement of digital media and interactive technologies continuously shift the production of art. In parallel, our understanding of the relationship between the artwork, viewer, and artist have also been in flux with the advent and development of these technologies as mediums. Prior to the age of digital, conceptual art played a similar role by expanding the traditional notions

¹ In this thesis, the term “advancement” is used to imply the progress made in technology in the overall process of invention, innovation, and diffusion of technological processes. Before further discussing the impact of technology on the viewers, it is important to understand that “advancement” does not imply the viewers, it is important to understand that “advancement” does not imply the superiority of the newly developed technology as an art medium through its ability to provide a more immersively engaging user experience compared to seeing a photograph or watching a video through a television screen.

² After its launch during July 2016, Pokémon Go! Was the most downloaded game in its first month, dominating the most-downloaded category in 70 countries and 130 million times, which accounts for the game's popularity and accessibility.

behind the artwork, its production, and the relationship between the viewer and artist.

This thesis will place the practices of AR artists in the context of artistic practices that may be considered as the ideological and technological precedents throughout the modern and contemporary periods. The strength of AR as a medium is that it creates a virtual space and offers real-time, interactive experience to the user. More importantly, the interactive essence of the work gives the users the ability to critically engage with the impact of contemporary digital technologies and media themselves. When viewing works of AR art, viewers are able to give motion to the images that are projected in the spaces that they are occupying. Beyond its appeal as a new technological development, AR has a unique strength in its ability to breakdown a limited narrative by projecting into spaces that are defined by limited narratives set by institutions, thereby creating an interventionist experience. Based on these qualities of AR art, I argue that the historicization of AR as a medium must depend upon discussing previous artistic practices that were developed to critically engage with three spheres, space, viewer, and the device, in order to fully understand and appreciate its impact. These themes will be discussed alongside specific case studies that will provide a more visible and tangible demonstration of each theme to bring forward the importance of AR art as a medium rather than just a segment of a newly developed technology.

The development of digital media does not equate to an artistic evolution or advancement, but rather acts as a force of change. The recent exhibition at the Whitney Museum of American Art, *Programmed: Rules, Codes, and Choreographies in Art, 1965–2018* is a reflection on the relevance of these issues by examining the history of art, science, and technology. The exhibition employs a holistic approach to bring forward the interactive nature of digital art and examine how this process of intersection influences the way larger culture and society are perceived. Digital technologies are heavily involved in the production of most works that we encounter in contemporary exhibition spaces. Products of this digital making are regarded as mere tools that create art rather than a unique medium in itself. In *Histories of the Digital Now*³, Christiane Paul, the adjunct curator of digital art at the Whitney, discusses how digital technologies are not only altering the interactive ability of art but also its creation by artists. The use of digital cameras to film and edit video, photographs as digital prints, or the use of computer-aided design in making sculptures and prints are a few examples of how digital technologies are changing the way art is being produced.⁴ According to Paul, digital art “explores digital technologies as a medium by making use of its medium’s key features, such as its real-time, interactive, participatory, generative, and variable characteristics, or

³ The essay is uploaded to the Whitney Museum’s website as an official part of the exhibition description. The museum has not published a physical copy of any official exhibition catalogue.

⁴ Christine Paul, “Histories of the Digital Now,” *Programmed: Rules, Codes, and Choreographies in Art, 1965–2018*, Whitney Museum of Art, <https://whitney.org/essays/histories-of-the-digital-now> (accessed March 1, 2019).

by reflecting upon the nature and impact of digital technologies,” and the works in the exhibition are organized to transmit this idea to the viewer.⁵ Beyond reflecting the importance of understanding digital technologies as mediums of their own, the exhibition is also notable because it places AR as one of these mediums. The exhibition featured an Augmented Reality installation piece that accounts for the most recent advancement of digital art, especially in relation to the definition set by Paul. Made by Tamiko Thiel, an artist who is a prominent figure in the creation and development of AR art, *Unexpected Growth* [<http://www.tamikothiel.com/unexpected/growth/>] overlays a digital image of organic underwater growth that interacts with the physical space on the sixth floor terrace of the Whitney as the final destination to the viewer’s trajectory in the exhibition.

Thiel explains that *Unexpected Growth* seeks to “playfully engage” the public in two very serious threats to ocean ecosystems.⁶ Located next to the Whitney’s large windows that overlook the Hudson River, the piece asks the question: “when will the waters of New York Harbor reach this disturbingly high level? Are such symbioses our future, as plastic waste becomes more numerous than the fish in the sea?”⁷ This connection can be observed in multiple aspects of the work; the images that are creating a sense of underwater experience by projecting an

⁵ Christine Paul, *Programmed: Rules, Codes, and Choreographies in Art, 1965–2018*. (accessed March 1, 2019). <https://whitney.org/essays/histories-of-the-digital-now>

⁶ Ibid.

⁷ Tamiko Thiel, “Unexpected Growth”, *Online Portfolio*. Tamiko Thiel and /p., 2018 (March 10, 2019).

image and sound that resembles being underwater. Through their individual mobile devices⁸ or the two tablets provided by the museum, the viewer is able to see the growing lumps of trash that expand over time depending on how often the AR program is accessed throughout each day. This “growth” of the virtual images of plastic and coral is created through Lindenmayer Systems, an algorithm that mathematically represents the organic growth of corals. The work goes back to its original state once there are a certain number of hours of inactivity, showing the ephemeral qualities of the natural world through the digital. What this means is that the accumulated exposure that is an amalgamation of coral and plastic waste grows according to the number of exposures it receives over the course of a day and eventually starts to fade. *Unexpected Growth* provides a visibly and physically engaging example of the imminent effects of an abstract yet vital concept such as global warming to the viewer.

Unexpected Growth successfully engages the viewer and communicates a critical message through the interactive images that are projected into the real space. However, its most distinct characteristic is that it does not carry some of the most defining qualities of AR art. The reason why AR technology so rapidly became widely accessible is due to its easy accessibility through the ubiquitous presence of mobile devices today. For the artist, these qualities allow a digital intervention into

⁸ The wall-text description of the work featured as a part of the exhibition contained a QR code for the viewer to scan and download the mobile application that recognized the viewer to be in the museum with GPS, then scan their surroundings and project the image that Thiel created.

existing physical spaces, in which they project site-critical images to established institutions and spaces that project the hegemony of these institutions. The forte of this practice is that the digital projections cannot be prohibited by the institutions unless the entirety of mobile devices are banned from the space.

Literature Review

As I have noted above, the primary characteristics of AR art are the interventionist and site-specific qualities of the works. Though there is not an ample amount of literature directly engaging with the subject due to the recency of the medium, a number of writers have begun to note the importance of AR as a creative medium on its own rather than a segment of AR technology as a whole. In *Augmented Reality Art: From an Emerging Technology to a Novel Creative Medium*, Vladimir Geroimenko brings together various writings by artists, researchers, and art historians under the theme of understanding diverse facets, ranging from cultural, social, spatial, artistic, and cognitive characteristics of augmented reality art. Amidst the diverse subjects, it is important to note that majority⁹ of the text is dominated by phrases such as activism, critical interventions, urban interventions, digital borders, and AR graffiti, which shows the prevalence of these themes in AR art literature. Throughout my discussion, I will refer to different essays that are featured in the book. However, it is also beneficial to examine the editor's insight in the Preface and Conclusion to understand the general

⁹ 6 out of 21 chapters (essays) featured in the book are containing phrases discussed above.

developments made in the field. The central idea that the book transmits appears in the Preface. The author notes that one of the developments made between these two editions is the ability of the developed technology to tie an idea to a physical location or object which accounts for the technical and conceptual theme that dictates the development and distribution of the medium.¹⁰ Geroimenko discusses the progress made for AR in the new edition of the book that was published in 2018 compared to the state of the medium that was discussed in the previous edition that was published in 2014¹¹, emphasizing AR's rapid growth thanks to the rise of smartphones that artists and the viewers benefit from.

Similar ideas can be observed in *Augmented Reality: Innovative Perspectives Across Art, Industry, and Academia* edited by Sean Morey and John Tinnell. This text is another comprehensive book that contains essays written by professionals in the field. Compared to Geroimenko's discussion, the book features more general facets of AR as a technology, and the essays featured in the book are more technical and expansive in their discussion of AR. The strength of the book is that it offers separate interviews of professionals and artists and a comprehensive and encyclopedic chapter that features brief descriptions of 5 artists, BC Biermann, Tamiko Thiel, Conor McGarrigle, John Craig Freeman, Bryan Leister, and Mark Skwarek, and a simple description of their artworks. Though the discussion may not

¹⁰ Vladimir Geroimenko, *Augmented Reality Art: From an Emerging Technology to a Novel Creative Medium* (Cham: Springer International Printing, 2018), viii.

¹¹ The second edition added 5 more essays to account for the rapid changes that the medium is going through.

be as academic and complex as Geroimenko's text, the book effectively captures and communicates the major themes that dictate the artistic practice overall. Most of the specific artists and artworks that are featured all carry site-specific and interventionist qualities, which are the most notable qualities of the medium overall.

Finally, *Not Here, Not There: An Analysis of an International Collaboration to Survey Augmented Reality Art* was published as a volume of the Leonardo Electronic Almanac as the only "academic collection currently available" that surveys the augmented reality artistic interventions.¹² The volume was published in 2013 and Geroimenko's survey was published in 2014, which makes the claim plausible for the time frame it was published. Because it aimed to be the first of this body of literature, the volume's editors provide strong elements that define augmented reality as a medium. Particularly, Lanfranco Aceti, the editor in chief, notes that AR art carries quality in disruption and its participatory nature, a characteristic borrowed by the acquired methodology of many site-specific artists from the 20th century.

Prior to discussing the specific components of AR as a medium, it is important to first review writings and discussions regarding AR technology as a whole. In *A Taxonomy of Mixed Reality Visual Displays*, computer engineers Paul Milgram and Fumio Kishino note the importance of the physical qualities of AR in comparison to Virtual Reality (VR). In VR, the viewing experience is completely

¹² Lanfranco Aceti, *Not Here, Not There: An Analysis of an International Collaboration to Survey Augmented Reality Art* 19 No. 2 (2013): 6.

separated from the real environment and surroundings of the viewer. Virtual Reality requires a head-mounted display (HMD) and a complete construction of depth and space within the gear for a fully immersive visual experience, which requires a disengagement from one's surroundings.¹³ On the other hand, AR is a subset of Mixed Reality (MR) virtual displays and overlays interactive virtual images to real environments. Particularly, it engages with specific locations that require GPS accuracy to project specific images for specific locations. An easy example of this can be Thiel's work at the Whitney, in which the viewer can only have access to the work at the particular location because the location (the museum) and the context in which the work is presented (the exhibition) are also central components for the artist to most effectively communicate her practice to the viewer.

This particular distinction between AR and VR made by Milgram and Kishino is highly critical in understanding the premise of AR as a medium and my overall discussion for two reasons. First, it allows the viewer and the device to re-experience the space that they are inhabiting, allowing an 'invisible space' to be activated through the choice of the viewer with their device. Second, it emphasizes the fact that AR allows more agency to the viewer by providing a sense of movement in relation to the device. Holding up a screen to view the augmentation results in a significantly different experience for the viewer compared to engaging with the device while having the rest of the body unencumbered. The physical engagement with the device grants a sense of

¹³ Paul Milgram and Fumio Kishino, "A Taxonomy of Mixed Reality Visual Displays," *IEICE Transactions on Information Systems*, Vol E77-D, No 12. (1994): 1321.

liberation for the viewer who has been developing a mental and physical passivity in relation to the device. The viewer is able to have an experience that is not confined to the images that are simply projected through the screen. AR is a unique point of digital art in which the technology itself is actually a medium that lets the audience become a participant in the work by actively engaging with the media they encounter. As a result, the artists' traditional role of artist as a creator of the work is shifted by a new meaning to their practice as a facilitator for the audiences' experience to contribute and interact with the work.¹⁴

Despite the recency of the technology involved with the making of AR, there is a notable precedent of conceptual artists who have created works that aimed to activate the passive viewer in relation to the devices that they engage with and the space that they occupy. The formulation of historicizing AR therefore must derive from works that examine the cultural and ideological components of understanding the technology rather than the technical past of the medium. Most of this idea is derived from Erkki Huhtamo's discussion in *Resurrecting the Technological Past: An Introduction to the Archeology of Media Art*, in which he notes the potential danger of historicizing media art in conjunction with the mechanical development of media art. Huhtamo stresses the importance of making a distinction between a show of contemporary art with an educational display. Historicizing machines in relation to other machines creates a situation where they only make sense in contexts that are

¹⁴ Ibid.

related to each other and not with any external signpost. Such development is particularly critical due to the rapid development and replacement of technological machines. “In this sense history belongs to the present as much as it belongs to the past. It cannot claim an objective status; it can only become conscious of its role as a mediator and a meaning processor operating between the present and the past (and arguably, the future).”¹⁵ Huhtamo urges media theorists to recognize the wider historical and cultural frameworks when they are analyzing the development of media to not only accurately understand the past but also to understand the newly developing conditions that contemporaries face in relation to their past. This approach is particularly conducive in understanding AR art as a medium that expands beyond its technological component.

Chapter Structure

As discussed earlier, I will historicize AR as a medium through its relationship with art that engages with three spheres: the viewer, space, and device. Tracing through the history of each of the three spheres and their intersections will show the contemporary significance of AR art. While the three spheres work together to bring together an unprecedented technology and experience, they also effect and will be effected by one another to be reinterpreted in relation to contemporary developments. As a result, a complete understanding of each component will be highly reliant on the other spheres. Each component has a

¹⁵ Erkki Huhtamo, “Resurrecting the Technological Past: An Introduction to the Archeology of Media Art” in *Art and Electronic Media*, ed. Edward A. Shakhn (London: Phaidon Press Limited), 199-200.

considerable amount of art historical context and chronology that are critical to understanding the nature and importance of AR artists and their practices. The art historical movements and concepts behind each sphere and their interdependence will set the fundamental ideas behind how AR artists employ the device for the viewers in established spaces, which will be discussed in case studies such as *Unexpected Growth* that will appear throughout my discussion.

Following the introduction, Chapter 1 will examine the technological and conceptual precedents of AR art. The discussion will be divided into three segments, the stereograph as a pre-digital attempt to achieve a sense of augmented space and vision, video sculptures as a criticism of the passivity towards the device that appeared after the rise of television and the device, and site-specific art as a defiance against established spaces and institutions. I will illustrate a technological precedent to AR and the evolution of the relationship between the viewer and the device by engaging both with the history of stereography and photography by specifically discussing the stereographic images that are in Drew University's archives. In particular, the section will expand upon the idea of a "passive viewer" by discussing Susan Sontag's argument regarding photography.

Following the section on stereography, I will shift the focus of the discussion to how the artists critically engaged with the sense of "passivity" that spread with the emergence of television in the section on video installations. The spread of photography introduced moving images, of course, closely relate to television which led to the spread of video installations during the 1970s and onward. The video installations were direct responses

from the artists against the great power of television and its profound impact on viewers. Given its technological relations to broadcasting, video seems destined to comment critically, either overtly or obliquely, on mass media.¹⁶ In order to understand the relationship between the “passive” viewer in relation to the device, it is important to understand the implications behind passivity by discussing Marshall McLuhan’s criticism on media and screen culture.

In conjunction with McLuhan’s criticism, video artists strived to alter the viewer’s relationship with time and space in order to persuade us to take up residence in an alternate universe with their practice. In video installation, device becomes a subject of criticism through the use of viewer experience. The most notable characteristic of video installation is the way artists criticized the device in order to give the viewer a sensation of activation from the device. Nam June Paik¹⁷ said, “Television has attacked us for a lifetime, now, we strike back.”¹⁸ Keeping such characteristics in mind, I will use Paik’s *Fin de Siecle II* (1989), Dara Birnbaum’s *Attack Piece* (1975), and Ernst Caramelle’s *Video Ping-Pong* (1974) as ideological precedents to AR artists’ criticism towards the device and their attempt to provide a physical liberation from the device. The final section of Chapter 1 will look at how AR allows the device to activate existing spaces through the discussion of site-specific art. With the invention of AR, there is a new

¹⁶ Cynthia Chris and Jason Simon, “Surveying Videscapes: The Politics of Distribution in Tiered Visual Economies”, *Art Journal* 74, no.4. (2015):5.

¹⁷ The Korean American artists is regarded as the “father of video art” for his notable contribution in video art. His work will be further discussed in the upcoming section.

¹⁸ Toni Stooss and Thomas Kellein, eds., *Nam June Paik: Video Time-Video Space* (New York: Harry N. Abrams, Incorporated, 1993).

spatial dynamic that is intangible, immaterial, and devoid of corporeality that is overlaid onto the existing physical space. This space may only be accessed through the choice of the viewer who chooses to enter or leave this space by using the device to link the physical to the virtual.

Chapter 2 will examine MoMAR, a case study that aligns with criticism towards the hegemony of art museums while bringing together all of the other characteristics of AR art that critically engage the viewer, space and device. In contrast to Thiel's work at the Whitney that is an official part of a sanctioned exhibition, MoMAR is a project by an artist collective that overlays AR works by contemporary artists on top of Jackson Pollock paintings at the Museum of Modern Art. The movement uses Pollock's paintings as a canvas for AR works, the MoMA as an arena of activation, and the device as apparatus of experience for the viewer. On the other hand, it also criticizes Pollock's colossal presence in the contemporary art scene and how MoMA perpetuates a limited art historical narrative. The gestural connection between the experience and Pollock's action painting is the most notable and visible way of showing the liberation of the passive viewer in relation to their mobile devices and using existing surfaces (MoMA as a whole and Pollock's works as canvases) as sites of criticism.

After discussing the historical precedents and the current state of AR art, Chapter 3 will discuss the practice of Tamiko Thiel from her contribution to the conception of Manifest.AR during the early 2000s all the way to her most recent work with the Whitney in 2018. Particularly I will revisit Thiel's *Unexpected Growth* and discuss the

implications of the evolution of AR art. The most distinct feature of *Unexpected Growth* in relation to the AR art that has been developed so far is that it is shown within a traditional cultural institution, which deviates from Tamiko Thiel's usual trajectory as an interventionist artist. What happens when these artists begin to become a part of these institutions, and how critical is the interventionist nature in defining its overall strength and appeal?

In addition to discussing AR art's liberating qualities, this thesis will contribute to understand the limitations and potential dangers of the expansion of the newly emerged medium. In the concluding chapter, I will discuss the danger of this control by engaging with the writing of Hito Steyerl and her idea of digital provenance *In Defense of the Poor Image* and how the once-intervention oriented artistic practice of AR artists may be twisted to control over the images that we see. The most notable danger of AR itself is that it may interfere with our physical reality on a daily basis unlike a canvas, television screen, or a site-installation can. This problem extends beyond the art institution and the viewer. It is important to understand the fact that AR possesses a unique danger as a very sophisticated surveillance system even though it has its liberating qualities as an art medium. Especially when the technology is so new yet so widespread, it is important to critically engage with its presence rather than being preoccupied by its practicality and attractions. Criticism of the normalizing of technology and its ability to replace and attack the way we view our reality rose with the development and widespread use of each technology, notably starting with the stereograph.

Chapter 1: The History of Augmented Reality Art

Section I. Stereoscopy

There has been a longstanding effort for artists to create a more active and deep presentation for the viewer to better engage with their surroundings. Until the emergence of technological devices with the ability to reproduce reality, the artist had no choice but to keep a natural distance from reality when creating art. The emergence of devices that perfectly replicated images began to alter the long-held objective of the artist, who was now faced with a new challenge in their practice. While the quality of art had long been dependent on the accuracy and physical components of the work, the invention of machines and devices now posed a difficult challenge to the art object, particularly painting.

The history behind the digital device begins with the emergence of the camera, which prompted theorists to respond to the notion of reality versus creation in the creative sphere. According to Susan Sontag, the initial appeal of the photograph was its democratizing of experiences by translating them into images. Before its artistic values, the primary appeal of photographs was the memorialization of individuals considered as members¹⁹ of family. In her essay *In Plato's Cave*,

¹⁹ Sontag explains that such appeal of family was especially appealing as the very institution of the notion of family began to undergo a serious altercation as the nuclear family was carved out of a much larger family. Photographing the extended family, therefore, is an extension of the the false sense of veracity that I discussed during the introduction. It is to symbolically restate the “imperiled continuity and vanishing extended ness of family life, which in its own a reaction to social and cultural outcomes of industrialization.

Sontag argues that a certain authority is granted to the photograph due to the seemingly truthful visual qualities it creates compared to conventional art media such as painting or drawing.. Sontag's criticism on photography engages with all three spheres of AR. First, she notes the way photographs help people to take possession of space²⁰ and how taking photographs converts experience to an image. With the advent of photography and its rapid growth, the final destination of reality and experiences in the physical realm become taking photographs. Because of this quality, Sontag equates the cameras to guns, noting that the act of photographing is a "sublimated murder-a soft murder, appropriate to a sad, frightened time."²¹

Compared to this dilemma, AR has the ability to allow the viewer to use the device to rediscover the lost real and tangible "experience" that was taken away from them after the advent of photographic devices. It does this by allowing the user to see their physical surroundings while also looking at moving images. Though Sontag mainly discusses photography and cameras rather than the moving images and smartphones, her remarks regarding the overall passivity between space, viewer, and device may be carried into understanding the importance of AR as a medium.

The nostalgic and personal appeal of the device led to the development of stereoscopes, which achieved a sense of three-dimensionality and visual depth

²⁰ For Sontag, such quality certifies experience for those who are from societies dictated by a ruthless work ethic. She notes Germans, Japanese, and Americans as those who are subject to a need for "friendly imitation of work" when they are travelling to new places and justify having a vacation, which could be identified as an idleness, into something productive. Such notion is now more pervasive in most countries where mobile devices are widespread, since the "ruthless work ethic" that constituted these three societies is a cosmopolitan condition.

²¹ Susan Sontag, In Plato's Cave 15.

through optical modifications by overlapping two photographs. Contrived by Sir Charles Wheatstone in 1838, Professor of Experimental Physics at Kings College, the stereoscope is a device that combines two similarly taken photographs through using a stereograph “by converging outlines, distribution of light and shade, change of size, and of the texture of surfaces.”²² In “The Stereoscope and Stereograph”, an 1859 article featured in *Atlantic Monthly*, Oliver Wendell Holmes discusses the process of making daguerreotypes, photographs, and stereoscopes and the techniques of transforming a personal moment to an aesthetic experience. The tone that Holmes employs throughout his discussion is informative and easy to understand, while his fascination with the process and its outcome is evident as well.

The primary aim of Holmes’ writing seems like a reminder to acknowledge the complexity of photographic images that became so banal and widespread to many people during his time. In fact, the stereoscope was a commonplace item in many American households during its popularity between 1870 and 1910 until its expiration during the late 1930s.²³ Rather than being an object that was only enjoyed by the elite or a selected few that could understand its technological complexities, stereographs were ubiquitous in households and became a part of popular visual culture. It is estimated that approximately half of the 16 million households in the U.S. during the early 1900s owned the stereoscope holder and the

²² Oliver Wendell Holmes, “The Stereoscope and Stereograph,” *The Atlantic Monthly*, 3 No. 20 (1859).

²³ Jib Fowles, “Stereography and the Standardization of Vision”, *Journal of American Culture*, 17, no.2 (2004): 90.

set of stiff cards that were taken a few inches apart in order to give the viewer an experience of visual depth. Holmes used illustrations for the readers to understand the logic and science behind how binocular vision worked. The stereograph was able to juxtapose two photographs that were meticulously aligned to achieve three dimensionality:

If we look at a square piece of ivory with one eye alone, we cannot tell whether it is a scale of veneer, or the side of a cube, or the base of a pyramid, or the end of a prism. But if we now open the other eye, we shall see one or more of its sides, if it have any, and then know it to be a solid, and what kind of a solid. We see something with the second eye which we did not see with the first; in other words, the two eyes see different pictures of the same thing, for the obvious reason that they look from points two or three inches apart. By means of these two different views of an object, the mind, as it were, feels round it and gets an idea of its solidity. We clasp an object with our eyes, as with our arms, or with our hands, or with our thumb and finger, and then we know it to be something more than a surface. This, of course, is an illustration of the fact, rather than an explanation of its mechanism.²⁴

The subjects that were portrayed in the cards were often not models or aesthetically complex figures. Drew University's Methodist Archives owns a collection of stereographs that portray students, faculty, and various buildings of the university. It can be deduced from these figures that the primary function of the images was to preserve the university's history in a more personal way. The viewer is invited into the space and the environment that students occupy by looking through the stereoscope to the images that look congruous but are slightly different. Particularly, a stereoscopic image that features a group of students in front of the Mead Hall shows the power of such image delivery. The group consists of roughly twenty five students who are preparing take a

²⁴ Holmes, "The Stereoscope and Stereograph."

formal photograph [Fig 2]. Some students playfully stare at the camera while others interact with each other. The interaction of the students and the motion and expression of each figure is heightened and augmented by the three dimensionality of the subjects as they appear to the viewer looking through the stereoscopic viewer. The viewer feels like they are invited to partake in this camaraderie between the students who are about to pose for an important photograph in front of a university building.

In addition to the sense of personal connection, stereographs granted their viewers a sense of omnipotence. In the most elemental way, the viewer could hold the stereograph card on the device. The device then, become a source of power. In *Stereography and the Standardization of Vision*, Jib Fowles discusses the meaning behind the feelings associated with the popularity of stereographs. He explains the sense of agency the viewer attained by using the stereograph: “the sight did not tower over them; they powered over it. They did not have to accept the subject in its natural setting, which may have been alien and dreadful; wrenched away, the subject now existed within the viewer’s surroundings, within the comfort and security of the viewer’s home.”²⁵ Such qualities are easily visible in the cards that are available in the Methodist Archives. Including the photograph of the students, there is a focus on an architectural form or a sense of vastness that dominates the structure of each card.

Especially from a contemporary perspective, the initial shock that arose as a response to using a simple device and two photographic images to achieve three

²⁵ Fowles, “Stereography and the Standardization of Vision,” 91.

dimensionality may fade after repetitively seeing similar compositions of figures and landscapes. Jonathan Crary argues that the stereoscope is one major cultural site in which a “breach between tangibility and visuality is evident.”²⁶ Presumably the architectural and sculptural visuals that were experienced were products of a meticulous juxtaposition of photographs to achieve the desired sense depth. However, it is impossible to deny a clear sense of staged qualities in each stereographic experience, even when it emulates the “realness” of places and people that it depicts through three dimensionality. Holmes concludes his discussion of stereography by discussing its power to alter the way we interact with our surroundings:

There is only one Colosseum or Pantheon; but how many millions of potential negatives have they shed,--representatives of billions of pictures,--since they were erected! Matter in large masses must always be fixed and dear; form is cheap and transportable. We have got the fruit of creation now, and need not trouble ourselves with the core. Every conceivable object of Nature and Art will soon scale off its surface for us.²⁷

As Holmes noted, stereographs qualify as one of the first visual mass media where reality was captured, segmented, and standardized by the camera operator. Alongside its significance as a democratizing experience for the viewer, the stereograph was a precursor to film. Film as a medium may contain liberating qualities by exploring commonplace milieu under the ingenious guidance of the camera, the film. Similar to the way stereographs allowed the empowerment of sight to the user of the device, the close-up, expansion of space, and slow motion that the camera showed the viewer after

²⁶ Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, (Cambridge, MA: MIT Press, 1992), 19.

²⁷ Holmes, “The Stereoscope and the Stereograph.”

consciously exploring the physical space suggests that there is a sense of freedom and democratization that stems from the opening of a new realm. However, the stereograph also introduced a new sense of passivity to the viewer in relation to the screen by replacing the thoughts of the viewer with moving images, which spread faster and wider with the introduction of film and television.

Section II: Video Sculptures

The most essential component of experiencing film is the device in which we gain access to the projected moving image. The public becomes an absent-minded examiner of the moving image projected by the device. In response, many artists began to challenge the numbness that was brought by the moving images by creating works that use the same devices as the camera operator. In *Art as Experience*, the American philosopher John Dewey explains that “To see, to perceive, is more than to recognize...Identification nods and passes on.”²⁸ The camera techniques that were developed made the viewer a perceiver, rather than a recognizer. The reason why the images projected from the stereograph, film being projected on the cinema screen or television, or many images that we encounter on our mobile devices today do not seem to be an artistic experience is due to the fact that they are no longer bearers of meanings with directive intent.

Dewey regards the existence of art as a proof that man “is capable of restoring consciously, and thus on the plane of meaning, the union of sense, need,

²⁸ Dewey 24.

impulse, and action characteristic of the live creature.”²⁹ The conscious restoration that Dewey talks about makes the important distinction that we must understand in order to understand the impact of artists who use the device to criticize the passivity and the numbness of the viewer. The Canadian media theorist Marshall McLuhan notes that the collective public mind was susceptible to an intrusion from the media and critiques the helpless state of society engendered by a “prolonged mental rutting” brought by the media, specifically through advertisement and entertainment that were ultimately manipulative, exploitative, and controlling.³⁰ Though his writing was a response to the widespread presence of television in America during the 1960s, his presence is more visible in contemporary society. The widespread use of social media lets users both produce and consume the images and information they encounter in conjunction with the content injected by companies and firms. This is not only applicable to photographs that we encounter through social media, but also to video. The recent rise of Vine, Youtube, and Snapchat allow viewers to produce their own videos, which is an unprecedented method of video production and consumption. With the rise of image and video oriented interfaces based on mobile devices, viewers themselves are perpetuating the “mental rutting” that McLuhan identified. While consumerism was previously driven by advertisements on television or physical advertisement boards that could be identified as unreal, at

²⁹ Dewey 26.

³⁰ Michael Rush, *Video Art* (London: Thames&Hudson), 15.

present consumerism is driven and perpetuated by the lack of distinction between the real and unreal.

With the rise of social media platforms where users are both creators and consumers of the media created, the consumerist desire that was propelled by the media is now being self-perpetuated by the users. There is a the sense of disconnection, isolation, and senselessness during an age that is supposedly “connected” with the emergence of mobile phones. Identification of such a condition not only comes from personal experience but also is deduced from conversations with those who are active users of the interface provided by mobile phones. McLuhan notes that “all media, from the phonetic alphabet to the computer, are extensions of man that cause deep and lasting changes in him and transform his environment”, and the interactive interfaces created by mobile devices are not an exception.³¹ Moving images and photographs constitute the most radical challenges to our classical visual notions of image representation. As a result, understanding how contemporary viewers interact with the newly emerged technologies and devices are as important as the technologies and devices themselves, considering the level of dependency and passivity we have formed around the devices.

The most notable artistic criticism towards the device were video sculptures, a direct response to the dominance of television. By the 1960s, television became an essential part of almost every American household, significantly altering the development of mass culture and daily life. Such development was extremely rapid;

³¹ Marshall McLuhan, “The Playboy Interview: Marshall McLuhan, a candid conversation with the high priest of popcult and metaphysician of media.” interview by Eric Norden. *Playboy Magazine*, 1969.

by 1953 only sixty-six percent of American households owned television sets whereas by 1960 the percentage shot up to ninety percent, which is a dramatic dominance over a short period of time.³² Alongside the increase of television sets, there was a newly emerging, collective obsession with a feeling of immediacy. The new technology was able to capture real events instantaneously, and television as a medium created an obsession with “newness, intimacy, immediacy, involvement, and a sense of the present tense.”³³ Jonathan Crary³⁴ contrasts the interconnection of emerging global data networks with the digitization of consumer culture during the mid-1990s with the replacement of analog formats with digital formats such as photography, film, television, and recorded sound. Crary identifies the periods of “relative constancy in the functioning and cultural identity of a medium,” which could be observed in the mid-1950s to the early 1980s for television.³⁵ For Crary, the defining elements of current media culture during his time were the creation of emotional needs for images and data in relation to both individual and communal experience in media. Viewers became subject to the continued ‘necessities’ that were ceaselessly created and distributed and became passive to the media they encountered on their television. As a response to this passivity, artists began to use

³² Michael Rush, *Video Art* (London: Thames&Hudson), 15.

³³ *Ibid.*, 8.

³⁴ The essay was featured in an exhibition catalogue for *Outer and Inner Space: A Video Exhibition in Three Parts*, an exhibition at Virginia Museum of Fine Arts in 2002 that aimed to underscore the thematic continuities of the video sculptures that defined the medium throughout its development.

³⁵ Jonathan Knight Crary, “Perceptual Modulations: Reinventing the Spectator” in *Outer & Inner Space: Pipilotti Rist, Shirin Neshat, Jane & Louise Wilson and the History of Video Art*, ed. John B. Ravenal (Richmond: University of Washington Press), 23.

the moving image and television as a medium as an attack on the “interface of a commercial moving image.”³⁶ In relation to this passivity, the literal altering of the device was deemed as the most visually direct way in which the artists criticize the device in their practice.

A major characteristic of video sculpture is that it is a practice of detournement. The idea behind such practice is that the artist or activist appropriates an existing media artifact and alters its appearance in order to give it new meaning.³⁷ This idea, of course, has been an integral part of AR as a medium of activism. Considered as the father of video art, the Korea American Artist Nam June Paik’s practice stressed the interactivity of video art and challenged the traditional boundaries between the artist, artwork, and audience by combining elements of high entertainment with meaningful symbols. The artist’s interest in video developed as a response to his participation in Fluxus, where performances that laid foundations for body art and performance art were created in an attempt to counterattack the established mass culture. Amidst the movement, Paik was able to identify that television was at the crux of the distribution of the mass medium and created works that countered the controlled images that viewers saw on television. For example, *Fin de Siècle II* (1989)

[<https://gagosian.com/news/museum-exhibitions/2018/09/28/nam-june-paik-progra>

³⁶ Manovich 230.

³⁷ Mark Skwarek, “Augmented Reality Activism”, in *Augmented Reality Art: From an Emerging Technology to a Novel Creative Medium*, ed. Vladimir Geroimenko (Cham: Springer International Publishing AG), 8.

[mmed-rules-codes-and-choreographies-art-19652018/](#)] was recently featured at the Whitney as a part of *Programmed: Rules, Codes, and Choreographies in Art, 1965–2018*. The seven channel installation is composed with 207 televisions and a sound system, the scale of the work itself already dominates the viewer that looks at the sculpture from below. Each television (or the ones that are restored) features fragments that Paik chose from previously aired television programs and edited to give them a newly defined visual characteristics. When it comes to using the physicality of the monitor itself, it is noted that the artist's objective has always been to treat the television monitor as "comprehensible in its own right as part of a sculpture, not as a mere conveyance for the picture it screens", and *Fin de Siecle II* embodies the duality of media as an extremely enticing yet dangerous matter.³⁸ The ecstatic changing of images with the fast paced music amplifies the feeling of sensory overload, creating a kaleidoscopic effect to the viewer.

The strength of video installations is that they allow viewers to make decisions regarding where to look and process, deduct, and assimilate the disconnected information presented to them. This quality of the works of art successfully counters the image consumerism introduced by photography. Going back to Susan Sontag's discussion of photography, experience is eliminated with the advent and popularity of photography and how it has become one of the principal devices for experiencing anything. With the introduction of the camera, what is worth seeing is now being equated to what is worth

³⁸ Ibid., 230.

experiencing. “Having an experience becomes identical with taking a photography of it, and participating in a public event comes more and more to be equivalent to looking at it in photographed form.”³⁹ The physical presence of the body alongside the physical quality of site and event constitute having an “experience”, and such ability is now usurped by the introduction of the device. As a result, we can see that beyond the mental passivity the viewer develops in response to the device, there is a passivity that develops in a physical manner.

In response to this physical passivity developed after the rise of television, artists began to create works that were meant to “strike back” to the “attacker”, which has not been a case for other mass media devices⁴⁰ such as the stereograph, photograph, or even radio. Through the creation of this artistic practice, the identity of the viewer started to become a notable characteristic of subsequent artistic practices. Following Paik’s practices, more artists began to use the physical and material quality of the television as a field of creation. The particular point of convergence between video installation and site-specificity and AR is the conscious placement of the screen in order to encourage a gestural viewing experience to the viewer. For example, Dara Birnbaum’s two channel video installation *Attack Piece* (1975)

[<https://thechart.me/being-present-in-the-space-of-video/>] embodies Marshall McLuhan’s criticism of the rise of highly commercial media and its intrusion to mass culture.

³⁹ Sontag, “In Plato’s Cave”, 24.

⁴⁰ As discussed in the introduction, by discussion of the passivity developed regarding mass media devices mainly comes from Marshall McLuhan’s various writings and critiques.

Particularly, the piece engages with the notion of “attacker” that Paik mentions. The composition of the work is simplistic. It features two walls that face each other at a distance. Each monitor on the wall projects images that were taken by Birnbaum and her peers. The screen that plays the moving image from Birnbaum’s camera shows the attackers while the other screens show moving image from the attackers’ cameras that show Birnbaum being attacked. The overall focus on the belligerence and intrusiveness of the attackers⁴¹ can be considered as a criticism towards the invasiveness of mass media and television culture in the most mundane elements of daily life.

Birnbaum grants television a sculptural quality and the viewer an opportunity to have a physical activation while viewing this work. Through the set up, Birnbaum encourages the viewer to actively engage with the screens, using their motions to view and experience the work. This, in a way, is a commentary and a challenge to the passivity that had been established as a result of the obsession over screen culture; the viewers just sat in front of the screen and watched what was projected at them. As a response to this passivity, Birnbaum deploys the screen interface as an activation space for the conventionally passive viewer, offering a kinetic, sensory experience when viewing video.

There is a tension created by the dynamic movements of the subjects that are photographed versus the stillness of the spectator, which contests the power granted to the media and the viewer’s passiveness and the inability to resist. A similar focus on

⁴¹ Another major point of the work is the gender tension between Birnbaum as a female and the attackers as male, showing the multitude of critical engagement that Birnbaum displayed in her practice.

activation through motion can be observed in Earnst Caramelle's *Video-Ping-Pong* (1974) [<https://www.mumok.at/en/events/ernst-caramelle>], in which the artist examines the relationship between the physical body of the viewer and video by juxtaposing two monitors that are on a life-size scale pedestal with a recording of two players next to a ping pong table. Visually, the life-size depictions of figures almost seems like a warning of how the media may replace the existence of human beings. Physically, the work requires the viewer to twist or turn their bodies according to the direction of the exchange between the two players that are recorded in the video. Once again, there is a sense of activation through the use of video sculpture. Its physical existence is a direct, tangible response to the emergence of media that surged during the two artists' time. The gestural dynamism encouraged by the work parallels the importance of the active body of the viewer in relation to site-specific art or AR works that I have discussed throughout this section.

Section III: Site-Specific Art

AR art's ability to offer agency and ability to the passive viewer by its engagement with the mobile device also extends to the redefinition of their relationship with existing spaces through their device. With the introduction of AR, the walls of buildings and empty spaces now become canvases for AR artists, and a possible work of art to viewers with mobile devices. Each element becomes critical to experiencing AR works, which is notably different from viewing a sculpture or a painting that was created in a studio. Even though the artist creates the work digitally, the site that they choose to

display their work becomes an essential part of their work. Even if they find a site in which they can create their work, the viewer and their mobile device are equally as significant since the visibility of their work is contingent on the other two factors. This quality of AR art parallels the idea of “to remove the work is to destroy the work”⁴² manifested by site-specific art. For this practice, site serves two primary functions: it provides a physical space in which the artwork can take residency to be present and becomes a place of interpretation for the artist, often in political and economical terms.

Miwon Kwon, in *One Place after Another: Site-Specific Art and Locational Identity*, examines the history and the development of site-specific art that began in the late 1960s. Kwon notes that the defining characteristic of site-specific art is its ability to explore the notion of space no longer as a static field that we traverse over time. Instead, it is a medium to be dismantled at will. As mentioned above, the dismantling of space is a primary characteristic of AR, for it allows the artist to dismantle an existing physical space with their digital construction. The need for such practice came about as a reaction to the growing commodification of art during this time and embraced highly politically progressive ideas⁴³, mainly regarding the politics and authority manifested by certain locations. The main subject of criticism for site-specific artists during the beginning of

⁴² This defining quote of site-specific art was said by Richard Serra after he got requests for his public art installation *Tilted Arc* that he produced for U.S. General Services Administration. He thought removing the work from the original space would efface the meaning of the entire work. Serra urged that the deviation from the original intention of the work would mean that the work would make it no different than a pile of steel.

⁴³ Kwon notes the intersection of and art, process art, performance art, conceptual art, installation art, institutional critique, community-based art, and public art with site-specific art overall. Though site-specific art is not an umbrella term for all of these movements, the idea of “site” best relates to the overall discussion of AR art, which includes all of the noted movements in itself as well.

the movement was commercial art galleries and museums. Artists such as Fred Wilson and Mierle Laderman Ukeles were the pioneering figures amongst these early site-specific artists who protested museums in their practices.

Ukeles did this by performing domestic activities at the Wadsworth Atheneum in Hartford Connecticut, protesting the hierarchical system of labor relations and gendered division between the notion of public and private. In this performance, she washed the entire museum plaza for four hours. Therefore, the space in which the work was performed was the primary agent of the art. Ukeles performing the same activity anywhere else would not have been conducive to transmitting her intended message, which was to bring forward the structural dependence of the museum to maintain its immaculate visual appeal on these domestic and undervalued tasks.⁴⁴ The museum also became a site of activation for Fred Wilson's *Mining the Museum* (1992), in which he took the museum's collection and re-structured them for a display in order to highlight the often-underrepresented figures in art history and museums.⁴⁵ Going back to the manifesto by Manifest AR., we can see the how the way AR artists are installing works that challenge the authority of the "Elite Purveyors of Public and Artistic Policy"⁴⁶ parallels with the way Wilson and Ukeles challenged the authority of museums by creating site-specific works.

⁴⁴ Miwon Kwon, *One Place After Another: Site-Specific Art and Locational Identity* (Cambridge: MIT Press, 2004), 19.

⁴⁵ Ibid., 50.

⁴⁶ The phrase is taken from the AR Manifesto.

As more artists began to participate in the movement, site-specific art as a movement associated itself with non-art spaces, non-art institutions, and non-art issues in order to make art more relevant to many forms of cultural work. “Deeming the focus on the social nature of art's production and reception to be too exclusive, even elitist, this expanded engagement with culture favors "public" sites outside the traditional confines of art in physical and intellectual terms.”⁴⁷ Similarly, most of the early works of AR were utilized by activists as digital graffiti. In *Augmented Reality Graffiti and Street Art*, Australian media academic and digital artist Ian Gwilt notes that even before the advent of digital augmentation, graffiti enhanced real world locations to provide social commentary on utilitarian city infrastructures.⁴⁸ The notable forte of AR activism compared to site-specific art or conventional graffiti is that it no longer deals with the physical realm that can be censored or deterred by the institutions or establishments that they are being overlaid on. It does not have to be sanctioned by an institution nor can be easily removed or stopped, since there are not any ways to prohibit the mobile applications that are on the viewer's phones. In addition to its wide availability for distribution, AR art is relatively easy and inexpensive to create for the artist, which eliminates the shortcomings that were faced by graffiti artists and site-specific artists.

⁴⁷ Miwon Kwon, “One Place after Another: Notes on Site Specificity,” *October*, Vol. 80. (Spring, 1997): 91.

⁴⁸ Ian Gwilt, “Augmented Reality Graffiti and Street Art” in *Augmented Reality Art: From an Emerging Technology to a Novel Creative Medium*, ed. Vladimir Geroimenko (Cham: Springer International Publishing AG), 227.

Chapter 2: MoMAR: A Case Study

As mentioned earlier, the defining characteristic of AR art is its interventionist nature. Just like video sculpture artists tried to contest the passivity that was created by television and mass media, AR artists are attempting to activate the viewing experience through allowing a physical movement of the body in relation to the device. Though the practices of AR artists are not direct criticisms of the device, the newly introduced identity and function of the device as a “window to the world” which did not exist before, now allows a sense of agency to the passive viewer. By offering art historical precedents regarding anti-elitist, viewer-centric, site-specific works, I have now set a conceptual framework to understand the aim of MoMAR and its significance in offering an alternative experience to the viewer that has long been passive in relation to the device. MoMAR is a case study of how AR artists challenge established and conventional institutions, otherwise known as the “white-cube” spaces. The ability of the device to access the unsanctioned works from these institutions, such as MoMAR, sharply distinguish AR art from site-specific art or video installation.

Lev Manovich’s holistic approach to augmented space specifically ties AR with the major ideologies that dictated the development of art viewing practice in the 20th century. Manovich discusses the active experience and reconfiguration of space brought by AR, which relates to the question of how viewers interact with their device to engage with their surroundings. In *The Poetics of Augmented Space; Learning from Prada*, Lev

Manovich compares times when the virtual and physical were separated. Unlike when desktop computers and cables were separated from physical reality, contemporary media experience is now dominated by wireless and mobile devices with cameras and screens. According to Manovich, the distinction between virtual space and the physical space is now eliminated, and architects and city planners must reconfigure the way they build in these “augmented spaces”.⁴⁹ He argues that contemporary architectural practice should adapt to the merging of the virtual data space and physical space by viewing the walls of architectural space as a new information surface. In doing so, Manovich notes the importance of regarding augmentation as an “idea and cultural and aesthetic practice rather than as technology.”⁵⁰ His primary idea of augmentation of space developed far before the development of any technology that constitutes AR technology, which is an important concept to understand throughout the discussion of artists who use AR as a medium.

Manovich applies this discussion to the dominance of two-dimensional display of art before any digital technology or virtual space was developed. He notes that Vladimir Tatlin’s early 1900s three-dimensional counter reliefs was an impetus for the activation of the viewing space from a flat and two-dimensional composition to a three-dimensional construction. “Augmented space can be thought of as the next step in the trajectory from a flat wall to a 3-D space which has animated modern art for the last hundred years.”⁵¹

⁴⁹ Lev Manovich, “The Poetics of Augmented Space,” *Visual Communication* 5, no. 2 (2006): 220.

⁵⁰ Ibid., 222.

⁵¹ Ibid., 227.

After Tatlin, artists began to use all of the exhibition space which led to the development of the “white cube” in the following decades. This allowed for the development of assemblage in the mid-50s, minimal sculpture in the 60s, and installation between the 70s and 80s. After the introduction of video and its complete dominance in media culture, the surface in which video was projected became a way of criticizing the passivity that was developed as a response to the screen. While the movie theater was characterized by the “rigidity of its interface”, video projected in these white cube galleries were ways to criticize this mass-produced culture.⁵² This shows that the “white cube” itself began to gain a sense of authority and a surface to be reconfigured.

By adding unsanctioned images to curated canvases, MoMAR creates a visual interchange between the projected media and the mobile device. The mimetic element of using AR to access works is the significant characteristic that makes the medium attractive to the contemporary viewer. This interchange allows the AR works on display to have a direct visual connection to Pollock’s practice, both ideologically and physically. Works by Pollock play a double sided role in MoMAR. How Pollock rose to fame and how his works are now being displayed at the Museum of Modern Art (MoMA) will be an important discussion point in this chapter. While Pollock’s works create a physical connection between the viewer and the canvas, it is important to consider the general criticism and skepticism towards Pollock and his iconic status. Though his work is captivating and his stance as a pioneer in his practice is notable and laudable, it is also

⁵² Ibid., 230.

important to critically assess how he became “America’s Greatest Painter” and has continuously been championed by the MoMA and other major art institutions. For this discussion, I will briefly discuss the role of critics such as Harold Rosenberg and Clement Greenberg on the rise of Pollock and the problems that arise with this one-sided narrative. This discussion will show that MoMAR is criticizing the limited and severely skewed art historical narrative of MoMA and allowing new stories to be transmitted to the viewers.

One clear distinction that needs to be made is that MoMAR is not the same collective as the members Manifest. AR and those who were behind *We Art at MoMA* (2010). However, the main description of the MoMAR exhibition clearly pays its homage and acknowledgements to these movements. The online exhibition description reads as follows:

In 1683, a private collection of natural history curiosities was donated to the University of Oxford. The collection was later opened to the public. The Ashmolean Museum thus became the first permanent public exhibition housed by a corporation. The act of “opening art to the public” simultaneously closes its definition to the commons; explicitly defining both space and art as exclusive and invulnerable. As with any establishment – be they media, church or government – the richest of galleries are canonized, to the point where the public’s role and contribution is reduced to passive observer. If we are to understand that art is the great measure of our culture we must also acknowledge it is owned, valued and defined by ‘the elite.’ We must also recognize then that the term “open to the public” is not an invitation, but a declaration of values. Values that are not our own. And so it has remained for 335 years. Until now. Welcome to MoMAR. An unauthorized gallery concept aimed at democratizing physical exhibition spaces, museums, and the curation of art within them. MoMAR is non-profit, non-owned, and exists in the absence of any privatized structures.⁵³

The most notable difference between *We Art at MoMA* and MoMAR is the fact that while the first case engaged the entire museum, MoMAR is specifically in the

⁵³ MoMAR, *About*.

Jackson Pollock room at the MoMA. The exhibition currently features works by David Kraftsow, a programmer and artist who uses pixelated images from Youtube to create interesting visual effects. Seven works⁵⁴ by Pollock in the Jackson Pollock room transform to either a moving image or a stagnant compilation of pixels that were created by Kraftsow. Despite their pixelated qualities, Kraftsow's work are meshed in unintended and blurred ways and achieve a painterly quality by rendering forms and images in terms of color or tonal relations [Fig 6]. Though it is important to talk about the visual effect of viewing the work, the most notable aspect of viewing Kraftsow's work is the physical experience of using my mobile device to view these works, particularly over Jackson Pollock paintings.

In *The American Action Painters*, American critic Harold Rosenberg states that “the new American painting is not ‘pure’ art, since the extrusion of the object was not for the sake of the aesthetic.”⁵⁵ He also notes the liberating qualities of the gesture on the canvas, from all “value: political, aesthetic, moral” that the painter might face. Such an idea is imposed on the viewer who is experiencing works of AR, by challenging pre-established aesthetic values and providing a mimetic experience.

⁵⁴ The Seven works that were on view in the gallery are as follows: *The She-Wolf* (1943), *Shimmering Substance* (1946), *Full Fathom Five* (1947), *One: Number 31, 1950* (1950), *Echo: Number 25, 1951* (1951), *Easter and the Totem* (1953), *White Light* (1954).

⁵⁵ Harold Rosenberg, “American Action Painters,” *Art News* (1952).

Gesture was a fundamental component in Pollock's practice. In *The Fate of a Gesture*, Carter Ratcliff expands upon Pollock's remark that "the modern artist is working with space and time" by suggesting that his words came alive during his practice.

Pollock's words came alive only when we see that, for him, to work with space and time was to paint what he became in his wildest imaginings: the artist as Nature, coincident with the universe. In Pollock's aesthetics, creative self and created world are one. Making that unity visible, gesturing it into being, he felt redeemed. Idle, he felt damned.⁵⁶

Similarly, gesturing grants a critical essence and character to the overall AR experience as well. Without the viewer holding their device and using their gesture to scan their surrounding and activate the work, the work does not exist. The blank canvas itself is an arena of action and expression for Pollock, and paintings of Pollock at the MoMA come to life by projecting themselves in this visual construction.

When I first discovered MoMAR, I thought the reason why its founders chose the Pollock room was for practicality and accessibility, since many people who go to the MoMA visit the Pollock room due to its popularity. However, there is a link between Pollock's practice that was dictated by action and the viewing experience that the viewer gets to experience by using their bodies. This particular link is best noticed and experienced in the room. In fact, I was unable to see the connection prior to my visit, even after reading the description of the exhibition online and knowing the fact that the installation was in the Jackson Pollock room. This experience shows that the physical presence of the viewer is an essential component of viewing the work for its particular

⁵⁶ Carter Ratcliff, *The Fate of a Gesture: Jackson Pollock and Postwar American Art* (New York: Farrar, Straus, Giroux, 1966), 87.

setting. The importance of the physical experience in fully grasping the artwork has been a central theme throughout my discussion of video installation and site specific art. Video artists transmitted this by using television screens to activate the viewer's physical body, and site-specific artists by requiring the presence of the viewer to complete the meaning of the work. Similarly, MoMAR allows the user to physically engage with the device for the projected image to move according to their movement while giving special meaning and context to the visual background of the space that the viewer occupies. The visual background, of course, is made by Jackson Pollock, an action painter who used his whole body to paint, and his works reflected the movements of his body in his practice. The gaze of the viewer is, therefore, traveling between Pollock and Krafsov's works, while the viewer is also required to move around in order to experience all works featured. Without the visual connection to Pollock, the total meaning of the work and the experience the artist tries to create for the viewer is incomplete.

The visual construction of Pollock's works are important to note while discussing its role as a canvas to MoMAR. The works that are featured in the exhibition room were all made between 1943 and 1954, a period particularly known as a transition from the easel to mural or wall picture. Particularly in the spring of 1947 through 1950, Pollock remained at a "half-way state" between the two practices, which led to alloverness and the pouring technique that so clearly define his identity as an artist today. Elizabeth Frank observes that by staying with his feeling through his bodily motion with pouring, Pollock achieved a full statement of the sublime in a cool and distant transcendence of the

material.⁵⁷ The defining idea that dictated this process was “alloverness”, which showed Pollock’s conscious decision to avoid the inimical and psychic censorship that could be transmitted with the brush and brushstrokes on an easel painting in his practice.

Pouring, in that sense, was a liberation that Pollock wanted to give the viewer to have an opportunity to have a greater contact with their unconscious. For instance, in *Shimmering Substance* (1946) [<https://www.moma.org/collection/works/78376>] that is on display at the Pollock Room at the MoMA, the work’s heavily crusted surface is constructed by the palette knife and heavy oil paint that was squeezed directly from the tube onto the canvas.⁵⁸ The 1946 work shows a territory in which Pollock truly begins to embrace the idea of “alloverness” by communicating immediacy and spontaneity in his work, compared to works that were more aligned with cubism that he created prior to this year. Similarly, in *Full Fathom Five* (1947) [https://www.moma.org/collection/works/79070?locale=en&location_id=Room_34&page=1&sov_referrer=location], another work that is present in the gallery, Pollock inserted nails, tacks, buttons, keys, combs, cigarettes, and matches—“metaphors, in a sense, for the traditional drawing relentlessly swallowed by the arabesque line that tears through the thick passages of white, green, orange, and magenta.”⁵⁹ These two works, alongside other earlier and small scale works, are significant to my discussion as Pollock’s oeuvre and their importance as precursors to action painting. The idea that Pollock strived to create a

⁵⁷ Elizabeth Frank, *Jackson Pollock* (New York: Abbeville Press, 1983), 66.

⁵⁸ Bernard Harper Friedman, *Jackson Pollock: Energy Made Visible* (New York: McGraw Hill, 1973), 95-96.

⁵⁹ Frank, *Jackson Pollock*, 66.

new space for painting and the viewer also parallels with the challenging of space and practice that AR artists demonstrate. The fact that Pollock's work acts as a canvas for Kraftsow's work provides a straightforwardly visual connection between these two spheres and their ideological connection. However, the size of the work plays an important role besides granting the viewer a presence, and the sense of completeness for the entire experience depends on the size of the work.

During my case study, the most impactful and memorable experience occurred with *One: Number 31, 1950*

[https://www.moma.org/collection/works/78386?locale=en&location_id=Room_34&page=1&sov_referrer=location], the largest work that occupies an entire wall of the gallery.

The AR works that were displayed on smaller scale works were not as engaging as the experience I had with *One: Number 31, 1950* because they felt like expansions of the usual mobile experience; that is, the fact that I was waiting for my screen to show me the work still remained to a certain degree. What does the 8' 10" x 17' 5 5/8" scale offer that is so distinct from the works that are displayed in the rest of the gallery? It encourages the viewer to move backwards or sideways to view the entirety of the work. Their movement activates the screen and projects the image that they want to see. Then their gaze travels to the canvas and sees Pollock's work, and then returns to their body as they make the conscious decision to move their body to another part of the work.

The size of the painting also emphasizes the conscious demarcation between the picture and the real space that Pollock achieves in the field of his painting with the

tracery of the poured paint. Michael Fried characterizes the visual field created by Pollock as optical because it “addresses itself to eyesight alone.”⁶⁰ What this means is that the rhythmic lines that were constructed by pouring and dripping were Pollock’s active acknowledgement that the frame is the ultimate context of painting. In that sense, the fact that line and color were functioning as wholly autonomous pictorial elements rather than components of purpose, creating a space in which “conditions of seeing prevail rather than one in which objects exist, flat shapes are juxtaposed or physical events transpire.”⁶¹ This idea accounts for the dynamic experience the viewer is able to have when viewing Pollock’s large-scale dripping works such as *One*. Typically, the viewer is completely disengaged with their surroundings while using their mobile device. As a result, moving with a screen to reveal more about his surroundings is an unusual activity to the viewer who is used to both being physically and mentally passive in relation to their mobile devices. Experiencing AR on a large size work, therefore, marks a sense of presence and emphasizes the physical presence of the viewer in relation to the virtual and digital.

Though the overall MoMAR experience is unique and memorable, there is also a sense of “gimmickiness” as the viewers try to move around the busy and compact gallery space with a mobile phone in front of their face. The theoretical connection between Pollock’s gesture and the viewer’s gesture is important. However, in terms of providing real experience, there is still a sense of incompleteness and visual shortcoming. This is

⁶⁰ Frank, *Jackson Pollock*, 68.

⁶¹ *Ibid.*

why the idea behind the projected image criticizing Pollock and MoMAR is particularly important. Pollock's art itself is often viewed with skepticism from the general public. Despite his art historical significance and success in expanding our understanding of certain aspects of art, Pollock is by some considered to be an "overrated" artist.

A key figure who contributed to the rise of Pollock is Clement Greenberg, the American art critic who was at the forefront of American Modern art of the mid-20th century. One of the ideas that he continuously promoted in his writing was abstract expressionism, which included praising Pollock's practice and putting it above other practices. In *The Decorative, Abstraction, and the Hierarchy of Art and Craft in the Art Criticism of Clement Greenberg*, Elissa Auther examines the way Greenberg began to put a hierarchy in what was considered 'art' and 'decorative' and that his pursuit of "purity in painting" that was embodied by Pollock and other artists of his favor "was achieved through an obsessive suppression of the decorative that also functioned to maintain the hierarchy of art and craft with significant consequences for artistic practice in the post-1945 era."⁶² Though the aim of this chapter and overall thesis is not to examine the validity of Pollock's artistic significance, Auther's point on how one particular practice was pushed forward by eliminating the other is important to note in terms of understanding MoMAR's overall intention and the strength of AR as a medium to break down the visual hierarchy that was established by critics and perpetuated by institutions such as MoMA that continued to embrace and promote this exclusive narrative in their

⁶² Elissa Auther, "The Decorative, Abstraction, and the Hierarchy of Art and Craft in the Art Criticism of Clement Greenberg," *Oxford Art Journal* 27 No.3 (2004): 342.

exhibition spaces. As a result, revisiting AR art's essential quality as an interventionist and critical medium and examining how Pollock gained his monumental art historical significance shows that the MoMAR's decision to use Pollock as a canvas is not only to provide gestural connection to Pollock's work but also to criticize the narrative in which he rose to fame and continues to emphasize his stance as the 'iconic' figure in the history of art. While being a reference point to the user, Pollock's paintings themselves become subjects of criticism, which becomes connected to the criticism towards MoMA's limited art historical narrative.

Chapter 3: Tamiko Thiel and the Implications of Her Practice

This chapter will discuss Tamiko Thiel's trajectory as an interventionist artist. Particularly, I will discuss the ideology behind her previous practices and the implications of her recent shift towards creating work that fits into an institutional narrative. Thiel is one of the leading artists who have been shaping the production of AR works. She was the founding member of Manifest.AR, a movement for AR artists who are critically engaging with physical spaces.

In the 21st Century, Screens are no longer Borders. Cameras are no longer Memories. With AR the Virtual augments and enhances the Real, setting the Material World in a dialogue with Space and Time....With AR we install, revise, permeate, simulate, expose, decorate, crack, infest and unmask Public Institutions,

Identities and Objects previously held by Elite Purveyors of Public and Artistic Policy in the so-called Physical Real.⁶³

The text above is an excerpt from the AR Manifesto that was written by the 8 founding members of the cyberartist group Manifest.AR. and was signed by 14 other artists from Canada, U.S., Japan, and China. As the manifesto states, AR artists are reconfiguring the surfaces that they are encountering on a daily basis by creating visual modifications to challenge the notion of established space and surface. Thiel herself has been actively creating unsanctioned works that criticize the power of the institution and emphasized the liberating power of the device, as stated in the AR Manifesto.

In addition to engaging with site, device, and the viewer, Thiel also explores the notion of cultural identity in her practice.⁶⁴ Her essay *Critical Interventions into Canonical Spaces: Augmented Reality at the 2011 and Istanbul Biennials*⁶⁵ discusses the interventionist qualities of AR art that challenge and exploit the primacy of site as canvas and context through the specific group of works that she created as a response to international biennials. Thiel explains the process behind creating *Shades of Absence [Venice, Istanbul, Brooklyn, Los Angeles]* (2011) [<http://mission-base.com/tamiko/projects.html>.] was to challenge the authority and the overlooked components of these established Biennials that overshadowed the problems that were faced by the artistic communities in these host cities. This approach parallels

⁶³ Manifest. AR, "The AR Art Manifesto" <http://manifest-ar.art/> (accessed March 17, 2019).

⁶⁴ Tamiko Thiel, "Biography" *Tamiko Thiel Online Portfolio* <http://mission-base.com/tamiko/cv.html#Bio> (accessed March 17, 2019).

⁶⁵ Though the text only discusses AR interventions for two Biennials in 2011, the series of interventions later expand to Los Angeles and Brooklyn to engage with two other major cities that host biennials.

the practice of site-specific artists that were discussed earlier in Chapter 1. For example, Mierle Laderman Ukeles uncovered the layers of different components that comprise an image of prestige that was held by the museum by performing a domestic and banal task in a specific space. Similarly, Thiel examines the implications behind hosting a biennale, a seemingly intellectual and artistic series of events, and how it censors certain artists and overshadows the apparent political problems that are happening in their host cities.

Thiel notes the association between the biennale, the cultural and military history of the host city, and its contemporary problems. Both Venice and Istanbul are contemporary remains of glorious past of memorable empires with ample culture. For Venice, the artists tried to bring attention the city's battle with climate change and its struggle in keeping the Biennale relevant in a globalized world that produces artists that are no longer confined to a single country of origin. For Istanbul, the civil tensions that were created by the authorities that tried to censor the journalists and the political bureaucracy to use jail sentences as a weapon of intimidation was brought to attention.⁶⁶ Each intervention featured a great number of works by multiple artists that addressed the unique problems of both the city and the organization of the biennial.

Prior to detailing the ideology behind the specific intervention, Thiel explains the impetus of Manifest.AR as a whole. She first notes that the first intervention, which was

⁶⁶ Tamiko Thiel, "Critical Interventions into Canonical Spaces: Augmented Reality at the 2011 Venice and Istanbul Biennials," in *Augmented Reality Art: From an Emerging Technology to a Novel Creative Medium*, ed. Vladimir Geroimenko (Cham: Springer International Publishing AG), 62.

to takeover the MoMA was organized by Sander Veenhof and Mark Skwarek⁶⁷ after they realized that the institutional walls of the white cube were no longer solid. This parallels the way site-specific art first began to form as a protest of the power granted to highly commercialized galleries. Thiel also notes the characteristic of AR that transcends beyond the conceptual associations of memory and culture and discusses the physical engagement that comes with the experience.

Usually the viewer must search the surroundings to find the augment, like bird-watchers scanning with binoculars, or must walk the site dodging real-world obstacles in order to experience the artwork in its totality. Thus, though the artwork is virtual, the viewer must engage physically with the site to experience it—an act which engages the kinesthetic sense of the viewer's body and thus situates the viewer and the act of viewing in the physical experience of that site.

This discussion ties back to the importance of the physical experience in relation to the artwork, which has been embraced by Birnbaum and Caramelle by the way they used the television screens to activate the viewer's physical body. It also begins to overlap with the components of site-specific art by requiring the presence of the viewer. Harriet Hawkins, a British cultural geographer, explains that “to experience an installation involves installing one's body and in particular being installed as a body.”⁶⁸ This primary quality of the viewing experience is often overlooked while the viewer and the historians

⁶⁷ The two artists are vanguards of these movements. They were both a part of the Venice and Istanbul Biennial intervention. Specifically Mark Skwarek is a primary artist that almost all literature regarding AR art refer to when they talk about interventionist art. His most notable practices are related to culture jamming, which specifically targeted corporations and advertisement by re-figuring logos, fashion statements, and product images. For example, his work *the leak in your hometown* would recognize a BP logo that was located in various BP oil stations to criticize the BP oil pipe leak disaster in the Gulf of Mexico in the summer of 2019.

⁶⁸ Harriet Hawkins, “‘The Argument of the Eye’? The Cultural Geographies of Installation Art,” *Cultural Geographies* 17, No.3 (2010): 324.

are too preoccupied with understanding the context of the work rather than the physical, tangible experience they are living while they are viewing the work. Particularly for AR art, such a quality is particularly important to note because the kinesthetic experience that the viewer experiences signals a liberation from the long-held passivity that they have developed in relation to the device, as I have discussed earlier in relation to video sculptures.

Thiel also has an experience with *We Art at MoMA (2010)*⁶⁹, in which the group “interjected” the Museum of Modern Art and overlaid their own work on top of existing works. Thiel, in describing her own experience as a part of Manifest.AR, says that the most notable power of AR intervention at the MoMA was moving an intervention from a public space such as Central Park to a curatorial closed space inside the “sacred” walls of MoMA. She discusses that altering the works of artists who were chosen to be displayed in the institution endows the work of with the aura⁷⁰ of objects canonized by the establishment, which seems to be on the continuum of the spirit of what site-specific artists desired to show. Even beyond the Venice and Istanbul Biennials intervention, Thiel created multiple works that have demonstrated her zeal towards promoting these characteristics of AR in her practice. *Reign of Gold [NYC, Berlin, Los Angeles, Sydney,*

⁶⁹ Thiel notes this intervention as the first activity of Manifest.AR. The intervention aims to do the same exact thing as MoMAR, except it was established in 2010 and seems to have discontinued.

⁷⁰ The aura of the object is a notion that is discussed by Walter Benjamin in *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*, in which he talks about the reversed function of art work with the advent of the technological advancement. Though his writing is not directly featured in my writing, his ideas regarding the impact of the device and machine in relation to the work of art has been a fundamental source of insight for understanding various writings that I have encountered throughout my research.

Tampa] (2012) was created to support the Occupy Wall Street movement and offer an artistic response to the sites that were associated with the corrupt and problematic system, such as the New York Stock Exchange or the Charging Bull.

This is why revisiting Thiel's *Unexpected Growth* may be beneficial, particularly following the in-depth discussions regarding AR's primary characteristics. Thiel explains that "Augmented Reality Art is the Street Art of the 21st century – especially for artists with bad knees and fear of heights," which shows Thiel self-identifying her own practice as what is synonymical to street art, a public and interventionist practice that challenges the order set by an authority.⁷¹ As a result, it is notable that she decided to create a work that is an official part of an exhibition that is organized in a traditional space that may be considered as the "elite purveyor" that she and her colleagues critiqued all throughout their practice and strip away from an essential quality of AR as an interventionist medium. Her work featured in *Programmed: Rules, Codes, and Choreographies in Art, 1965–2018* aligns more closely with the video installations that are featured in the exhibition rather than an AR work. There are a few notable achievements of the work. Firstly, it re-configures the existing blank space in the gallery with a digital image and encourages the viewer to engage the device in order to do so. In addition, it shows that AR is now recognized as a medium on its own to be featured in museums, and its ability to offer a visual deconstruction of space is still being transmitted to the viewer.

⁷¹ Tamiko Thiel, "Interview, Artist, Artwork", interviewed by Lanfranco Aceti & Richard Rinehart. *Leonardo Electronic Almanac* 19 No. 2. (2013): 212.

However, the technology and device heavy focus of the overall exhibition feels like it defeats the purpose of the other significant characteristics of what the AR artists have tried to achieve in their practice so far. The moving image to be projected was already approved by the institution, and the movement of the viewer was strictly confined and controlled by the fixed devices that were present. The driving force behind Thiel's practice is her personal connection to the notion of space. What makes her practice so geared towards the memories and cultural implications that compose a physical space is reflective in the works that I have discussed so far. However, her fundamental understanding of what composes a space is also a critical factor in her success in creating these works. Thiel, beyond the technical understanding of this notion, has a very personal connection with how she discovered and developed these ideas. In an interview, she explains her personal background with spaces.

Although I was born in the USA, my family moved to Japan for a few years when I was two, and again when I was ten. What Margaret Wertheim describes as a “dualistic cosmology encompassing both body space and ‘soul-space’ – that is, a physical space of matter and an immaterial space of spirit” I was very present where we lived in Japan. Statues and figures of Buddhist bodhisattvas and Shinto gods populated the world, trees and rocks were marked with sacred ropes identifying them as powerful spirits, and I played around the tomb of the first Shogun Yoritomo and his brother Yoshitsune, the basis of countless Japanese legends and plays. Each time I returned to the USA it seemed barren and empty in comparison, lacking the densely and intensely populated invisible but tangible parallel world that Japan seemed to have. I later realized that for Native Americans the continent has always had this parallel world, but the invading European settlers had wiped sited memory clean of most of these references.⁷²

⁷² Tamiko Thiel, “Interview, Statement, Artwork” 216.

Though highly biographical, this idea of differing spaces depending on cultural notions is a clearly visible moving force behind her practice. Thiel explains that she feels like she is creating visual bridges between the everyday physical and visible worlds. She understands the importance of physical and mental presence when an individual is having a spatial experience. As a result, her works are always nuanced and transmit feelings and emotions even though they are essentially digital projections in physical spaces. Prior to the exhibition at the Whitney, Thiel created a few works⁷³ that were parts of official exhibitions or commissioned by specific museums; however, they were always direct responses to the site's cultural history⁷⁴ and contemporary implications rather than independent works to be showcased in a museum space.

Thiel's shift of focus in *Unexpected Growth* parallels the shift that Fred Wilson experienced after his success as a critical artist. Wilson, after his success, was invited to perform similar tasks in other institutions around the country. Discussing the decrease of impact of the installations as Wilson produced more works, Miwon Kwon argues that the artists that were once critical of institutions were now selected by them as their certified critics, which turned criticism into spectacle. This was due to the commodification of the artists for them to become "the extensions of the museum's self-apparatus" as they were

⁷³ For instance, she created *Treasures of Seh Rem* as a part of Boston Cyberarts in the Salem Maritime Museum in 2017, which criticizes the history between Western traders and the Eastern world and the oppressive political and historical relationship that resulted from these interactions. She projected the monstrous and vicious interpretations of the Westerners' faces that were interpreted by Japanese artists.

⁷⁴ Another example that dealt with the culture of the site was *El Barrio is Home!* (2016), for the Caribbean Cultural Center and African Diaspora Institute. The installation was to engage with a new facade of the building that was going to be revealed, in which the projected images were made by the artists in the center who projected golden writings of the responses they got from the residents of the area. The question was: "What makes El Barrio feel like home to you?"

selected to be the token criticizer of the art institution.⁷⁵ This could even be viewed as an appropriation of the practice, since it is taken away from its original context and is used to promote the point of criticism that the practice meant to bring attention. *Unexpected Growth* opens a new ground for AR as it is sanctioned by the institution and is no longer embracing the long held interventionist traits of AR artists. Rather than being an interventionist piece, the work complements a set narrative put on by an established institution.

Looking at the bigger picture, the work is sanctioned by a museum and aligns with the institutional vision of the Whitney. This parallels the shift that site-specific art saw as it began to be embraced by museum as an exhibition topic. Despite their radical and critical nature, the works of both movements are now displayed in museums and are more suited to the needs of these institutions. This shift may pose a new danger in the development and the spread of Augmented Reality art. The institution will now once again control a medium and artistic practice that has once been against its hegemony. Stripping away the interventionist and institutionally critical nature of AR leaves it with its location accuracy and may once again use the device to simply transmit the messages that the institutions will want the viewers to see.

⁷⁵ Kwon, *One Place After Another*, 47.

Conclusion

AR art is not a one-sided process where the artists use a newly developed technology and apply it to their practices. Instead, it is a conversational and interactive process in which artists develop different facets of the technology itself and our understanding of it. McLuhan, during his discussion regarding why it is important to refer to the artists rather than scientists to perceive and understand the trends set by media explains that “It’s always been the artist who perceives the alterations in man caused by a new medium, who recognizes that the future is the present, and uses his work to prepare the ground for it.”⁷⁶ By discussing the art historical conventions that rose as criticisms towards the device and space, this thesis explored the characteristics of AR art that activate the viewer experience in the device-heavy contemporary age.

Mark Pesce, in *The Last Days of Reality*, explains that in order for the viewer to access AR and have a complete experience, “systems must scan that world continuously, creating a very valuable stream of data about the places people go and the things that catch their attention.”⁷⁷ Though Pesce’s remark is relating to AR as a technology overall rather than a specific segment such as AR art, it is important to understand the fundamental difference between stereograph, video sculpture, site specific art, and works of Pollock compared to AR art because the experience itself records and detects the details of the space that the viewer occupies simultaneously as they are viewing the

⁷⁶ Marshall McLuhan, “The Playboy Interview: Marshall McLuhan, a candid conversation with the high priest of popcult and metaphysician of media.” interview by Eric Norden. *Playboy Magazine*, 1969.

⁷⁷ Mark Pesce, “The Last Days of Reality,” *Meanjin Quarterly*, Summer 2017.

artwork. Hito Steyerl is a German filmmaker who examines the global circulation of images and our relationship with media and technology discusses the importance of the free circulation of “poor images”. She views the circulation of these images as “defiance and appropriation just as it is about conformism and exploitation.”⁷⁸ For Steyerl, the image gains a new significance on its own through the context in which it has been distributed, just like a tangible art work has its own provenance that gives it meaning beyond its physical or material qualities. There is a power in the circulation of poor-quality digital images that are not sanctioned by the institution. In that aspect, the technology and the artistic practice may be twisted to control over the images that we are allowed, or not allowed to see. The visual and physical appeal of AR art will allow the medium to be a continuous point of attraction in art institutions. The technological advancement that allows AR to be site-specific and critical will then become an effective tool for the institutions to monitor the distribution of the high-quality images and subject the image and the viewer to the surveillance of the institution. There is a danger in criticality itself becoming a part of artist’s commodity and for criticism to turn into spectacle.

In one of the first academic writings regarding AR as a medium, Lanfranco Aceti notes the financial challenges of becoming an AR artist due to the medium’s non-for-profit nature and its electronic materiality, and how AR artists face challenges to

⁷⁸ Hito Stereyl, “In Defense of the Poor Image,” *E-flux Journal* 10 (November 2009): 8.

preserve and make profit from their practices.⁷⁹ What happens when these artists begin to become parts of the institutions that they once criticized, and how critical is the interventionist nature in defining its overall strength and appeal? The success of AR art is highly dependent on the small scale of AR interventions and its ability to separate from the narrative set by museums and institutions. As a result, a new challenge rises as these institutions recognize AR art as potential works of display. What is AR art without its interventionist nature, and which of its qualities may be preserved as it begins to shift its meaning and context once again?

By creating a possible world where any surface can link to digital media, AR is a powerful medium for its ability to transform rigid spaces to interfaces of activation. In addition, it offers agency and ability to the passive viewer by engaging with the mobile device. Just like 20th-century artists broke away from displaying their works on a flat and rectangular frame and went into the third dimension by covering a whole floor, suspending objects from the ceiling, or creating three-dimensional works that demanded a viewing space accordingly, AR artists create virtual works that redefine the viewing spaces they occupy. What I want to emphasize through this discussion is that AR art's importance should not be confined to its technological nature or its historicization as a continuum of conceptual art. Rather, its importance should be recognized for the medium's ability to allow real experience in a real space without interruption by the device and to offer different narratives that otherwise would not be visible.

⁷⁹ Lanfranco Aceti, *Not Here, Not There: An Analysis of an International Collaboration to Survey Augmented Reality Art* 19 No. 2 (2013): 6.

Figures



Fig 1. Inji Kim, *Untitled*. 2019. Source: Drew University Methodist Archives.

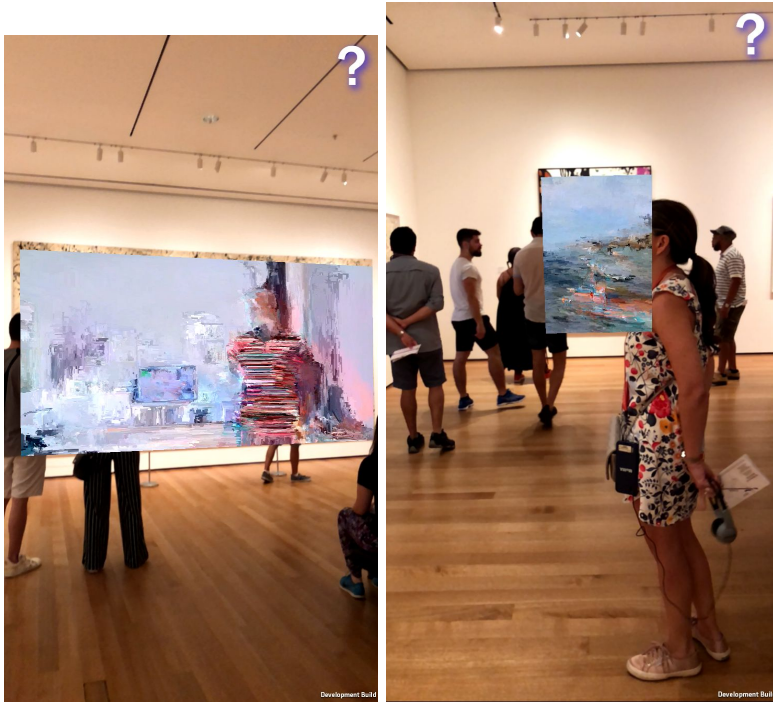


Fig 2. Inji Kim, *MoMAR* 2019.

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