

NEW MEDIA ART: MOVING BEYOND THE VISUAL

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Undergraduate Honors Thesis

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**Mount Holyoke College
June, 2013**

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INTRODUCTION

New media/digital art has historically been defined primarily as visual art, with secondary qualifiers added in an attempt to describe it more accurately. The visual arts are divided into categories, most regularly by time period or movement and by medium. New media/digital art is categorized as 'contemporary visual art' and then qualified by its medium, which includes Web-based art, video art, and software art. However, new media/digital art defies the traditional categories into which art is divided. Born out of a hybrid of modernist and contemporary art movements and technological advances, new media/digital art creates many cross-technological and artistic connections, which cannot be easily described and categorized.

Many proponents of new media/digital art have long sought to have it included in gallery and museum spaces and, more importantly, have sought to discuss it within the same conceptual space as other traditionally defined visual arts. In this thesis I will argue that new

media/digital art is a genre that contains references to 'traditional' forms of visual art but also extends far beyond the solely visual because it combines moving images, sound, and installed elements that contribute to a multi-sensory experience that engages the viewer in ways that visual art does not. New media/digital art also utilizes complex computer programs to create virtual reality spaces as well as network structures that can reach across the globe. Therefore, I think it is necessary to deliberately set new media/digital art apart from the contemporary visual arts by addressing its hybrid nature.

In order to remain as clear as possible, it is important to explain precisely how I will define 'traditional artworks' and 'new media/digital artworks' in this thesis. Traditional works of art will be defined as any work of art that either does not use any digital technology or uses it solely as a tool for the creation of what will ultimately be a traditional art object: a photograph, painting, sculpture, etc. By using this definition, I am purposefully excluding digital photography and film from the new media art category.

I will define new media/digital works of art as works that use digital technologies as a medium of exploration within themselves, particularly focusing on works that use a computer program as the main tool for their creation. Works of art of this nature generally fall under one or more of the following categories: digital video, Internet art, software art, and virtual reality. This also includes installation pieces that contain any of the

elements listed above. For reasons of simplicity, I will refer to new media / digital works of art as new media art in the rest of the work; however, I in no way condone this term as a perfect one that should be used exclusively to refer to this type of art. Because new media art is extremely young within the larger context of the history of art, the exact terminology to be used and other debates regarding the exact definition of new media art are still being formulated and decided upon. Due to its extremely hybrid nature, this is a particularly hard task for historians of new media art. However, I think that the concept of new media art has become mainstream enough that a series of generally held definitions have become attached to this art form. It is at this semi-solid state of development in the history of new media art that I believe my argument for the distinction of new media art as a separate creative form that cannot be discussed using only visual art references is particularly relevant.

My discussion of the core differences between new media / digital art and fine art is broken down into four sections. The first discusses new media / digital art's challenge to the perceived dichotomy between the virtual and the real and explores the practical medium of new media / digital art. In this first section I discuss the role of the computer program as a medium. The visual element, or end result for the viewer, usually does not include any of the programming code or technological devices necessary to 'run' the work of art, unlike traditional works of art, which almost always give some visual clues regarding the medium. I

then explore concepts of illusion, reality, and virtual reality in contemporary art and new media/digital art, focusing on the medium of new media/digital art as a tool that enables artists to create a virtual reality that the viewer can mentally and sometimes also physically enter.

The discussion of virtual reality segways into my second chapter in which I focus on the differences between communicatory works of art and immersive works of art as well as the utilization of multiple senses. Here, I discuss the ways in which new media/digital art utilizes multiple kinds of sensory information (sight, sound, etc.) to create medium-specific experiences, by incorporating interactive works of art and using examples to illustrate different types of possible interactions that are singular to new media/digital art.

In the third chapter, I tie the ways in which new media/digital artworks utilize sensory information to aesthetic theory and particularly on physical versus mental proximities and psychological distance in new media/digital art. In this section I explore the shift in contemporary aesthetic thought from an object-based analysis to an approach that focuses on aesthetic effects or experiences. I also discuss the use of computer processing to manipulate large quantities of data and the ways in which artists are appropriating computer programs that were developed for business activities to create works of art.

In the fourth section I discuss the fluidity of viewing spaces of new media/digital art and focus mainly on contemporary museum and gallery

structures. These structures were created to deal with static art objects, and in my critique I explore new ways to re-imagine the traditional museum display and exhibition structure.

CHAPTER ONE:
**AN ANALYSIS OF THE MEDIUM OF NEW MEDIA ART AND ITS
CHALLENGE OF THE DICHOTOMY BETWEEN THE VIRTUAL AND
THE REAL**

The dichotomy between the illusory and the real is a subject often dealt with in works of art. However, new media art takes a new approach to this subject by introducing the concept of the *virtual* reality, or a reality that is not simply illusory but is a representation of a complete world. Virtual reality elements in works of art challenge the concept of a dichotomy between virtually constructed realities and actual realities by creating a 'suspension of disbelief.' Samuel Coleridge coined this well-known literary term in 1817, and when applied to new media art it refers to the fact that no matter how implausible the virtual reality elements in a work of art may be, the mind willingly suspends its disbelief because the underlying subject matter is extremely compelling. The medium of new media art, the computer program, is the driving force behind new media art's ability to create virtual realities that compel the human mind to such a great extent.

When I discuss virtual reality, I define it as a tool for humans to

visualize, manipulate, and interact with computers and complex data.¹

Under this definition virtual reality can include simulations of 3D environments or provide platforms for interaction with data. In the case of all virtual reality, however, the artist and/or the viewers of the work of art can interact with and directly manipulate elements within the virtual reality space throughout the lifetime of the work of art.

Let us turn to an example. Consider an imaginary scenario: one day, a visitor enters a large museum. The visitor walks through the galleries, admiring works of art, and pauses by a window to look at the landscape outside. It takes a moment for the visitor to realize this is not a real window or landscape. Instead, a window frame has been set into the gallery wall and a flat screen monitor with an animated landscape fills the frame from behind. A platform for questions and critical analysis is created as the visitor's initial assumption that this is a glass window showing a view to the landscape outside the museum becomes confused as his/her brain attempts to understand whether it is in fact, seeing outside. Finally, the visitor re-evaluates the work of art as a work of art and not a real space and a reaction that is different from their initial response occurs. Some questions that come to mind upon witnessing this might include: *How is this different from an illusionistic oil painting or a work of installation art that features a wall with a window framing a photograph of a landscape? What would the difference be between the viewer's reaction to the painting or installation versus the new media work? What is the difference*

between these works of art? Aren't they all landscapes, just in different mediums?

The answer to these questions begins with a breakdown of the medium itself. The question of what new media art *is*, or is made of, creates a puzzling dilemma. When an oil painting of a landscape is created, the artist utilizes different elements, such as color, brush strokes, oil paint, etc., and the finished work of art is the final visual effect of that paint after it is applied to a surface such as canvas. The painting can be picked up; it can be touched and felt. It can also be photographed, and when those photographs are reproduced, they create a representation of the original work that includes all the necessary visual elements to give the viewer of the image an adequate understanding of what the original work of art looks like and how it exists in time and space. This same logic applies to drawings, paintings, and sculpture. When viewing a work of art it is not always obvious exactly what media or techniques were used, but almost always there is some visual indication of the type of medium.

This logic does not hold with new media works because they are not static, they are not solely visual, and the part of the work that the viewer experiences does not fully represent the entire work of art. The basic question of what a new media work of art is, what it consists of, is not clear. It is impossible to understand how a new media work of art was made and what was used to make it simply by looking at it. A museum-goer may think of a new media artwork, in its entirety, as the projection seen on a wall, or the images on a flat screen hung in a gallery space.

However, unlike the oil painting discussed before, an artist's hand did not make the images on the screen directly. Instead, the artist's hands were employed in typing the commands that created a computer program that was responsible for creating the images, or using computer graphics tools to digitally modify an existing image. The conclusion of this train of reasoning is that a work of new media art, no matter how it is ultimately displayed, exists *practically* in digital, or numerical, form. Furthermore, it is important to realize that the numbers that make up this digital form are simply tokens that mark the existence of an abstract concept.² There is no relationship between the visual form of a number and what it practically represents, unlike, for example, a brushstroke, which directly visually relates to the final image. The numbers are the tool, or brush, and the paint/medium, or the part of the work of art that directly relates to what is visually shown, are the computer programs that define the work of art.

A computer program is the set of instructions that tells the computer processor what to do. The program is written using programming language, which is simply a language that gives commands using a logic structure that the computer understands, and algorithms are sets of statements that use the programming language to tell the computer exactly how to execute commands.³ The computer program itself is at the core of the extreme difference between new media art and traditional art, acting as a mediator or translator between the program and the audience.

Let us return to one of our original questions: *How is this different*

from an illusionistic oil painting or a work of installation art that features a wall with a window framing a photograph of a landscape? Both the oil painting of the landscape and the installation with the wall and window framing a photograph of a landscape are static works of art. The landscapes do not move or change, and there is only a visual component. Each of the landscapes refers directly to a previous point in time and cannot be altered without the original image being destroyed to some extent (i.e., painting over parts of the landscape or cutting out pieces of the photograph).

Now, let us examine the work of new media art. Although the landscape in the example above is fictional, I am going to use an existing work of art to discuss the role of the computer program and dynamic components in new media art. *Mesocosm (Wink, TX)* (figure 1), by Marina Zurkow, is a work of art that exemplifies the ways in which computer programs are used to 'paint' a reality that is constantly changing and to allow physical interaction from the artist at any point in time. This work will also be useful in discussing the use of algorithms to create a constructed dimension that operates and makes decisions, to some extent, on its own with only a few guideline instructions from the artist/programmer.

Mesocosm (Wink, TX), is a 144 hour-long video installation that never repeats, but uses a series of probabilities that inform the events. The time frame of the work is very long (every minute represents an hour, every

day is 24 minutes, etc.) in order to highlight the fact that although change happens slowly, it can become radical over time. The title, *Mesocosm*, is used in environmental science to refer to simulated ecosystems that are manipulated in biological and ecological research.

The main image is a landscape, showing a large sinkhole in Wink, Texas on land owned by a private oil company. The hole has been expanding since its appearance in 2002, and Zurkow's work uses the sinkhole and surrounding land as a stage onto which a series of elements, including humans and animals, appear and interact. The sinkhole itself is extremely volatile and it "boils, gushes, flows and expels objects: plastic bags, oil and dark clouds that whirl out of the sinkhole's vortex in ghostly choreography."⁴ Many animals inhabit the landscape, including birds, prairie dogs, and monarch butterflies, as well as humans in Hazmat suits, and in the background several oil refineries burn off gases.

Although *Mesocosm (Wink, TX)* is an interesting work of environmental video art by virtue of its visual characteristics, the probability equations that inform every event that happens within the landscape adds a dynamic 'new media dimension.' Each event has a certain probability of happening and, when it has happened, of interacting with other events. The visual elements are animated and each frame is hand-drawn, however Zurkow points out "their choreographies are dynamic—not predetermined or canned—dictated by constraints in real-time."⁵ *Mesocosm* recombines continually as inputs and set probabilities

determine the order, density, and interrelationships of each event. This results in an artwork that is never the same twice, and although *Mesocosm* loops again after every year-long period, or 144 hours, different events occur, creating a real time situation that neither Zurkow, nor the audience, directly controls. Zurkow notes that *Mesocosm* doesn't perform like a painting or a movie because the events are "to some degree algorithmically emerging and disappearing off of the stage."⁶ The idea of not knowing what comes next, of being witnesses to a landscape that is actively changing over time, is a new element in art and can only be achieved through the use of computer programming. The ability of Zurkow to change the probabilities and to add or subtract elements from this work at any time is another specific characteristic of new media art that complicates the artist's role. Although *Mesocosm* has the ability to operate on its own, Zurkow can also interfere at any time, simultaneously giving *Mesocosm* agency and taking that agency away.

Now that the concept of medium in new media art has been explored, let us turn to the singular ways in which new media artists are working to challenge the dichotomy between the virtual and the real by discussing a new media work next to a work of art from the modern era that considers issues of illusion versus real space versus virtual reality.

René Magritte's *The Human Condition* (figure 2) was painted in 1933, and although it was 62 years old when *Corridor* (figure 3), was created by Craig Kalpakjian in 1995, the concepts that Magritte includes in his

painting create a useful comparison to *Corridor*.

The Human Condition shows a window through which a rural landscape can be seen. On closer observation, the viewer realizes with shock that there is also a canvas painting set on an easel and framed by the window. The reason this does not immediately become clear is that the easel features the exact same scene as the view that can be seen from the window, painted in such a way that the real landscape and the painted landscape blend together into one complete image. A few hints for the viewer remain: the canvas is angled in such a way that one side of unpainted canvas can be seen, the legs of the easel protrude from the middle of the landscape, and a painting clip is attached to the top of the canvas. The title refers to the condition that is implied in the painting: the confusion of the viewer while attempting to decipher what is false or unrealistic, and what is truly 'real.' After all, 'What is real?' is perhaps one of the most fundamental questions within the human experience, and this question is set into a loop in Magritte's work.

When this painting is compared to Craig Kalpakjian's *Corridor*, the differences in the ways in which traditional art and new media art can approach the question of the virtual versus the real can be explored. *Corridor* is an installation piece and includes a video component. In the video, the viewer sees a curving hallway, and then the (assumed) camera in the hallway begins to travel down it, leading the viewer along a seemingly endlessly curving path. What the viewer may not realize at first

is that this hallway does not actually exist in any physical reality. The image is completely computer generated, which is hinted at through the eerie perfection of the hallway and the uniform play of light and shadow through the windows on the left side of the hallway. I note that there is an assumed camera moving down the hall because the viewer's first reaction and reading of the video is that this is a video of an actual hallway when in fact it is a computer-generated animation. However, no matter how far the viewer 'travels' down the hallway, it will be exactly the same and infinite.

When this video is compared to *The Human Condition*, the viewer realizes that it was impossible for Magritte to create an active virtual reality using a non-digital tool. The illusory effect is used extremely well in *The Human Condition*, but a true virtual reality is not created. There is no possibility of physical interaction within the space by either artist or viewer, and the canvas remains an object within the viewer's reality, the physicality of the medium resisting a reading of this work as a virtual reality.⁷ *The Human Condition* can ultimately only be approached as a painting, although it challenges viewers to ask: *Is a painting of a scene the same as the actual scene?* It cannot be approached as an active virtual reality space.

Corridor interacts with the viewer in a different way. The question of illusion has been replaced with a virtual reality versus actual reality experience. While the viewer can visually enter both works of art, *Corridor*

adds movement and the digital animation creates an image in which there is no immediate sense that this is an artificially created space; ultimately, not only does the viewer see the hallway, but they also virtually travel through it, allowing for the experience of a different reality, rather than remaining mentally and physically removed from the reality that is portrayed in *The Human Condition*. *Corridor* confounds familiar ways of understanding appearance and reality.⁸ The corridor could very well be a video of a real hallway, and it is only after the viewer's mind picks up on subtle clues such as the eerie uniformity of the hall that they realize that the space they are seeing on the screen does not exist in real space or time.

In his essay "After The End of Art," Arthur Danto noted that it is important not to ask 'What is art?' but to focus on the question: "What makes the difference between a work of art and something not a work of art when there is no interesting perceptual difference between them?"⁹ The digital image, in and of itself, confuses familiar and intuitive ways of understanding appearance and reality. Furthermore, as a medium that has evolved from the fields of architecture, sculpture and performance, new media art incorporates a range of sensory information that, when combined, challenges the viewer to question their perception of reality. The use of computer programming to create virtual realities within works of art and the use of algorithms to bring these realities to life exemplifies the ways in which this new medium is challenging the dichotomy between virtual and actual realities, as well as the concept of what a work

of new media art is made of.

If we return to the visitor in the museum who looks out through a window only to realize it is not a window, we now have a framework to understand how that work of art was created, why the virtual reality embodied in it is constantly changing in certain ways, and how easy it is for the artist to open up a new dialogue or moment of interaction with this work by changing a few lines of code. We are also beginning to understand the role of viewers as they consider what is truly real and what is not real in reference to both the artwork in front of them and the reality of the gallery space they are standing in. The experience of the viewer will be discussed in the next chapter, which focuses on communicatory versus immersive works of art and the utilization of multiple senses in new media art.

¹ Steve Aukstakalnis, David Blatner, and Stephen F Roth, *Silicon Mirage: The Art and Science of Virtual Reality*, (San Francisco: Peachpit Press, 1992).

² Timothy Binkley, "Digital Dilemmas," *Leonardo*, 3 (1990),

<http://www.jstor.org/stable/1557889>. 14.

³ How Stuff Works, "What is a computer algorithm?." Last modified 2011.

<http://www.howstuffworks.com/question717.htm>.

⁴ Marina Zurkow, "Mesocosm (Wink, TX)." Last modified 2012. <http://www.o-matic.com/play/friend/mesocosmWINK/>.

⁵ Ibid.

⁶ Zurkow Marina, (New media artist), "Marina Zurkow on "Friends, Enemies, and Others", " Video hosted on YouTube, October 25, 2011,

<http://www.youtube.com/watch?v=wTJ367tQY0k>.

⁷ Binkley, "Digital Dilemmas," 17.

⁸ Ibid, 14.

⁹ Arthur Danto, *After the End of Art*, (Princeton, NJ: Princeton University Press, 1998). 35.

**CHAPTER TWO:
INTERACTIVE AND IMMERSIVE WORKS OF ART AND THE
UTILIZATION OF MULTIPLE SENSES**

Every work of art is interactive. The interactivity that I refer to here is that which captures a viewer's attention and proceeds, through the use of visual aspects, to challenge the viewer to embark on a journey of inquiry in their own minds, combining their interpretation of the visual in front of them with their own experiences and creative ideas. However, in traditional artworks this type of interaction is limited to a mental sphere and the interaction is one-way, with the work of art communicating to the viewer, who is not able to actively communicate back. Viewer involvement has been explored in performance art for decades, but new media art utilizes technology to create an opportunity for "remote and immediate interventions,"¹⁰ that take advantage of the complex network of communication that the Internet has made possible.

New media works allow physical and mental interaction in direct and indirect ways throughout the lifetime of a work of art. *Nile Blue* (figure 4) by Janet Bellotto, is one example of this. *Nile Blue* creates a multi-layered world, which interacts with the viewer visually, through motion,

and audibly through the use of sounds. All of the elements within the work are realistic, but they are combined in such a way that the resulting image is a fantastical improbability that, against reason, still logically 'works' in the viewer's mind.

A two-minute video loop, this work features a large nautilus shell superimposed against a jet-black background. An ocean can be seen within the nautilus shell, and tiny animated images of different species of threatened and endangered animals are perched on the ridges along the outside of the shell. As the video plays, the ocean's waves ripple and the animals become agitated, moving around on the shell and emitting a chorus of sounds. Several times throughout the video, a flock of birds appears from the black background behind the shell and swoop into the center of the shell, disappearing into the oceanscape.

Bellotto's work was inspired by the golden ratio, a mathematical proportion that exists frequently in nature and is particularly clearly exemplified in the nautilus shell. The installation reminds the viewer that the golden ratio could potentially be lost due to environmental degradation; after all, the earth is only the sum of its parts and those parts are disappearing. The appearance of the nautilus as the main component in the video with the ocean and animals playing secondary roles speaks to the importance of the golden ratio in nature. Furthermore, the flight of the flock of birds from the background and into the nautilus serves to tie the different layers of reality together for the viewer and opens the work up

into an obviously 3D space. The sounds of the animals further immerses the viewer into the reality of the work and the restless actions of the animals creates a sense of urgency and disruption similar to what someone watching that animal in a movie or in its natural habitat would feel upon seeing those actions.

In its original installation form, Nile Blue could only be activated by the viewer swiping an access card to begin the video loop. This moment of interaction, in which the viewer physically asks the video to begin to play, acts as a portal into the constructed world of the artwork. When it is finished, the screen goes black, and that world is gone until it is invited to reappear by the next viewer. Once the viewer has entered the world, they are greeted with a three dimensional video that incorporates visual movement with sound that actively mentally places the viewer in that world.

While the physical interactivity associated with Nile Blue ends after the viewer swipes their access card, other new media works invite the viewer to continuously interact with them and in these cases, the viewer controls their path through the artwork by making a series of continuous decisions. An example of this situation is shown in the work *Beyond Manzanar* (figure 5), which leaves many choices up to each viewer. It could be described most accurately as a work of art that is open-ended and has a fluctuating structure and logic “where control over content, context, and time”¹¹ is given to the viewer through the power of

interaction. Although the artist decides what content is included in the artwork, it is the viewer's prerogative to explore that information with their own intuitions and reactions as a guide.

This work consists of an interactive 3D world based in Manzanar, the first internment camp for Japanese-Americans built during World War II, and it also parallels experiences of Iranian-Americans during the 1979—1980 Hostage Crisis. Images are life-size and projected onto a large wall, and viewers navigate through the space using a joystick, which allows them to move along paths and through open doors to access different parts of the work. Apart from images of the camp, *Beyond Manzanar* also contains imagined landscapes of Japanese and Iranian gardens, superimposed images of newspaper articles, poems, and paintings, as well as music. For example, one space shows two lines of camp barracks with high mountains in the background. Semi-transparent newspapers are superimposed onto the scene and the headlines read "Jap Hunting Licenses Issued Here" and "War! Oahu Bombed by Japanese Planes." Another space shows the corner of the internment camp, surrounded by barbed wire fences and a watchtower. Poems relating to themes of exile and imprisonment in English, Japanese, and Farsi are tangled in the barbed wire. An interior space shows an Iranian-American dream room with framed images of Iranian-Americans getting married, graduating from college and holding children. There are approximately seventeen different spaces that the viewer can navigate through.

Although viewers can mostly control their viewpoint, the joystick operations are sometimes mechanically disabled with no prior warning, and the visceral reaction of the viewer relating to the loss of control of the situation underscores the lack of control many groups of people have over their own fate due to politics and oppression. Furthermore, the visual characteristics of the 3D space in this work are not ultra-realistic. Instead, video game technology is used to create an obviously constructed space, which relates to the artificial construction of political and social boundaries.

One of the most intensive modes of interaction is immersive artwork, most generally described as a work of art that gives the viewer the perception of being fully physically present in a different reality. The level of complication of the human brain and the sophistication of the human senses might seem to make true immersion a hard task. However, new media art speaks to humans' ability to inhabit and interact with an alter ego and it is relatively easy for viewers to mentally submerge their minds into the reality of that alter ego.¹² One such situation is presented in *Osmose* (figure 6), an immersive, interactive, virtual-reality environment installation by Char Davies. This installation takes a practical approach to the virtual experience: the viewer wears a head-mounted display and motion-tracking vest, which monitors his/her movements. After donning this equipment, the viewer, or immersant, perceives a three-dimensional Cartesian Grid, which helps orient them to the virtual space. For

approximately fifteen minutes, the immersant can then explore a dozen different world spaces present in *Osmose*: Clearing, Forest, Tree, Leaf, Cloud, Pond (figure 7), Subterranean Earth (figure 8), and Abyss, to name a few. There is also a substratum and superstratum layer, named Code and Text, respectively. Code contains the software written to make the work (the practical reality), and Text includes quotes from the artist as well as quotes from texts on subjects such as technology, nature, and the body. These two layers work in tandem with the other layers to create a multi-layer experience for the participant. Immersants can use their own breath and balance to journey through each world space thanks to the motion-tracking vest, which creates a more intuitive way to move through the space, as opposed to a mechanical procedure such as a joystick.

One of the key aspects of the immersive qualities of *Osmose* is that it does not directly communicate with the viewer. Instead, it encourages the viewer to rediscover their own sense of mental and physical awareness as they journey through an unfamiliar space. Immersants who were interviewed after their experience reported that they experienced a subtle shift in awareness in which “the urge for action is replaced by contemplative free-fall.” Rather than physically pushing their bodies to move, the immersants let themselves become spatially enveloped and float through the space, using subtle physical shifts to move in the direction they wanted to go.¹³ Immersants also noted that they experienced a sense of embodied consciousness while they were

immersed in the work, during which they were acutely aware of the movement of their bodies in space. *Osmose* illustrates the computer's ability to work with the human mind to dislocate and then relocate the immersant's sensory experience within a realistic, virtualized environment.¹⁴

There is a second way that viewers can interact with *Osmose*, as a public installation (figure 9) that includes the immersant as a part of the installation. It consists of a large-scale video and audio projection of the imagery and sounds from the point of view of the immersant. The immersant is participating in the project behind a translucent screen within the installation, which allows the public audience to see the gestures and movements of the immersant in silhouette.

This installation allows viewers who are not directly undergoing a journey through the virtual reality world of *Osmose* the chance to combine their own perceptions of the 'real' world around them, with a parallel experience of the reality present in *Osmose*. This creates a situation in which the viewer, while firmly situated in the gallery space, is asked to use visual clues (projections of what the immersants are seeing and the silhouetted actions of the immersants themselves) to imagine what the experience of being immersed in *Osmose* is like. Without knowing what the actual experience of immersion feels like, each viewer's imagination creates a radically different idea than the person next to him or her of what the immersion experience must be. This type of interaction creates

different yet still powerful explorations of different spatial and mental realities.

Immersive works of art embody some of the characteristics of new media art. However, other avenues of viewer interaction, including works of art that allow viewers to choose their own viewing path are also an important part of the overarching theme of communication and the utilization of multiple senses when viewing one work of art. Combining mental and physical interaction and incorporating concepts of performance, open-ended results, and changeable narratives, the viewing experiences associated with new media art become actively varied. Interactivity is a type of conversation with the media and “It is the way you dance with the computer... [The] visual is not important. What is important is the rhythm of interaction... It is a new art form... We don’t entirely know what interactivity is yet.”¹⁵ One of the main purposes behind interactivity in new media art is to allow the meaning behind the interaction to be explored by the viewer, and it is a way in which to create multiple layers of meaning.¹⁶ This highlights the importance of successful two-way communication between the viewer and the work of art; a communication that results in a singular experience for each viewer.

When the subjects of both chapter one and chapter two are combined, it becomes obvious that references to the visual arts, performance, sound, etc., are all regularly created in new media works of art, and they combine to create a single multi-sensory experience for

viewers. Furthermore, because of the multi-sensory components of new media works, viewers cannot completely remove themselves mentally from the work at will. Sound and motion spill over into the actual reality of the gallery space and resist their confines, creating a digital environment that further blurs the edges between virtual and actual reality.

¹⁰ Christiane Paul, *Digital Art*, (New York: Thames & Hudson, Inc., 2003). 67.

¹¹ Paul, *Digital Art*, 68

¹² Binkley, "Digital Dilemmas," 18.

¹³ Char Davies, "Osmose ." Last modified 2012. <http://www.immersence.com/osmose/>.

¹⁴ Mules Warwick, "Contact Aesthetics and Digital Arts: At the Threshold of the Earth," *Fibreculture Journal*, 9 (2006), <http://nine.fibreculturejournal.org/fcj-058-contact-aesthetics-and-digital-arts-at-the-threshold-of-the-earth/>. 559.

¹⁵ Warwick, "Contact Aesthetics," 563.

¹⁶ Chee-Onn Wong, Keechul Jung, and Joonsung Yoon, "Interactive Art: The Art That Communicates," *Leonardo*, 42, no. 2 (2009), <http://www.jstor.org/stable/20532638>. 1.

CHAPTER THREE PHYSICAL VERSUS MENTAL PROXIMITIES AND PSYCHICAL DISTANCE IN NEW MEDIA ART

New media art's invitation of embodied interaction naturally leads to the question of the effects of physical versus psychological proximity to a work of art. Although the concept of proximity applies both to traditional works of art as well as new media art, the use of complex proximities is one of the most defining characteristics of new media art. Proximity is defined here as the mental distance from a work of art. This distance can be created through an understanding or lack of understanding of elements within a work of art. It is also based on the emotional reaction to a work of art and the brain's attempt to either embrace feelings related to it, or to push those feelings away because they are unpleasant or unwanted. These proximities are explored in countless ways; for example, "turbulent 'blocks' of sensation" are created when digital animations morph into unknown images or links between bodies of information/data become immediately proximate to each other. These surprising proximities ignite emotions such as wonder, surprise, or uneasiness in the viewer.¹⁷

Within the relatively new discipline of academic research on topics

relating to new media art/creative digital technologies, there is a growing segment of writing on the topic of the new ways in which aesthetics functions in relation to new media art. This writing often focuses on issues of proximity. Contemporary aesthetic theory focuses on concepts of sensation and experience,¹⁸ which play directly into ideas concerning the 'distances between' and the effects of different amounts of negative and positive space in a three dimensional arena. "For instance, digital art theorist Anna Munster proposes that there is something specific about digital art that warrants special aesthetic consideration in terms of what she calls approximate aesthetics"¹⁹ New media art has moved away from the object as the focus of the aesthetic idea and instead the viewer's experience is increasingly based on the identification of effects or sensations distributed through all forms of technical objects and experiences.²⁰ The experience of these aesthetic effects occurs without one specific subject in a virtual reality environment, and centers around the body in imminent relation to its surroundings. This situation opens up possibilities for new kinds of sensory experience.

Edward Bullough first coined the term 'psychical distance' in the early twentieth century. In his work entitled "'Psychical Distance' as a Factor in Art and as an Aesthetic Principle," Bullough declares, "Distance is a factor of all Art."²¹ This statement makes the powerful claim that the defining characteristic of a viewer's experience of art is ultimately based on his/her relative proximity to that work of art and the proximities

within the work itself. In his paper, Bullough describes several terms that he creates to define specific distances that create a helpful framework for discussing psychological distance. *Actual spatial* distance is the physical distance between the viewer and the work of art. The *represented spatial* distance is the distance represented within the work of art, and, thirdly, the *temporal* distance describes the remoteness from the viewer in reference to time.²² Bullough illustrates psychological distance with an interesting example: fog. When someone is enveloped in a thick fog, his/her inability to see very far into the distance creates a sense of fright and unease. Sounds become magnified and scattered, and the viewer is constrained to only being able to guess where the sounds are coming from, adding to their trepidation and feelings of fear. However, being enveloped in fog also gives the person the opportunity to look at the world in a new way, and Bullough describes this with relish, noting that this singular experience is due to the insertion and deletion of certain distances. As the fog surrounds the person, the outlines of objects around them blurs and the shapes distort. Spatial recognition also becomes distorted and the barrier of the fog creates a sense of solitude and remoteness from the world. This experience can create a sense of poignancy and emotional release, which contrasts with the unease and disorientation of the actual situation of being enveloped in a heavy fog. "This contrast, often emerging with startling suddenness, is like a momentary switching on of some new current... illuminating the outlook

upon perhaps the most ordinary and familiar objects.”²³ The description of this feeling is one that could be used to explain the experience in front of a work of art that utilizes proximity as a key element. In the case of the fog example, all three types of distance can be identified: the person’s distance to objects they can see, the distances between objects themselves, and the distance between the viewer and their sense of sound and time. All of these proximities combine to create the experience of psychological distance.

The creation of unexpected proximities in reference to a well-known website and cultural institution is the focus of a work of art that is fittingly entitled *Uncomfortable Proximity* (figure 10) by Graham Harwood. This work unleashes momentary flashes of surprise, discomfort, and squeamishness by using a virus-like technique to forge juxtapositions and proximities that push the boundaries of comfort on the part of the viewer.²⁴ *Uncomfortable Proximities* was commissioned by Tate Modern, a large national contemporary art museum in London, and it utilizes the museum’s own website as the platform for the work. Running through the entire year of 2002, every third visitor to the official site of the Tate Modern was unknowingly re-routed to a different website. This website, at a very first glance, was identical to the Tate’s website in layout and structure. However, this website is a combination of official Tate text, Harwood’s own narrative of his experiences of the Tate and his lifelong relationship to art and images. The images are composites of close-up digital images of master works that the Tate owns, Harwood’s own

family, and natural debris, including mud and puddles that he photographed on the banks of the Thames. These images are then combined into ghastly collages that evade the brain's attempts to separate them into visual information that makes logical sense. "Skin pores become alien matter folding in billows, blunt bags trimmed with iridescent grease, pinked mudflats. Hair meets paint slabbed on like cold marge. Eyes of muscle, water and jelly share the same surface tension as those of dried-up and lacquered oil in a self-portrait by Hogarth..."²⁵

Uncomfortable Proximity combines the concepts of proximity to digital environments, such as the Tate website, and proximity to familiar visual images that are presented in a way that confuses the mind of the viewer. The Tate website is a trusted online resource, and when a visitor opens the website, he/she expects to be given accurate information that has been approved by the Tate, a reigning cultural institution. Instead, they are given some information that seems to be accurate, but also information that is clearly not accurate. The viewer becomes confused and begins to ask questions such as *Is this the right website? What is the Tate attempting to communicate by configuring its website this way? What are these images and why are they shown here?* These questions alienate viewers from the Tate website and force them to realize that the website is not the familiar site that they were expecting, but is instead a different web space that they do not know and now must explore in order to understand it. In this case, more space is inserted into the relationship between viewer and website.

The images on the Tate website examine a different kind of proximity: the deletion of space between the viewer and image. All of the images on the *Uncomfortable Proximity*/Tate website were recognizable in their original form, but they are close-up fragments of the larger image that are then collaged together. Visitors to the website expect to see images of great contemporary art, yet, when they arrive, they encounter visual images that are not recognizable, not because the viewer would not recognize the image, but because there is not enough distance for the viewer to be able to step back far enough to see the complete image.

Apart from visual proximities, the use of computer programming has given artists the ability to manipulate data to create proximities that reach across geography and time. A French new media artist, Maurice Benayoun, has recently created a series of works that use large amounts of real-time data to create a virtual reality situation that parallels the actual reality of current events. *Emotion Forecast* (figure 11) and *Occupy Wall Screens* (figure 12) are part of the *Mechanics of Emotion* series, a group of 15+ works of art that explore the Internet as a metaphoric organ, and, furthermore, as a highly filtered, culturally oriented nervous system.²⁶ *Emotion Forecast* and *Occupy Wall Screens* are both built using the logic behind the predictive systems that inform the stock market and ask the question: What if the economy and stock market were based on the emotional state of the planet? If this were the case, Benayoun argues, there would have to be some sort of predictive model, or a forecast of global

emotions.

Benayoun created a program that uses Google News to continuously measure 48 emotions on websites related to current events in 3,200 cities around the world. Based on the compiled data, it then forecasts the emotions in each individual city and the average emotions of the entire world for two days into the future in real time. This data is then displayed on a world map, with the names of individual cities popping up on it and displaying an emotion with a plus or minus X percentage to qualify it. For example, in Rome, happiness is up +3.3% and in Los Angeles despair is down -1.9%. A band along the bottom of the map displays an electronic ticker tape reminiscent of a stock market ticker, and it displays each city, the current emotional value associated with that city, and a red or green arrow indicating a rise or fall in each emotion in real time.

At first glance, *Emotion Forecast* is a parody of the capitalist economic system, but not necessarily much more. However, when the layers of this work are peeled away and analyzed, it soon becomes clear that this work is not only measuring emotional forecasts around the globe, but also utilizes the proximity of current events and recognizable electronic features to create new proximities that ultimately challenge viewers' own understandings of their daily reality.

Occupy Wall Screens similarly combines current social and economic events with an aggregated emotion forecast. It displays the stock value readouts of major financial institutions next to emotional currents

emanating from Occupy sites around the world, using similar data manipulation software as *Emotion Forecast*. The screen is divided into two equal parts; one side is titled 'emotion,' and the other 'stock.' Large red and green arrows indicate the current emotions of Occupy locations on one side, while the current stock values of companies like JP Morgan Chase & Co., are displayed on the other side.

Both of these works utilize proximity as an important tool. The viewer stands in front of a large screen to view each work and their physical proximity to the artwork mirrors their proximity to the data shown on the screen. The viewer is in one geographic location, yet, they are seeing real-time updates of emotions and stock values for cities and companies that could be down the street or thousands of miles away. The visual references to the stock market and the modern business of economics encourages a proximity between viewers and their own economic situations which is newly informed by an understanding of the enormity and volatility of the network that they are part of.

With this in mind, it becomes clear that the importance of connection and disconnection²⁷ by virtue of proximity is an important part of both of these works.

Temporal and spatial distances are often used to great effect, particularly when dealing with combinations of visual spaces in the present and future. *Slurb* (figure 13) is a psychological narrative by Marina Zurkow that consists of a seventeen-minute video portraying a series of

animal-headed humans rowing and floating through a body of water that has been altered by global warming. The title, *Slurb*, is a combination of the words slum and suburb, and the slimy, rotting, water-filled world in this work of art references the ill effects of rising temperatures in oceans. Large portions of Earth's oceans have reverted to a primordial sea, which mimics the structure of the ocean before the development of multi-celled organisms. This work of art was commissioned by the city of Tampa, Florida, and crumbling city landmarks are visible throughout the video.

Although Zurkow could have used her computer graphics program to make an extremely realistic scene, the video instead features cartoon-like humans whose bodies are flat, without shadow or definition.

Although it might be assumed that the use of cartoon figures would help distance the viewer from the scene and add levity, the combination of anonymous creature-humans struggling through a world filled with remnants of a currently thriving city serves to combine the present reality and future possibility in a shocking proximity. Another key proximity is embodied in the fact that although the animated figures do not resemble real people, their overall structure and movements were copied from videos on the Internet. Therefore, all of the figures in this video, although changed beyond recognition by computer software, are based on real people. The video and soundtrack stutters at times and each of the figures in the video runs on a stuttering animated loop. All of the proximities, sounds, and visual characteristics of *Slurb* share a common theme of

confounding familiar ways of understanding appearance and reality²⁸ and in this case, confusion leads to new ways of understanding as the viewer's mind is forced to approach the sensory information it is receiving in different and creative ways.

¹⁷ Munster, Anna. CTHEORY, "Digitality: Approximate Aesthetics." Last modified March 14, 2001. <http://www.ctheory.net/articles.aspx?id=290>.

¹⁸ Munster, "Approximate Aesthetics."

¹⁹ Mules Warwick, "Contact Aesthetics and Digital Arts: At the Threshold of the Earth," *Fibreculture Journal*, 9 (2006), <http://nine.fibreculturejournal.org/fcj-058-contact-aesthetics-and-digital-arts-at-the-threshold-of-the-earth/>.

²⁰ Warwick, "Contact Aesthetics."

²¹ Edward Bullough, "'Psychical Distance' as a Factor in Art and as an Aesthetic Principle," *British Journal of Psychology*, 5 (1912): 87-117 (excerpts), http://www.csulb.edu/~jvancamp/361_r9.html.

²² "Psychical Distance"

²³ Ibid.

²⁴ Munster, "Approximate Aesthetics."

²⁵ Fuller, Matthew. Tate Gallery, "Breach the Pieces." Last modified 2000. <http://www2.tate.org.uk/intermediaart/entry15470.shtm>.

²⁶ Maurice Benayoun, "The Mechanics of Emotions." <http://www.benayoun.com/projet.php?id=27>.

²⁷ Munster, "Approximate Aesthetics."

²⁸ Binkley "Digital Dilemmas," 14

CHAPTER FOUR FLUIDITY OF VIEWING SPACES FOR NEW MEDIA ART

One of new media art's greatest differences from traditional works of art is its lack of *objectness*. Most traditional works of art are an addition to a space that already exists, and their *objectness* is a part of their core identity as works of art that have been crafted by the human hand. The French term *objets d'art* is the defining term that has long been used to describe objects that are widely considered to have worth solely as works of art. This definition solidifies my point that the *objectness* of a work of art is an integral part of its definition. Furthermore, discussion of and interaction with the work of art is ultimately based on one's proximity to the work either physically or in a more abstract, psychological sense.

In new media art, this lack of objectness has created a set of opportunities as well as major challenges for viewing. The established art world has long been oriented towards art objects, and this has resulted in a history of institutions that are configured to primarily present and preserve static works of art.²⁹ The development and popularization of new media art has created the impetus for a shift regarding both the practical questions of physical display and the conceptual nuances of new media art. In this chapter I will discuss the aesthetics of display and the

experience of the viewer as well as the question of how new media art is similar to and different from traditional art. I will particularly discuss how new media art affects practical and conceptual considerations in museological practice.

Above all there is a shift in focus from object to process in regards to all of the questions above. New media art challenges the traditional notion of art as object because of the characteristics that have been discussed in previous chapters, namely that it is time-based, interactive, and customizable.

New media art has traditionally been associated with the visual arts, and has therefore been historically categorized as the responsibility of art museums and galleries, whose assumed roles are to buy, sell, display, and store new media art. It is logical, then, to start with museums and galleries in the exploration of the fluidity of viewing spaces and platforms in new media art.

Museums, in the traditional sense, have generally operated as archives or as holders of 'cultural memory.'³⁰ This automatically defines them as institutions that house works of art from the past; works that have been made and are finished in a given period and will be displayed in the museum as a way to reflect on the history of art. The question then raises itself: how does this change with the advent of works of art that operate in real time? What about works of art that update constantly or are self-

generating and whose form/content is consistently different than it was at a previous point in time?

Contemporary art has complicated and expanded the traditional ways of viewing art. Some works of contemporary art are supposed to be touched, and sometimes a work is even created specifically for the gallery it is in and then must be destroyed at the end of the viewing period, like many of Sol LeWitt's works. These works create a dialogue that challenges the idea of the museum as a protector of art and brings a new focus to the idea of impermanent works of art that have fixed life spans.

However, contemporary art is still displayed and seen in the viewer's present and recalls decisions or events that took place in the near past. The ability to self-generate, to become something new, to look not only to the past but also at the present and into the future is reserved for new media art by virtue of the ability of the digital, networked medium it uses. When new media art is brought into a museum, the definition of that museum is changed from simply that of a holder of cultural memory to a holder of constantly updated cultural memory, which also serves as a herald to the future.

It has been argued that memory is a reaction against the acceleration of technology and an often threatening "heterogeneity, non-synchronicity, and information overload."³¹ Museums or galleries, in this sense, have been categorized as actively resistant to new media art. I would not go as far as to say that I stand behind the argument that

cultural institutions *actively* resist new media art, but there is a definite disconnect between the original mission and configuration of museums and galleries and the ways in which these institutions must change to accurately reflect and accommodate artistic production in the modern day. Often, I believe that this would involve a major transformation of mission. This disconnect has often been highlighted, particularly in reference to the standards which govern the ways in which a museum operates. For example, the ways in which exhibitions and loans are discussed are clearly meant for object-based work and cannot easily be reworked to fully accommodate new media art. Cataloging terms that ask for specific physical dimensions and an unchanging list of mediums that completely describes what the work is made of are just a few examples of the ways in which museums and galleries often struggle with fitting new media art into a system designed for fine art objects. By refusing to fit into the neat boxes of traditional museum practice, new media art challenges curators and educators to re-think the practice of displaying static objects and instead pushes them to creatively present dynamic, changing projects that actively resist complete authority on the part of the curator.³² This challenge has resulted in a wide range of exhibition alternatives that have not been fully explored yet but may ultimately result in a more versatile approach to new media art in museum work. These alternatives include exhibiting work as a software program or data flow, as a tradeshow, or as

a broadcast, and all of these strategies engage with new media arts' multi-sensory attributes.

One successful UK exhibition used a strategy that paralleled data flow modeling. *Art for Networks* was curated by the artist Simon Pope in 2002, and was a traveling group exhibition, which focused on the practice of networking and data flow. The show combined different media and art forms, including Web-based works, computer-driven installations, sculpture, video art, prints and conceptual performance projects.³³ Data flow is the movement of information within a system, and in order to utilize this concept, *Art for Networks* changed the way it was installed and the checklist for each new gallery installation depending on their venue, audience, etc. A traditional traveling show has a set list of objects and a similar installation structure at each gallery it visits. However, *Art for Networks* changed its shape and content for each new venue, much like an information stream. The rationale behind this exhibition was to create more expansive definitions of 'networks' and to give new media artists a role in determining their own roles within art history by defining how their work was displayed. The overarching theme was to leave everything in the exhibition open for ongoing interpretation and inquiry.

Another major disconnect occurs with wall labels. First, a wall label expects an attribution of one artist or group, when in reality there are often many people who help to create a work of new media art. Sometimes works of art are open sourced and participants are never

named, or there are too many to include on one wall label. As noted, the necessity to provide an unchanging list of mediums that describe what the work of art is made of is another problem. Sometimes the program used to create the work of art is named and other times the medium is more loosely defined. The date is a third issue, and perhaps the most puzzling element of a wall label describing a work of new media art. After all, how does a curator determine when a work of art was created if it exists with real time inputs and continuously updates, creating new versions of itself?

Electric Sheep (figure 14) is based on an algorithm that examines the question of whether digital life can have organic subtlety. The algorithm creates individual forms of artificial life, each with its own genome. It can then be downloaded through an open-source screensaver and when the computer goes to sleep and the screensaver activates, the computer then accesses other computers who are running the same program over the Internet and begins to work with them to render new animations. This system has created an internet-distributed supercomputer, which now consists of over 450,000 computers.³⁴ The animations are rendered via family connections, and viewers contribute to the program by voting for their favorite sheep. The most popular sheep mate and reproduce, creating a genetic system that evolves based on the opinion of its human audience (figure 15).

Electric Sheep is one example of a work of art that transcends the bounds of traditional viewing spaces and curatorial choices, and resists

almost all of the confines of a wall label. The medium: ‘an infinite animation made with collective internet intelligence, mathematics, and Darwinian evolution,’ neatly explains that it is open-sourced by referencing collective Internet intelligence. There would not be enough room, however, to include all of the programmers and graphics professionals who assisted the primary artist, Scott Draves, with his work. I recently exhibited an excerpt of *Electric Sheep* and wrote to the artist, asking what I should write as the medium on the wall label. In what I know was a completely serious query, he asked how many words he could use, and I know that if I had let him write a page, he would have filled both sides with information that still would not have captured all of the intricacies of the medium. When writing the date, I settled for writing the year that the particular excerpt of the project that I was displaying had occurred, but if I were to ever reference *Electric Sheep* as a whole, I feel I might be better served not by writing when the project was first conceived, but by writing ‘1999 – an unknown point in time in the future.’

Electric Sheep is constantly changing and updating as new sheep are ‘born,’ and it exists on many different visual platforms, all of which represent different but equally legitimate ways of displaying this work of art. At its core, *Electric Sheep* exists in a downloadable format, which can be viewed on any computer, tablet, or mobile device with Internet access. Due to the countless and ever expanding hours of animations that make up *Electric Sheep*, this work of art is also available in small excerpts on

YouTube, Vimeo, and hundreds of other online sites that are free to access. Furthermore, videos of each generation are available for sale in limited editions, and limited edition prints of different sheep are also for sale. Videos of each generation are available to museums to display, either on a monitor or as an immersive projection in a gallery space.

The transition from an object-based museum and gallery culture to one that can or is willing to accommodate new media art is often not a smooth one. Christiane Paul, a new media theorist and curator notes in a book concerning modern curatorial practice: “Because new media art is deeply interwoven into our information society...It will always transcend the boundaries of the museum and gallery and create new spaces for art,”³⁵ therefore creating challenges for those who work within museum and gallery systems to exhibit new media art to its greatest potential.

There is a current popular protest that new media is underrepresented in museums today. In response to this, I would like to step back and question the place of new media art in fine art museums and galleries, not because I believe it should be excluded from them, but because by virtue of its complex multi-sensory attributes, new media art cannot necessarily be confined to only spaces that house the fine visual arts. New media art, depending on the subject, can often be seen in media-specific museums including museums of science and technology, or in museums of film, video and photography. Other new media works are likely to be found in public venues or artist co-op spaces.³⁶ New media art

can be seen in any public or private viewing space, including on one's own computer or phone. New media art can be streamed exclusively over the Internet, as in the case of Grant Harwood's *Uncomfortable Proximity*, or streamed in a public location, as in the case of the *Mechanics of Emotion* series. The lack of objectness and the ability to duplicate some elements of a physical presence in new media art greatly extends the range of venues in which these works can be exhibited.

New media artists are also increasingly taking on roles as mediators and facilitators. Since the process of making a work of new media art often does not stop at a specific point in time, artists are often engaged with their work while it is on display. Artists also often play a role in facilitating an engagement between the viewer and the work of art. They are also increasingly becoming curators, as is discussed below.

New media art creates a great opportunity for curating alternatives. Curators historically make decisions about the stories they tell through exhibitions. They decide what objects they want to include in their exhibitions and the information that they want to include. The active role of the artist and audience puts the new media curator in a different position, often as a facilitator rather than an expert who controls the flow of information between artist and public, and this has led to a re-evaluation of curating models. In many cases, artists become co-facilitators with curators, or take on the role of curator themselves,

particularly in the case of group exhibitions in which a group of artists works together to reach some common goal in an exhibition.

It has been argued that “Art reflects the conditions of its time not through the explicit and deliberate use of new techniques or technologies, or through relevant subject matter, but at a deeper level, through transformations in practice that may well be unconscious as far as the artists themselves are concerned.”³⁷ It appears to me that this statement should be revised: art *not only* reflects the conditions of its time through the explicit and deliberate use of new techniques and technologies and through relevant subject matter *but also* at a deeper level, through transformations in practice that may well be unconscious as far as the artists themselves are concerned. These transformations in practice refer not only to artistic practice but also to the practices of those who display and work with new media art in all capacities. New media art occupies a space between media labs and static exhibition spaces.³⁸ New media art can never be treated solely as an art object and so, by virtue of its ever-changing nature, it has challenged the abilities of white cube exhibition spaces to properly display it and in many cases has moved out altogether, finding relevant display spaces in natural science museums, public arenas, and even on YouTube and home computers. New media art is a truly versatile and ever-evolving art form.

²⁹ Christiane Paul, ed. *New Media in the White Cube and Beyond*, (Berkeley: University of California Press, 2008). 1.

³⁰ *Ibid*, 5.

³¹ Charlie Gere, "New Media Art and the Gallery in the Digital Age," in *New Media in the White Cube and Beyond*, (Berkeley: University of California Press, 2008), 23.

³² Sarah Cook, "Immateriality and Its Discontents: An Overview of the Main Models and Issues for Curating New Media," in *New Media in the White Cube and Beyond* (Berkeley: University of California Press, 2008), 26.

³³ Cook, 33.

³⁴ Scott Draves, "Scott Draves - Software Artist." <http://scottdraves.com/sheep.html>.

³⁵ Paul, *New Media in the White Cube*, 2.

³⁶ Cook, "Immateriality and Its Discontents," 29.

³⁷ Gere, "New Media Art and the Gallery," 15.

³⁸ Cook, "Immateriality and Its Discontents," 33.

CONCLUSION

While writing this work, I found that I could not stress enough how versatile and constantly evolving new media art really is. It also struck me that although many of the singular features of new media art explored in the previous chapters have created friction within traditional museum and gallery structures, the versatility of new media art is a good thing. New media art resists a number of assumptions that scholars and critics have used for decades, and questioning the status quo in the ways that new media art does can only improve the future of artistic practice and presentation. The fact that many works of new media art can be viewed on a personal computer, phone, or TV screen in a public place underscores how truly public new media art can be. Barriers to viewing art are slowly fading in many cases as works of art can be seen on a computer anywhere, at any time.

Several pivotal terms kept appearing again and again as I was researching, the first being *network*. New media art is the first art form that I know of which uses networks, particularly those that can be accessed over the Internet, to such a great advantage. The idea of network, of connecting across time, geographical location, culture, etc., is one of the

most exciting facets of new media art.

Proximity is another term that I continued to come across in my research, and this is closely linked to networks and the concept of being able to easily and electronically access data and information from anywhere in the world. Humans' sense of their spatial and mental proximities are extremely developed, and this creates an opportunity to work with our gut reactions and sensibilities as living beings experiencing the world around us.

Finally, the overarching factor that informed every one of the works of art I discussed is the computer program. Today's computers use immense amounts of processing power and can work with almost unfathomable amounts of data. The sheer ability of computers to process large amounts of data and to create any type of visual that can be conceived of has re-defined what artists can create from their imaginations and has opened up a new level of creativity. This also allows a wider range of cross-disciplinary references, and locates new media art beyond the solely visual. When the characteristics and possibilities of new media art are taken into account, I hope that new media art will not be discussed only in terms of visual art, but will occupy a multidisciplinary niche. The upcoming task of museums and galleries should not be to try and find ways of fitting new media art into an existing system, but to embrace the possibilities for reinvention that new media art brings to the table.

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IMAGES

Figure 1

Mesocosm (Wink, Texas), created in 2012

Marina Zurkow

Software-driven animation. 144-hour year-long cycle (never repeats).

Color, animation, sound

Format: Standalone software application on (intel) Mac with monitor / projection

Dimensions variable

Add'l animation: Michelle Mayer

Code Design: Veronique Brossier

Occasional Sound: Lem Jay Ignacio

Image courtesy website of the artist



Figure 2

La condition humaine (The Human Condition), 1933
Rene Magritte
Oil on Canvas
Gift of the Collector's Committee
Image courtesy, National Gallery of Art, DC



Figure 3

Corridor, 1995

Craig Kalpakjian

Digital media, computer-generated animation on a laser video disk

Image courtesy, SFMOMA



Figure 4

Nile Blue, 2010

Janet Bellotto

Digital video, color, sound, 1 minute

Image courtesy of the artist

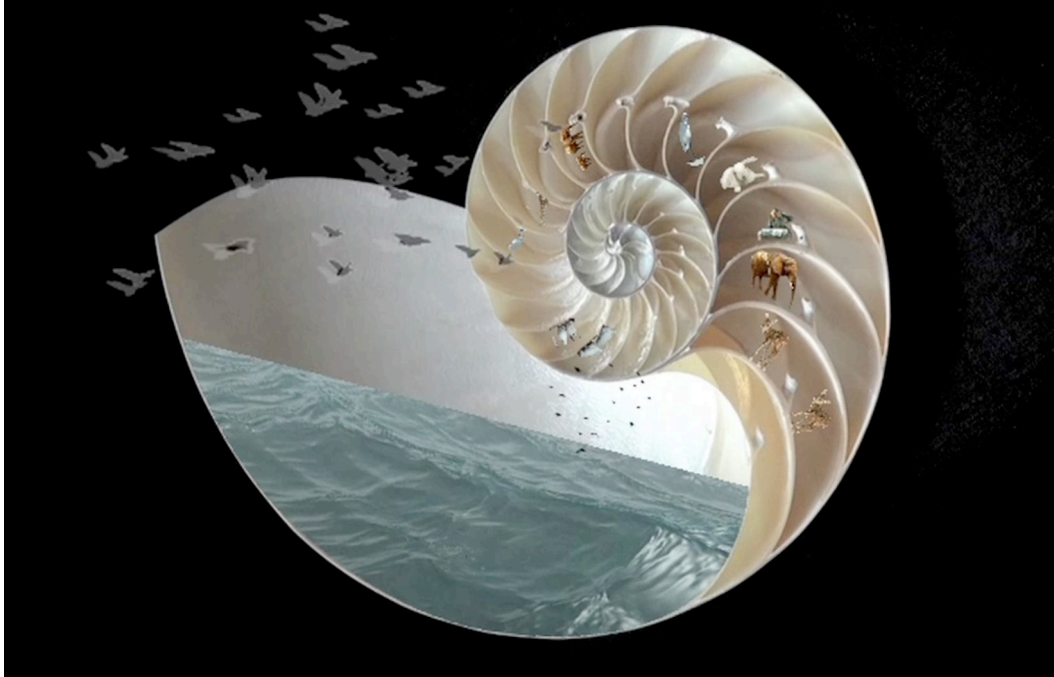


Figure 5

Beyond Manzanar, 2000

Tamiko Thiel and Zara Houshmand

3D interactive virtual reality installation

Image courtesy <http://www.mission-base.com/manzanar/index.html>

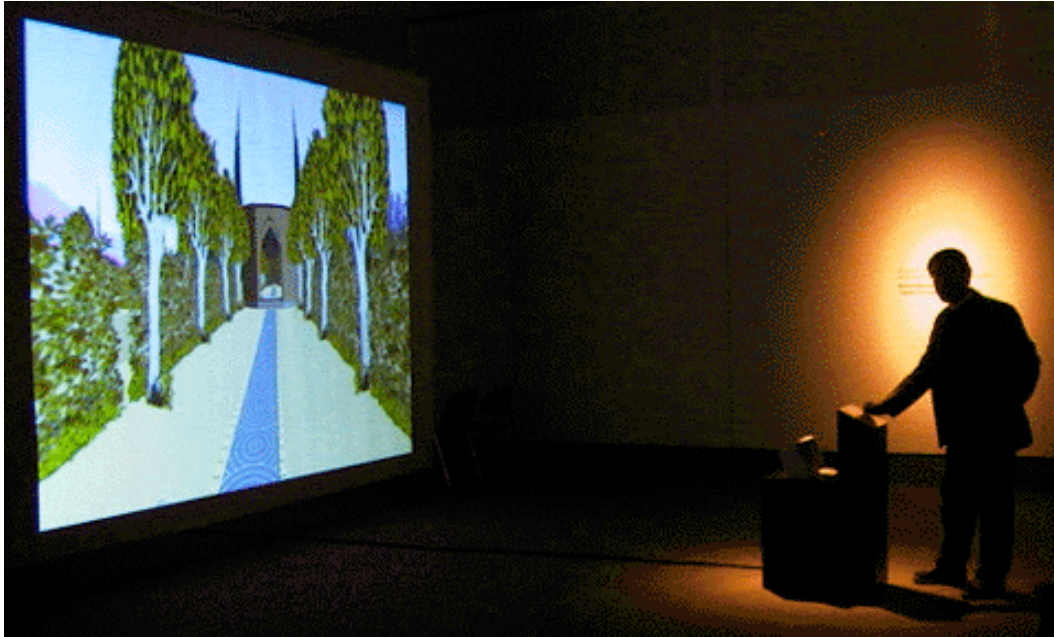


Figure 6

Osmose, 1995

Char Davies

Immersive interactive virtual-reality environment installation with 3D computer graphics and interactive 3D sound, a head-mounted display and real-time motion tracking

Image courtesy <http://www.immersence.com/osmose/>



Figure 7

Char Davies, *Tree Pond*, *Osmose* (1995)

Digital still image captured during immersive performance of the virtual environment
Osmose

Image courtesy <http://www.immersence.com/osmose>

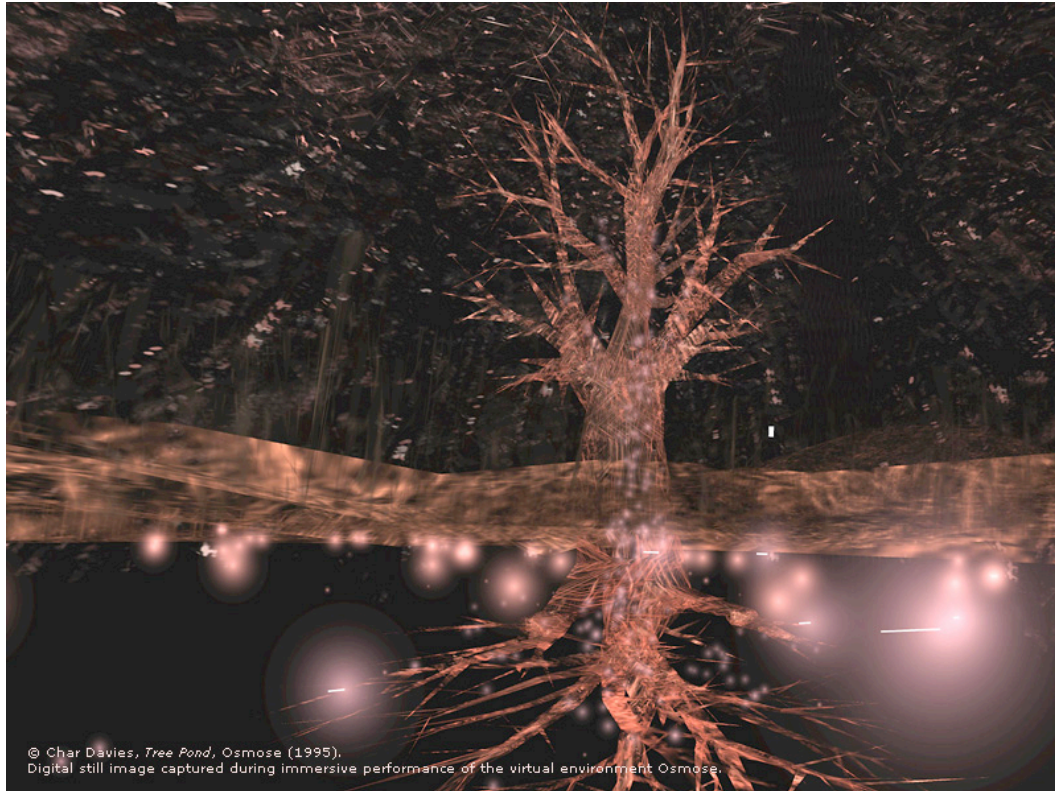


Figure 8

Char Davies, *Subterranean Earth*, *Osmose* (1995)

Digital still image captured during immersive performance of the virtual environment *Osmose*

Image courtesy <http://www.immersence.com/osmose>



© Char Davies, *Subterranean Earth*, *Osmose* (1995).
Digital still image captured during immersive performance of the virtual environment *Osmose*.

Figure 9

Public installation of Osmose

Image courtesy <http://www.immersence.com/osmose>

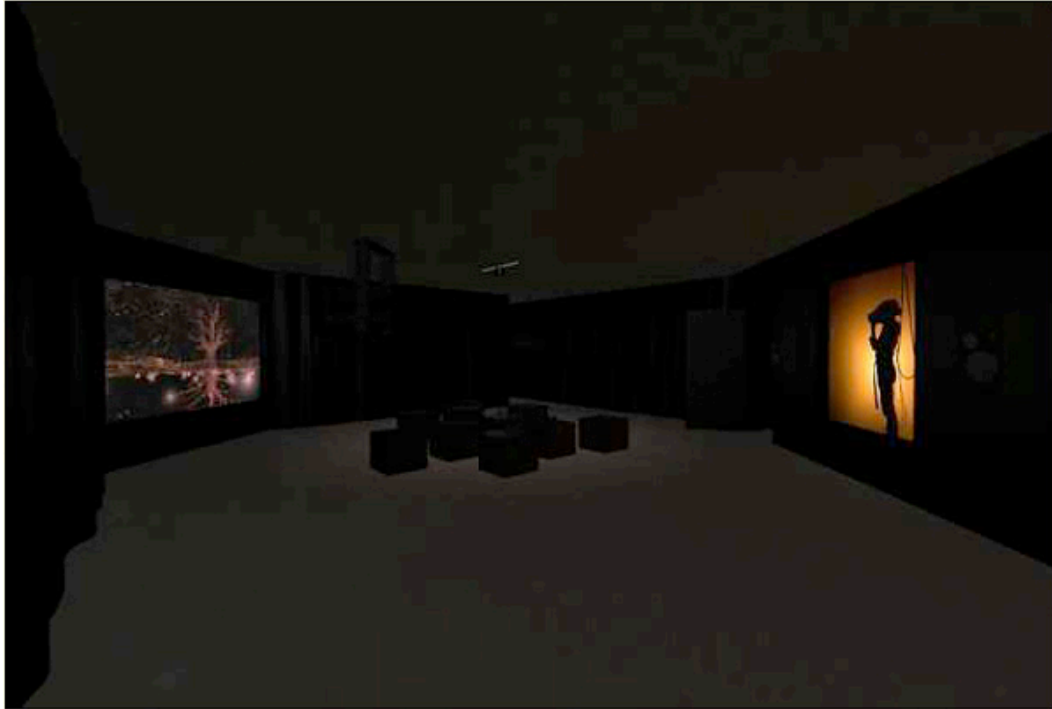


Figure 10
Uncomfortable Proximity, created in 2000
Graham Harwood
Hogarth, My Mum 1700-2000 and Constable Haywain, Dad, Mud from the Thames
1800-2000, Composite image
Image courtesy <http://www2.tate.org.uk/intermediaart/entry15266.shtm>

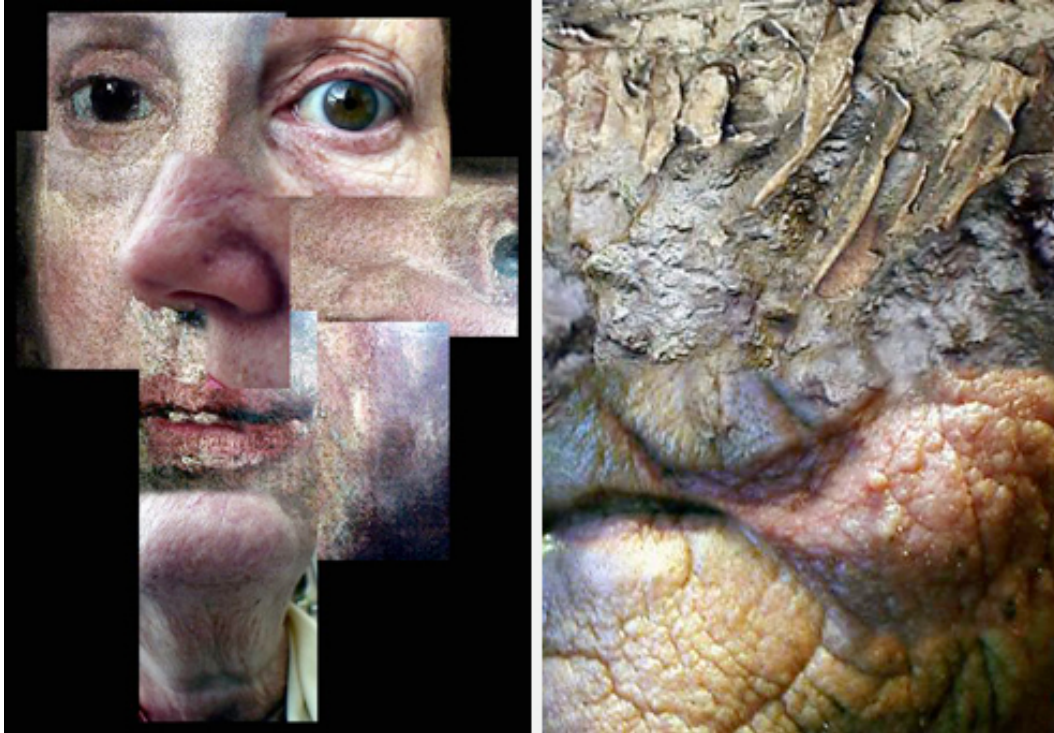


Figure 11

Emotion Forecast, created in 2010

Maurice Benayoun

Internet, real-time video installation

Image courtesy <http://www.zero1biennial.org/screen-streaming-museum>



Figure 12

Occupy Wall Screens, created in 2010

Maurice Benayoun

Internet, real-time video installation

Image courtesy <http://blogs.elpais.com/artes-en-la-edad-silicio/2012/02/la-meteorologia-de-los-estados-de-animo.html>



Figure 13

Slurb, created in 2009

Marina Zurkow

Color, animation and stereo sound, duration 17'42" (loop)

Image courtesy of <http://www.o-matic.com/play/slurb/>



Figure 14

Electric Sheep, 1999 – an unknown point in time in the future

Scott Draves

Infinite animation made with collective internet intelligence, mathematics, and Darwinian evolution

Image courtesy of the artist

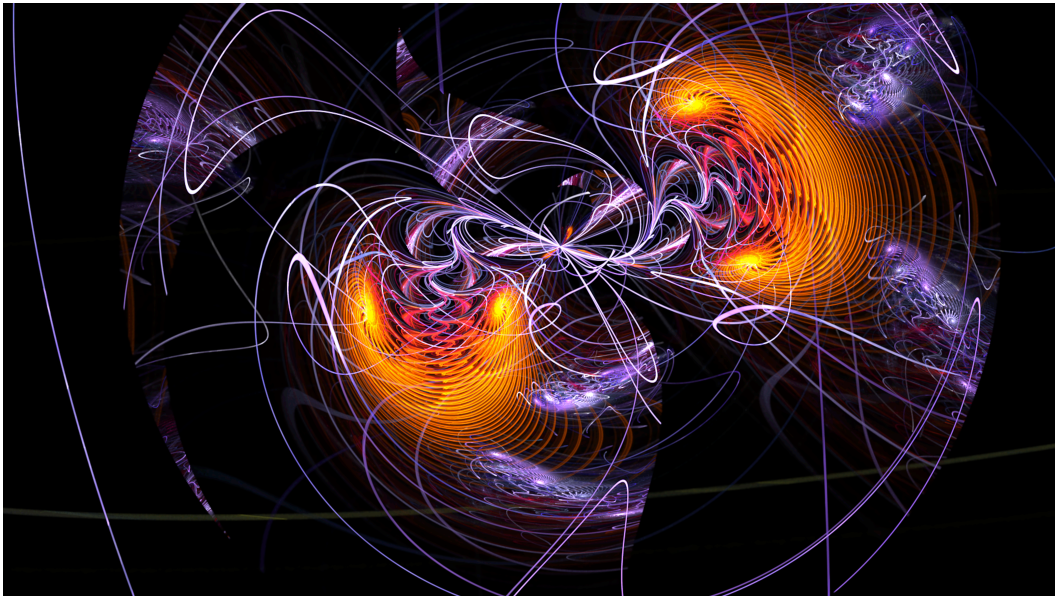


Figure 15

Diagram of the family tree of an electric sheep
Image courtesy of <http://scottdraves.com/sheep.html>

