

**The significance of play in the art gallery interactive
environment: A case study of Nathaniel Stern's
Stuttering (2003) and Step Inside (2004).**

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Declaration

I declare that this dissertation is my own unaided work. It is being submitted for the degree of Master of Arts in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

Catherine Jane Bland

_____ 22 _____ day of _____ December _____ 2008

Abstract

The incorporation of playful interactive artworks into the art gallery affords gallery viewers an opportunity to break away from traditional art gallery viewing practices. Understanding the consequences of this break requires an analysis of the rules of the art gallery and a reassessment of the role of the gallery viewer.

By providing a historical perspective on the gallery, its evolution over time and the changing roles of its viewers, along with an understanding of theories concerning the concept of play in general and, more specifically, the concept of play in the gallery, this report aims to prove that play is a serious and meaningful activity allowing contemporary art consumers a more profound experience of an artwork than that enabled by traditional art viewing practices. Using a case study of Nathaniel Stern's interactive artworks, Stuttering (2003) and Step Inside (2004), this report assesses the use of bodily play in the art gallery and outlines some misconceptions with regard to the incorporation of play into this environment. These interactive artworks transform the viewer's understanding of an artwork from something that is mentally and visually appreciated, to something that can be tangibly and physically experienced and appreciated. The report concludes that the viewer's role in this environment has shifted, and that a new conceptualisation or classification of this role has become necessary.

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Table of Contents

Declaration	ii
Abstract	iii
Acknowledgments	iv
Table of contents	v
List of Figures	vii

Chapter One:

Introduction - The Interactive Artwork	1
i. Digital Technology and Interactive Art	1
ii. Interactive Art in the South African Art Scene	9

Chapter Two:

The Temple of Art	14
i. The Traditional Gallery	15
ii. The Modern Gallery	16
iii. The Participatory Gallery	18
iv. The Interactive Gallery	27

Chapter Three:

Playing with the Idols	36
i. A Historical & Theoretical perspective on Play	36
ii. Serious and Meaningful Play	43
ii. Play in the Gallery	48

Chapter Four:

Case Study: Two Interactive Installations by Nathaniel Stern	53
i. <u>Stuttering</u> (2003)	54
ii. <u>Step Inside</u> (2004)	57
iii. The Performance of Play	67

Chapter Five:

Revealed	74
i. Classifying the Viewer	74
ii. Encouraging Playfulness	84
iii. Reflecting on the Significance of Play	87

Endnotes	93
Works of Art	97
Works Cited	98
Appendix One: Nathaniel Stern Personal Interview	104
Appendix Two: <u>Step Inside</u> Installation Specifications	114

CHAPTER ONE:

The Interactive Artwork

Interactive artworks and the participation they demand from their viewers¹ challenge traditional methods of viewing art. They force the viewer to become aware of her relation to the artwork, in the sense that she is made conscious of the choice between participating or passively viewing the artwork. Playful interactive artworks that require an active participant and a level of engagement create a greater depth of awareness on the part of the viewer: they invite one to become physically involved with the work and take responsibility for its outcome, thus ultimately adding a personal knowledge and bodily depth to one's experience of it.

i. Digital Technology and Interactive Art

The introduction of interactive technology into an art form creates challenges for the art form: it complicates the idea of the 'author' or the authority of the 'artist' and thereby questions the identity of the 'artwork' (Saltz 117). Critics, such as Christine Tamblin, Timothy Binkley and David Saltz, have proposed that interactive computer art is a form of conceptual art. Some interactive artworks have the capacity to surprise their own creators by producing outcomes and sequences of events that their creators did not envisage (Saltz 117). The transitory nature of Interactive Art is seen as moving art history into a mode of dematerialisation where the focus is not on creating a solid physical art object, but rather on working in the realm of ideas by creating logical structures in the medium of software (Saltz 117). According to David Saltz, Interactive Art should be understood by analogy with Performance Art: "Interactive Artists do not produced fixed, immutable material objects, and so, the implicit reasoning goes, they must be producing 'immaterial' objects" (118).

It is time to examine the concept and definition(s) of Interactive Art, including the concept of interactivity itself.

Renowned and influential New Media theorist Lev Manovich investigates the concept of interactivity in art in an essay entitled "The Myth of Interactivity", a chapter in his book The Language of New Media. Manovich critiques the way in which the word "interactive" is typically utilized: "I avoid using the word 'interactive' in this book without qualifying it ... [because] I find the concept to be too broad to be truly useful" (70), and instead has recourse to a series of terms including "menu-based interactivity, scalability, simulation, image-interface, and image-instrument," to describe different kinds of interactive structures and operations (The Language of New Media 5). Manovich points out that interactivity is a fundamental, defining component of the New Media: "to call computer media 'interactive' is meaningless – it simply means stating the most basic fact about computers" (The Language of New Media 55). To use the term is to suggest a false or fake dimension of free choice and personal creativity:

Now interactive media asks us to click on a highlighted sentence to go to another sentence. In short we are asked to follow pre-programmed objectively existing associations... we are asked to mistake the structure of somebody else's mind for our own. (Manovich, "The Language of New Media" 61)

In other words, in interactive works the user is restricted in his or her choices, and rather than the user manipulating the work, the creator of the work is in fact manipulating the user. By focusing on the process of interaction and not on the end point or culmination of the process, Manovich ignores the critical depth that can be achieved through interaction. For it is in the process of choosing specific routes planned by the artist that the viewer becomes involved in the work, interprets its meaning, engages with its content, and comes to his or her own conclusion or version of the work.

Manovich's enquiry into the concept of interactivity sheds light on the connection between art and technology and draws attention to some important problems pertaining to interactive art. I agree that there is a danger that interactivity in interactive art could be interpreted too literally, such that the interactor's physical action of pressing a button, choosing a link, or moving his or her body (71) overrides the importance of

psychological and mental interactions. Yet in his rigid notion of computer-based interactivity, Manovich does not conceive of interactivity as an open-ended interaction, capable of producing unanticipated results (as this report does), but rather as a mechanism enabling pre-programmed actions to lead to pre-programmed conclusions.

Manovich also asserts that there is nothing new about the phenomenon of interactivity in the arts. He asserts that:

All classical, and even more so modern art, was already “interactive” in a number of ways. Ellipses in literary narration, missing details of objects in visual art and other representational “shortcuts” required the user to fill in the missing information. Theatre, painting and cinema also relied on the techniques of staging, composition and cinematography to orchestrate the viewer’s attention over time, requiring him to focus on different parts of the display. With sculpture and architecture, the viewer had to move his whole body to experience the spatial structure. (The Language of New Media 71)

There is no doubt that a form of exchange occurs between a viewer and a painting, and that this exchange leads to the viewer’s attention being captured and to a kind of detached contemplation being enabled. However, as we will discover in due course in this report, this act of detached contemplation does not provide the same level of physical engagement with the work as a participant in an Interactive Installation environment would experience. Here too, Manovich fails to acknowledge the degree to which interaction has changed with the invention of interactive artworks, and this leads him to equate all forms of interactivity and mistakenly claim that interaction in art is not a new phenomenon.

Digital art critic Michael Rush also criticises Manovich’s the assumption that the word “interactive” is the most inclusive term to describe art forms of the digital age. He challenges the common misconception that digital art is necessarily interactive, pointing out that not all digital art is interactive, or even reactive (171).

According to Rush, Digital or New Media Art can be divided into five basic categories that indicate the chronological evolution of digital technology and suggest a historical perspective on digital art capable of revealing where and how Interactive Art fits into the developmental narrative. These categories are Computer Art, Digitally Altered Photography, Art of the Worldwide Web, Interactive Digital Art and Virtual Reality. In contrast with Manovich, Rush sees Interactive Art as the new avant-garde art² because even though the artist determines the content of the artwork, the viewer now creates and controls the outcome of the artwork. Rush demonstrates that as societies move toward a virtual world, a different kind of art making is emerging, within which the artist and the art object are no longer the centre of creation.

Rush's first category, Computer Art, is often perceived to be the same as Digital Art since most people associate "digital" with computers, and vice versa. This is often the case, but in many instances artists use the computer as a medium to create the work, but choose to exhibit the work in a more traditional visual medium, such as printed on canvas (Rush 171). When Computer Art emerged, pioneering Computer Art practitioners were usually associated with research institutions, where they were experimenting with the abilities of the computer. The work produced often resembled the machine itself, with many early works consisting of mechanical futurist imagery (Rush 172).

During the Computer Art era, personal computers were not as easily accessible as in the time of Rush's next category, Digital Art. The increasing availability of computers in the 1980s brought with it a broadening of the computer-based art genre and the category of Digitally Altered Photography. This category covers in the main the manipulation of images by artists in order to subvert and alter preconceptions associated with the medium of traditional photography (Rush 184).

The third category, Art of the Worldwide Web, was the first to deal with real time interactivity. With the advent of the Internet and the ease of information sharing and communicating, art (especially digitally-based art) became more cheaply and easily distributed (Rush 192). This mode of art distribution can be seen as an attempt to subvert the notion of the 'elite' Fine Art gallery. The concept of cheap, widely available art is one that has been explored by many artists in many different movements and genres throughout the history of contemporary art, such as Marcel Duchamp's placing of mass-produced items in the gallery (which will be investigated further on in this report). This type of art blurred the boundaries between art and craft, as graphic designers began to assist visual artists in the production of a work (Rush 197).

Rush's next category, Interactive Digital Art, is the main focus of this report and will be explored more thoroughly. Interactive Art for Rush is not merely a "click and gain satisfaction" or a "surfing experience," as is most web-based art. Truly interactive artworks allow the viewer to engage in the artwork, and through her participation become an integral part of the artwork itself (197). These interactive works are often on a large scale and invite viewers to create their own narratives or develop their own associations regarding the work. This tendency will be evident in the case studies presented further on in this report. Moreover, truly interactive works involve the viewer more than web-based works as, in this definition, interactive works are real physical spaces requiring live full body participation.

Rush finds that interactivity allows the artist the opportunity to involve viewers in heightened ways. Although the artist chooses the content of the work, what the participants do with this content can have numerous variations, which renders the outcome of the process very uncertain (201). Rush acknowledges the challenges that Interactive Art poses for the concept of authorship of the artwork, but finds that the artist's authorship is not completely lost: "The artist has now become a facilitator of the art experience with the interactive artwork becoming, in a sense, an extension of

education, a hands-on type of creative learning" (201). Thus these types of artworks reduce the degree of separation between the artist and the viewer, as the artist provides the framework for the participant to work within. The artist creates an interactive experience for the viewer, rather than a traditional product for viewing, and in this way allows the viewer to have a heightened physical engagement with the work and with themselves in relation to the work. The artist creates an environment that facilitates participation, interaction and play.

The theorist Christiane Paul notes that:

With regard to digital art, interactivity allows different forms of navigating, assembling or contributing to an artwork that go beyond [the] purely mental event. While the user's or participant's involvement with a work has been explored in Performance Art, Happenings and Video Art, we are now confronted with complex possibilities of remote and immediate intervention that are unique to the digital realm. (Digital Art 67)

According to Paul, the term Interactive Art can encompass a variety of digital technology art forms; its manifestations can be extremely hybridised and can range from interactive installations with or without network components, which provide an immersive digital environment, to software art which is software written by an artist, to internet art which consists of artworks or projects created for and hosted on the World Wide Web; or it can combine any or all of these (Digital Art 67). As Paul points out when he reminds us that "technologies often tend to develop faster than the rhetoric evaluating them" (Digital Art 67), there are multitudes of interactive artworks to date that have been produced combining elements from all the above categories. This makes it difficult to produce one single definition of Interactive Art. As we have seen, Rush believes that Interactivity needs to be separated from other forms of digital media, such as web-based artworks, whereas Paul combines some of these different forms of digital technology to fit under the umbrella term of Interactive Art. When assessing these two influential theorists' categorizations and definitions, I find Paul's encompassing of some Digital Art categories

that Rush would separate into different terms persuasive. To develop a definition that provides a complete understanding of the term Interactive Art, one would need to include rather than separate out all interactive computer-based forms that present themselves as art.

As this report will establish, not only is it very difficult to properly define the term Interactive Art, but it has also become increasingly difficult to provide single all-encompassing definitions for terms such as Interactivity and Play. Although the emergence of Digital Interactive Art will be further examined in the upcoming chapter's, for the purposes of this report, the term Interactive Art will refer to the uses of interactivity specific to its case studies. Thus the Interactive Art of Nathaniel Stern's Stuttering (2003) and Step Inside (2004) would, according to Paul's definition, fall into the category of Digital Art Installations (Digital Art 71). Reminiscent of large-scale video installations, this interactive art creates an environment in which the viewer is immersed, but that does not attempt to alter the viewer's sense of reality. That is, the viewer is placed in an environment but is constantly aware that this environment is an artwork and not a parallel reality. This interactive art does not aim to duplicate the viewer's current environment, but rather to get her to explore a new state of consciousness enabled by a very different environment (71).

David Saltz lays down prescriptive conditions for what he would term Interactive Art. According to Saltz, Interactive Art uses software as a medium, but it can never only exist as software (117). Interactive artworks must capture an interactor's input, either by physical contact with a physical object or by making movements in a articulated region of space, and the work must in turn project some kind of stimulus response back into its world for the audience to perceive (118). Interactive artworks therefore exist within and establish a connection to an enclosed physical space with an underlying spatial and architectural element which is indispensable to the work itself and provides boundaries. This is what Paul would refer to as a Digital Installation (Digital Art 71).

Paul finds that "Some artworks try to translate qualities of the virtual world into the physical environment, others strive to map the physical and virtual and yet others are aimed at fusing the two spaces" (Digital Art 72). In this report, the case studies embody Saltz's conditions for Interactive Art and therefore the Interactive Art referred to in this report endeavours to map the physical onto the digital self through the use of technology and interactivity, while establishing a connection to its mapped out physical boundaries. This Interactive Art constitutes a dialogue between the artwork and the participant, as the participant is invited to act upon the artwork and can expect in turn to be acted upon by the work.

As mentioned above, the case studies Stuttering and Step Inside would fall into the category that Paul calls Digital Installation. In terms of Rush's categories, these case studies would fall between Interactive Art and Virtual Reality. Rush's final category of Digital Art, Virtual Reality, is described as "the still passive aspect of watching a screen is replaced by the total immersion into a work whose reality exists contemporaneously with one's own... in a sense everything one sees on a computer is part of the 'virtual' universe" (208). According to this definition, the case studies display certain characteristics of the category of Virtual Reality, to the extent that they showcase a different realm of art making in which the artist and his canvas is no longer the centre of creation. Yet it would be more accurate to say that these works do not only represent the category of Virtual Reality, but also fall into the category of Interactive Digital Art. Rush describes the artwork Passage Set / One Pulls Pivots at the Tip of the Tongue (1995) by Bill Seaman as an example of his category of Interactive Digital Art. This work is an interactive installation in which three projections contain 'hot spots' that when triggered by the viewer reveal a visual poem, since the viewer can select words or phrases from the projected image and text panorama to create her own poem or random selection from the all the artworks language which is presented in four scrolling lists. This work allows for a sequential reading much like reading a poem (203). It engages its viewers in a sequence of physical interactions that reveal the content, and "passively

encourages [them] to create their own narratives or associations with the work" (201). As this report will explain in Chapter Four, the central works in this study belong to this category of Digital Art because they too are both large-scale interactive works that encourage true physical participation and invite the viewer to trigger and reveal her own unique sequence of events in the artwork (i.e. create her own narrative) through her bodily interaction with the artwork.

ii. Interactive Art in the South African Art Scene

In contradistinction to traditional art media, interactive artworks are a new phenomenon on the South African art scene, and one that requires the viewer to adopt an altered approach to viewing. The viewer must be willing to participate actively and vigorously in interaction with the artwork, which means that she must spend time with the work and use her body in ways not usually accepted by the traditional gallery. These new viewing techniques can lead to the viewer becoming unsure of her role and identity in a space that has traditionally sanctioned a more contemplative engagement with art works.

This report will argue that through bodily play and interactivity the viewer of an interactive artwork accesses a more profound experience of the artwork. This new relationship between viewer and work would seem to require new definition and therefore a new terminology – a terminology capable of helping the viewer to understand her role in a full-body interactive environment. Such an understanding should encourage her to spend more time with the artwork without feeling self-conscious about her movements in its vicinity.

The works chosen for case study are Nathaniel Stern's Interactive Installation Artworks entitled Stuttering (2003) and Step Inside (2004). Nathaniel Stern is an internationally exhibited New Media artist, well-known on the South African art scene thanks to his ability to successfully network himself and his artworks. This success is

due in part to his online blog, which has been described by Carine Zaayman as "one of the most popular [web]sites in the South African art world" (1).

Stern has contributed significantly to the emergence of interactive artworks in South Africa, notably through the recognition achieved by his interactive artworks Step Inside and Stuttering in the Brett Kebble Art Awards. In 2003 Stuttering was selected as an exhibiting finalist in the Brett Kebble Art Awards, and subsequently won a merit award in the New Media category. It was also exhibited at the launch of the new Wits School of the Arts, University of the Witwatersrand, in 2004. Commenting on the work in her Brett Kebble Art Awards overview, Carine Zaayman declared it to be "the only actual New Media piece" on the show (1). In 2004 Step Inside was also selected to be exhibited at the Brett Kebble Art Awards and achieved a major award. These awards were landmark events that announced the arrival of Interactive Art on the South African art scene.

Described as the largest visual art awards in South Africa (Brett Kebble wins BASA award 1) the Brett Kebble Arts Awards were established in 2003 by the controversial South African businessman Brett Kebble. The Awards aimed to provide South African artists from various disciplines with an opportunity to showcase and be recognized for their artworks. One of the main objectives was to highlight South African art and its investment potential, by focusing on the mutually beneficial opportunities that arts patronage can provide to artists and investors (Brett Kebble wins BASA award 1). Receiving more than 1000 entries in 2003, a South African record, the Awards were raised to international standards in just two years, according to Sue Williamson of artthrob.co.za (1), with increases in both the prize money and the scope and categories of the Awards. The panel of judges has over the years included top South African artists, academics and critics, such as Frank Ledimo, Lucia Burger, Penny Siopis, Julia Meintjes, Clive Van Den Berg and Zwelethu Mthethwa (Brett Kebble wins BASA award 1). That Stern's installations won awards in this prestigious competition is significant for

Interactive Art because of the public recognition, which necessarily entails an acceptance that interactive artworks can be exhibited successfully in the art gallery.

Step Inside was not only exhibited at the Johannesburg Art Gallery, but was also purchased for the gallery's permanent collection. This sale to the well-known institution of the Johannesburg Art Gallery is yet another important landmark in the history of South African Interactive Art, providing as it does a great opportunity for archiving Interactive Art, which is far too often limited to one night shows and temporary displays.

Stuttering and Step Inside were chosen as case studies for this report not only because they were the first major award-winning interactive artworks in the country, but also because each represents a different approach to physical play and performance. Where Stuttering aims to channel the viewer's bodily movements and force her to move in particular ways, Step Inside focuses rather on the politics surrounding the viewer's willing participation and spectatorship. Therefore, while Stuttering will allow us to focus on full bodily immersive interaction and play, Step Inside will allow us to investigate these immersive environments and their affect on the participant and the gallery.

This study of the significance of play in this specific style of Interactive Art requires identification of the differences between Interactive Art and Traditional Art genres and practices. This process begins with an exploration of the history of participation and the role of the viewer in the art gallery, from the beginnings of the public art gallery in the eighteenth century to today. The history traces a movement away from the traditional gallery, which does not allow its viewers any physical interaction with the artworks, via the Modernist "white cube" to the participatory gallery, which encourages the viewer to become part of the artwork, to create or compete it through her interaction with it. The next progression in the history of the gallery is the incorporation of active participation in what I term the Interactive gallery. This study of the Interactive gallery begins with formulating a working definition of Interactivity. The evolution of the gallery from a place for detached contemplation to a place for creating,

completing and playing with artworks in an interactive space creates a classification problem for the viewer. Are the viewers in an interactive environment audience members, participants, players, performers or interactors? This question is considered in the concluding chapter, in an attempt to provide the viewer with an understanding of her role in such an environment.

As this report aims to highlight that “the notion of art as something which hangs on a wall (a painting) or is placed on a pedestal (a sculpture) is challenged with increasing frequency these days, not only in alternative spaces but by commercial galleries as well” (Phelan 32), it is imperative that I define the term “gallery” as it is used in this report. When this report refers to “the gallery,” it means the art gallery or art museum, a space for the exhibition of art – traditionally, visual arts such as paintings, sculptures, prints etc, but more recently Performance and Participatory arts, such as Installation Art, Performance Art and Video Art. Therefore, the term “gallery” refers most specifically to the public gallery or museum, such as the Johannesburg Art Gallery and the Tate Modern in London. These galleries are usually not privately owned and are non-profit institutions that purchase and archive art (sometimes specific to the nation). They exhibit a selection from their archive, and they generally do not sell the art on display. The public gallery will therefore have stricter regulations than the private gallery (which concentrates on selling the art it displays and makes a profit from this practice) about which works will qualify to be purchased by it or exhibited within it.

Chapter Two explores the concept of the traditional or public gallery (such as the Johannesburg Art Gallery, which owns [Step Inside](#)), the gallery's evolution, and the advent of interactive and digital interactive artworks.

Chapter Three offers a brief historical and theoretical analysis of play, and explores the concept of serious and meaningful play. It goes on to investigate why, although playful interactions can be considered more successful than traditional artworks

due to their ability to engage the viewer, they are still finding it difficult to be taken seriously in the art world. The chapter concludes with a study of the emergence of play in the art gallery.

Chapter Four comprises case studies of Nathaniel Stern's Stuttering and Step Inside. Being the earlier work, Stuttering is investigated first. After an in-depth description of the work, of how it and its interactions function (with supporting diagrams), Stuttering is assessed according to the way in which it intentionally channels the movements of its viewers and allows the gallery to become a space for experimentation, participation and play. Step Inside is then examined and unpacked, with similar supporting materials and diagrams to those used for the commentary on Stuttering, but with a focus on the changing role of the viewer. This subsequently leads to a study of the performative aspects of play noted in these two artworks.

The final chapter of this report, Chapter Five, reflects on the significance of play in the interactive art environment, making specific reference to the case studies. While it is acknowledged that Stern's artworks are unique and not fully representative of all interactive work, there is a generalisable aspect to the new role of the viewer. Investigation of this role reveals a classification dilemma: a new categorization and description for the viewer of interactive artworks is therefore proposed, specifically for viewers of works which have a similar type of interactivity and share the same criteria for the viewer participant as the case studies Stuttering and Step Inside.

CHAPTER TWO:

The Temple of Art

The way in which a viewer perceives or reacts to a work of art placed in an art gallery is shaped by existing procedures associated with the viewing of an art object in this environment: the rules of the gallery, as it were, which include protocols for the gallery viewer.

Traditional art gallery viewing practices are significantly different from current or emerging viewing practices, especially with regard to interactive artworks. Change in gallery viewing procedures and in the art world in general is of course not a new phenomenon. Throughout history artists have challenged previous modes of representation and understandings of art; for example, Post Modernism (which will be discussed later in this report) can be seen as a direct revolt against Modernism, and Modernism in turn as an attempt to break away from the realist conventions of nineteenth-century art production (Gowing 924).

Artists have also used their work to challenge the role of gallery. According to Manovich, "Artists have also experimented with the identity of the gallery: from a traditional space of aesthetic contemplation to a place for play, performance, public discussion, a lecture, and so on" (Black Box versus White Cube 2). The world in which the artist lives is constantly changing, and innovations in technology and modes of thinking inevitably influence the work that he or she produces. As the artist and the artwork change and evolve, so the art gallery and its viewers have little choice but to grow with them, to reject the 'old' and engage with the 'new'. In order to arrive at a clear understanding of the gallery's evolution, and the concomitant evolution in the role of the gallery viewer, this report will now offer a brief history of the art gallery and its viewers.

i. The Traditional Gallery

Today art galleries and museums target the general public, yet before the nineteenth century art producing, viewing and collecting was the preserve of an elite social class (Zolberg 60). With democratisation and the spread of educational opportunities to the masses, what are now referred to as traditional art viewing practices and museum culture which began in the nineteenth century and included picture galleries and salons, became prevalent (Zolberg 61).

The history of the exhibition space began before the emergence of the Victorian picture gallery and nineteenth century salons, in this time collectors, the elite, collected mixed objects of universal interest (both natural artefacts and mundane artefacts), and displayed these assorted treasures in cabinet of curiosity or 'Wunderkammer' (Fitzpatrick 13). After the Renaissance these cabinets began to display mainly paintings and natural specimens, and not until the eighteenth century and the separation of art from science did galleries become dedicated to displaying art objects only (Fitzpatrick 13). Consequently, in the late nineteenth century public art galleries and salons began to emerge, and the mode of display in these public galleries and salons is that which this report refers to as the 'traditional' art gallery. In this 'salon style' mode of display a large number of paintings with heavy gold frames would be stacked in rows to form an intricate pattern on a wall. Railings were installed to ensure that the public could not get too close to the works (Barker 28). In this environment viewers progressed slowly through a sequence of carefully mapped out rooms, frequently pausing to examine individual artworks and read their associated labels (Buck and Dodd 139). Artworks deemed to be very important would be placed in rooms furnished with specially designed benches, which enabled more lengthy contemplation of the work without upsetting the flow of traffic and obstructing other visitors (Buck and Dodd 139). Paintings were the privileged medium of representation (Rush 7) and touching the art objects or exhibits was strictly forbidden. Even close proximity was discouraged and loud conversation was unwelcome (Buck and Dodd 139). Although the viewer was prohibited from touching or

being in close proximity to the art objects for practical conservation reasons, this practise ultimately distanced the viewer from the work and affected the viewers encounter with the art objects.

These traditional viewing practices respect the complex contemplative relationship between the viewer and the artwork, supporting a form of aesthetic contemplation highly attuned to the sensory qualities of the works. Yet both the work and the viewer remain static, which renders the aesthetic contemplation an entirely internal or mental event. The traditional method of viewing does not allow the viewer to interact with the artwork further than gazing at it in detached contemplation from an appropriate distance. In this way the art object acquires an elevated sense of importance and authority.

ii. The Modern Gallery

In the late nineteenth century artists began producing works that rejected the realism characteristic of early nineteenth-century classical art traditions. These artists, who became known as Modernists, experimented with new ways of seeing and depicting life and produced liberated, abstracted artworks that focused on form and technique. These works needed a new place to be exhibited, a space different from that of the traditional gallery, and so the Modern gallery was born. But in order to understand the Modern gallery, one needs to have a clearer understanding of Modernism itself.

According to Charles Harrison, the term Modernism can be defined in three ways. First, it represents an idea of 'the new' that rejects the norms of previous movements in favour of new and contemporary ideas and originality (6). A second definition refers to 'Greenbergian' Modernism, so called as a result of influential writings by the theorist Clement Greenberg, who describes Modernism as self-critical and aiming to achieve purity and truth to medium. According to Greenberg, Modernism is "distinct from classical, academic, and conservative types of art but also, crucially, from the forms of

popular and mass culture" (Greenberg, "Art and Culture" 143). The third definition of modernism identifies it as a critical term or value. In this definition modernism is understood as the idea of a universal aesthetic, a qualitative view of art that effectively validates Western cultural norms (9). A distinction might therefore be made between 'Modernism', meaning alternative modes of representation in Western art, literature, music, film and architecture, dating from the early twentieth century; and 'modernism', a critical term referring to an avant-garde² or contemporary mode of thinking.

As Modern(ist) artists broke away from traditional nineteenth-century art practices, so the Modern(ist) gallery is significantly different from the traditional gallery. The Modernist gallery is now generally thought of as "the white cube", after an influential essay by Brian O'Doherty. In "Inside the White Cube", O'Doherty theorizes the gallery space in the Modernist era, with a strong emphasis on how the conventions of displaying works in this environment affect the viewer. He describes the ideal gallery in this context: "the ideal gallery subtracts from the artwork all cues that interfere with the fact that it is 'art' " (2). He finds that the history of Modern art can be correlated with changes in gallery space and the way the viewer sees it, and concludes that we as viewers have reached a point where we see the artwork's space before we see the actual artwork. O'Doherty finds the 'white cube' Modernist gallery to be constructed according to extremely strict rules. These rules prohibit the outside world from entering the white cube: windows are usually sealed off and the ceiling becomes the source of light, with all walls being painted white. In such a space, "[a] discreet desk may be the only piece of furniture, [and] in this context a standing ashtray becomes almost a sacred object" (O'Doherty 3). This pure clean white artificial space is devoted completely to the art and its aesthetics. As opposed to the traditional gallery that fills the wall with a 'collage' of works and invites the viewer to sit and contemplate them on a bench provided, inside the white cube works are hung separately for study as idols of such importance that even the viewer's body seems an intrusion into a sacred space: "The space offers the

thought that while eyes and minds are welcome, space-occupying bodies are not or are tolerated only as kinaesthetic mannequins for further study" (O'Doherty 3).

This space not only deprives the viewer of any distraction, but also deprives the artwork of any context besides that of the space it is in. In this way the artwork is placed in its personal space against a dazzling white wall like an icon or idol to be worshipped (Buck and Dodd 139). The museum becomes above all a "temple of art" (Buck and Dodd 142), a "shrine for contemplating sacred objects" (Polaine 2). The Modern gallery has a kind of absolute power to confer merit; art placed with its space immediately acquires an elevated aura of worth and value.

Thus although traditional and Modern galleries differ in their modes of displaying artworks, both elevate the importance of the art object, creating a space where the artwork is of utmost importance and the viewer merely secondary. However, as artists began to produce artworks that afforded the viewer a more important role, so the dynamics shifted and the Participatory gallery was born.

iii. The Participatory Gallery

The movement from the Modern gallery to the Participatory is indicative of movement to a postmodern mode of thinking. This mode of thinking supports the incorporation of the viewer into the artwork, contests the idea of the artist as genius (Natoli and Hutcheon 141), and attempts to break down the boundaries between high and low art (Natoli and Hutcheon 35).

Post Modernism is an ambiguous and complex term, as it not only refers to a period in history but also to a mode of art production and a way of thinking. It can also be seen to have multiple meanings: in one sense 'Post'-modernism can mean 'after' Modernism, following on from the Modernist movement. But in another sense it can be seen as a reaction to Modernism, an 'anti'-Modernism. Lyotard states that "the Post-

Modern would be that which, in the Modern, puts forward the un-presentable in presentation itself" (Lyotard, cited in Natoli and Hutcheon 49). That is, the Post Modern in art represents that which previously would not be considered art, and the post-modern artist takes items that would not previously be considered as art, places them in galleries and labels them as art.

The Modern museum embodies the values of Modernism insofar as it is a structured entity that represents fundamental notions and concepts, embodies classification and assigns authenticity, authorship, and value (Sherman and Rogoff xi). Post Modernism has rejected central tenets of Modernism, such as originality, authenticity, 'art for arts sake' and formal purity, and has sought to break down the boundaries between high and low art.⁴ In the Modernist era the art gallery was the major source of distinction between high and low art (or art and everyday life), and ultimately made the decision as to 'what is art and what is not'. Post Modern artists have questioned the authority of the museum and its entitlement to wield such power.

For example, as early as 1917 Marcel Duchamp began by placing 'ready-mades' (mass produced objects that had no aesthetic substance) in the gallery as 'works of art', in an attempt to question preconceived notions of what lies inside and outside of the art world, of what is considered art (De Oliveira, Petry and Oxley, *Installation Art* 11). The postmodern way of thinking that informed Duchamp's works, highlighted the problematics of museum and gallery culture, specifically by posing the question of whether merely placing an object in this environment can assign it value.

Central to Modernism is the concept of the artist as genius. This concept elevates the importance of the creator, emphasising his supremacy and reinforcing the idea that the presence of the mark of the artist directly defines the status and value of the work. This concept of artist as all-knowing absolute genius is another of the concepts critiqued by Duchamp's postmodern mode of thinking. This is especially seen in his work Fountain.

which was a mass-produced urinal that Duchamp signed R. Mutt and anonymously submitted to the committee of the Society of Independent Artists in 1917. It was originally rejected by this committee and only accepted and exhibited when Duchamp (himself a member of the committee) became known as its originator (Grünewald 1). This demonstrated that the status of the artist was, in Modernism, a key factor in determining what was considered art: the urinal was merely a urinal until Duchamp (the artist genius) declared it to be his artwork.

In 1951 Duchamp exhibited Bicycle Wheel (1913), an assemblage³ of ready-mades consisting of a bicycle wheel attached to a stool. The viewer was meant to spin the wheel on entering the exhibition space and allow it to flicker at the fringe of her vision. In this example Duchamp was already attempting to involve the viewer on a different level, in terms of which the space around the artwork becomes just as important as the artwork itself. The space actually becomes part of the artwork and is no longer merely a neutral place in which to sit and contemplate the work.

In their book Installation Art, De Olivera, Oxley and Petry note that in the Post Modern period, the years from 1960 to the present, "it is in coming to terms with the tendency exemplified in these gestures of Duchamp that installation [art]... developed" (11). Of course, postmodern tendencies are to be found not only in Installation Art but also in other artistic movements, including Conceptual, Performance and even Multi-Media art. As is the case with Duchamps' works, these movements are conceptual in nature and challenge preconceived notions of what is considered high and low art,⁴ in the process challenging also the gallery's authority to confer artistic value.

Installation Art is believed to have begun in the 1950s and '60s, as it was at this time that there was a change not only in representation and looking but also in the mode

of working. Artists began to move away from object-based saleable art toward non-materialist art that was difficult to buy and sell.

In the early 1960s, before the term "Installation Art" became part of the idiom of the contemporary art world, the word "Environment" was used to describe what we would now term Installation Art. The term was coined by Allan Kaprow in 1958 to denote his room-sized multimedia works (Reiss xi). Kaprow's work represented a postmodern attempt to subvert the distinction between high and low art by integrating art and everyday life. This led him to focus on the idea of active spectator participation (Reiss 9). Environments also took participation to the next level, as viewers were allowed, if not encouraged, to interact with the environment, to turn switches or move items. In this way the viewer becomes part of the environment. Kaprow later increased this viewer interaction in other art / performance events he called Happenings. Happenings were unique event collages, performances, or situations meant to be considered as art, and were often shaped by the actions of the audience that participated in any given performance (Wardrip-Fruin and Montfort 83). Happenings ultimately served to eliminate the idea of 'audience' altogether, and forced all viewers to become participants (Reiss 9).

Kaprow aimed to shift the role of the viewer from passive spectator to active participant. Thus in the reception of his works the work and viewer were of equal importance, and the relationship between them became a reciprocal one (Reiss 9). The viewer had the ability to contribute something within the structure created by the artist, as each viewer's addition to a work could be read and interpreted by other viewers and the artist herself. This situation affords the viewer an active experience, because she is helping to bring the work into being and complete it (Reiss 16).

Kaprow's environments were aesthetically dominated by "junk", and his intention was to show the continuity between the works and everyday life (Reiss 23). The use of

junk also communicated the idea that this form of art was a new non-traditional and non-precious form of art (Reiss 22). Reiss states that "the use of junk could be seen as an assault on high art and the elite audience that it traditionally served" (22), undermining the power of the temple of art by reducing its idols to junk or mass-produced consumer products.

Kaprow's belief that museums were responsible for isolating art from daily life prevented him from exhibiting any of his original Environments in a museum (Reiss 29). Moreover, at that time his works would not have been welcome in such institutions. The fact that these works are now acknowledged as artworks worthy of a place in the history of the gallery and the history of art is a clear indicator of the extent to which the gallery has evolved over time.

Kaprow's Environments were a precursor to Installation Art, which is the use of a physical space as both medium and content, with the spectator's body usually immersed in the space demarcated as the work (Reiss xix). Installation exists in a relationship between viewer and space, and requires the presence of the viewer "in the artwork in order to see and experience it" (De Oliveira, Petry and Oxley, "Installation Art" 98). Installation Art can refer to a wide range of artistic practices, and at times overlaps with other interrelated forms of expression, including Fluxus, Earth art, Minimalism, Video art, Performance art, Conceptual art and Process art (Reiss xiii).

Helen Couvas claims that Installation Art facilitates a more embodied experience of space and artwork than conventional art viewing practices (11). This she says is because Installation consciously includes the actual physical space both of the artwork and of the viewer. She finds that in conventional art viewing the physical is subdivided in an attempt to prolong the viewing practice within the frame we identify as the artwork. Therefore she finds that in Installation Art the artwork's physical space is

contemplated in a manner different from and of more importance than that characteristic of everyday life (14).

Installation Art challenges traditional art viewing practices as the artist places emphasis not on the “end product” but on the spectator and the setting, for it is the spectator’s direct involvement that brings the artwork into being and produces meaning. Installation Art was thus the first art movement truly to embody viewer participation and make the viewer an important component of the artwork. By entering and exhibiting in the art gallery, Installation Art took the first step in transforming the gallery into a place for interaction, learning, play and participation.

Another group of artists that helped to transform art and the gallery, also emerging in the 1960s, was Fluxus art. Fluxus was an international movement of artists, writers, musicians and filmmakers who were avant-garde,² anti-art and anti-museum, opposed to the commodification of art as the property of museums and collectors (Rush 24). Fluxus artists made Events that aimed to form a link between everyday objects and events and art.

Fluxus Events seem similar to Kaprow’s Happenings, but differ in that Happenings were sometimes complicated, lengthy performances meant to blur the lines between performer and audience, and performance and reality. Fluxus performances, on the other hand, were usually brief and simple. The Event performances aimed to elevate the banal, to be “mindful of the mundane”, and simultaneously to deconstruct the high culture of academic and market-driven music and art (Rush 24). These Events became statements against the perceived self-importance of museum art as well as participatory affairs in which viewers became active participants (Rush 24).

In this movement the viewer not only “completes” the work, but she actually becomes the work through her participation (Rush 24). Founder of the Fluxus

movement and well-known media artist Nam June Paik experimented with what is now called fluxfilm (Rush 25). He rejected the entire mechanism of large-scale movie making and subverted the usual expectations of film viewing by "instilling a performative aspect into the screening context and, in the process, liberating the viewer from the manipulations of both commercial and alternative cinema" (25). The influence of Fluxus art led to changes in Performance, Film and eventually Video Artworks (Rush 24).

Video Art is a type of art that relies on moving pictures and is comprised of video and audio data, but should not however be confused with television or experimental cinema. Video Art developed as an art form alongside the use of television sets as sculptural objects, freed from their usual context (Morse 154). Video Art was in its prime during the 1960s and 1970s, and today continues to be produced in two varieties: single-channel and installation. Single-channel works are much closer to the conventional idea of television: a video is screened, projected or shown as a single image. Installation works involve either an environment, several distinct pieces of video presented separately, or any combination of video with traditional media such as sculpture. Installation video is the most common form of Video Art today and because Installation video art is most commonly exhibited in the art gallery, this report will focus on installation video. Yet it must be noted that video art has been, and continues to be, exhibited and viewed on the internet (Internet Video Art) and distributed on DVD. In some cases the internet is used to allow the viewer to control or manipulate a video in an installation from within the installation space or from a remote location.

Although single-channel works do not include the viewer as a participant and therefore do not encourage the evolution of the participatory gallery and gallery viewer, the mere inclusion of Video Art in the gallery is significant in the gallery's development as it represents the first major inclusion of technology or New Media in this traditional space.

Whereas single channel Video Art did not include the participatory viewer, Video Installation combines video technology with Installation Art, and therefore embraces both technology and viewer participation. This art form became more widespread in the 1980s when high quality video projectors became cheaper and more reliable. In his essay "Black Box versus White Cube", Lev Manovich reports that in the 1990s video installations began to take over gallery spaces, turning O'Doherty's "white cube" into a dark enclosed or semi-enclosed rectangular space with a video projector at one end and the projected image at the other (the "black box"). He argues that Video Installations that take over gallery spaces are contrary to the paradigm of Modern art: not only do they bring moving images into the gallery, but they also turn the gallery into its ideological enemy, the movie theatre (Black Box versus White Cube 3).

This claim appears to be exaggerated: Video art brought technology (not the movie theatre) into the art gallery. But Manovich's point is that this is the technology of consumer culture, and its importation into the high art ⁴ world of the gallery necessarily "degrades" the establishment and the work it holds.

As Video art became more popular, so artists began producing Interactive Videos, also referred to as Interactive Cinema. The first experiment was by the director of MIT's Interactive Cinema group Glorianna Davenport (Lunenfeld 145). This work consisted of a screen with an image of a flock of birds pecking at the ground: as the spectator approaches, the birds take flight. Another work features a screen with an image of an Indian dancer performing complex choreography. As the spectator leaves, the screen cuts to a close-up of the dancer, angry that the spectator would dare to turn away during his performance (Lunenfeld 145). In their use of technology and "awareness" of the viewer, then, Interactive Video and Interactive Cinema can be seen as precursors to fully participatory movement-sensing interactive installations and Interactive Art.

According to Wardrip-Fruin and Montfort, since Video Art began it has constantly striven to be new and interactive, and has had a tendency to create an always-already

history (227). They claim that Paik's work incorporates these tendencies. Although Paik did not follow New Media art into its next stage of development, the production of interactive installations, Wardrip-Fruin and Montfort believe that the pioneers of interactive installations were following in the same cybernetic video direction that Paik had defined. Therefore Paik could in this context be considered an important influence on Interactive Installation Art.

Christiana Paul also regards video works as precursors to interactive works within the gallery, noting:

[Video works] have for the longest time been an exception to the mostly object-based art world rather than the rule. After approximately three decades, video now seems to have found an established, safe place in the art world but the museums relationship to performance or sound as art forms remains a problematic one. (Challenges for Ubiquitous Museum 2)

Paul finds a problem in the demands made of the viewer by the artwork in video works and interactive works. She says that with video works a viewer can grasp the concept of a work simply by viewing a fragment of the video, whereas with interactive ever-changing works this may never be the case (Challenges for Ubiquitous Museum 2). Although some interactive works have many levels of detail and configurations that can potentially be missed by the viewer, Andrew Polaine finds that this largely depends on the mode of the interactivity and the reason for interactivity (Polaine 2). Paul later makes a point that is central to this conundrum for her:

One of the biggest challenges for the presentation of New Media art is to engage the audience for a period of time that is long enough to allow a piece to reveal its content [...] Moreover, New Media art often requires a certain familiarity with interfaces and – despite the fact that computers seem to have become ubiquitous – one can still not presume that every audience member will be an expert in navigation paradigms. (Challenges for Ubiquitous Museum 2)

The degree to which the gallery viewer engages with an interactive artwork is indeed potentially problematic, but this is largely due to the viewer having been conditioned to believe that her role in the gallery is not one of exploration and interaction but of detached contemplation. It is also true that the viewer of New Media art is faced with technical challenges in order to view and grasp an artwork, yet many artworks – including the case studies – turn this “problem” with New Media art viewing to their advantage. In such cases the point of the work is for the viewer to master the interface provided by playing with and exploring the work, for one of the challenges of the work is for the viewer to embrace its technology. It is my hope that acknowledging this and finding a new definition and categorization for the viewer’s place in the interactive gallery will provide her with the confidence needed to embrace and interact with artworks such as Stuttering and Step Inside.

Paul claims that another problem with interactive artworks and audience participation is that one cannot expect every audience member to be an expert in technology and have the ability to navigate its technology. Yet this problem is an aspect of the reception of art in general and not only with interactive artworks. In the early days of Installation Art, gallery viewers were not accustomed to being immersed in an artwork and had to adapt their viewing practices and ways of thinking to accommodate this new type of art. Similarly with interactive artworks, one cannot assume that every viewer will understand the complexities of the technology and navigation, yet interactive art challenges the viewer to educate herself, to explore and develop an understanding of this new category of art.

iv. The Interactive Gallery

Essential to the Interactive gallery is the use of computer technology. The use of computer technology in the gallery has changed the nature of various genres of art and practices of viewing art. Throughout history ‘the new’ has created anxiety for some, who find the new intimidating and argue for a reconnection with tradition, while others find

tradition a hindrance and applaud the progress of technology and 'the new'. These opposing responses to art have been prevalent for centuries: a good example is the development of photography, a new technology which had to fight for its place and value in the art world. The emergence of New Media and Interactive Art into the art world's sacred gallery is no different, for it continues to engender vigorous debates (such as the famous 'what is new about New Media?' debate, in which the theorists Terry Flew and Lev Manovich engaged).

Some traditional artworks can be seen as interactive, such as Duchamp's Bicycle Wheel which, as mentioned, allowed the viewer to spin the wheel, causing light to flicker at the fringe of her vision. In this way a tactile relationship between the viewer and the artwork is established, a relationship that encourages the viewer to see the work in the context of the entire space of the encounter. But today, with its increasing use of digital computer technology, Interactive Art falls under the umbrella term New Media Art. New Media Art is a label for art that incorporates an element of New Media technologies, that is, the technologies that have insinuated themselves into mainstream society since the mid-twentieth century (as previously pointed out in chapter one). Multimedia Art, Media Art, Digital Art, Internet Art and Interactive Art can all be termed New Media Art. In her preface to The New Media Reader entitled "Inventing the Medium", Janet H. Murray points out the speed of change within art production of our time, she states: "The term 'New Media' is a sign of our current confusion about where these efforts are leading and our breathlessness at the pace of change, particularly in the last two decades of the 20th century" (3).

Michael Rush finds that there has been little academic writing about the history and emergence of New Media art. Murray's breathlessness at the pace of change could be a reason for this, yet Rush believes this is because New Media's history is a product of a fusion between the history of technology and the history of art, which leads to a complex, non-linear and unsubstantiated record (9). Rush asks how far from canvas the

art world has moved. He highlights computer-based practices that have moved art into the fast-changing digital world. In this virtual world which creates its own reality, the image is controlled and manipulated by the computer, which effectively usurps the role of the artist painting on canvas, and replaces it with the artist-technologist 'painting' or developing with binary.

The interactive artwork presents its viewer with choices, either micro-choices of moment-to-moment interactivity or macro-choices, which change the long-term progress of the experience. Meaning is created through this viewers' actions within the system (Salen and Zimmerman, *Rules of Play* 69). The interactive artwork challenges the traditional gallery viewer's roles in relation to the gallery space and in relation to the work itself. This viewer becomes something other than merely a viewer; she becomes an interactor or participant and must learn to communicate with the system and its tools, to make choices and to interpret the outcomes. This is a task much more demanding on this viewer than traditional art viewing practises.

Just as a viewer of Interactive Art has been forced to develop or change her role, so the actual gallery space cannot escape the changes that this new kind of art imposes on its traditions and structure. The gallery has little choice but to allow the incorporation of technology and computers. The sterile sacred untainted white walls must now provide easy access to electricity plug points, as bits and pieces of technology are hidden (and in some cases simply strewn) around the room. Holes are drilled in ceilings to install motion-tracking cameras, lights dimmed to allow projectors and screens to be seen clearly, the floor is marked or artificial stages are installed to provide demarcated performance or interactive spaces. All these are a necessity for the proper functioning of an interactive artwork, and if the gallery is going to accept these kinds of works into its space, it is given little choice but to accommodate their needs.

In many cases of early Interactive Art the main difference between traditional forms of art and Interactive Art was that instead of questioning the gallery space or the museum, Interactive Art turned was concerned with questioning technology and its possible applications (Hieronymi 16). It is the combination of these two features, audience interaction and meta-commentary (which refers to an art practice that is continuously 'de-mythtising' and 'de-automating' prevailing discourses from the inside), that constitutes one of the main focuses of most early Interactive Art (Hieronymi 16).

Fine Art theorist Andrew Polaine investigates interactive artworks in the art gallery and concludes that the real gallery of interactivity is outside the Fine Art world in places such as performance spaces because they are less bound by the conventions of Fine Art galleries and impose less of their own context on the work. He finds that interactive artworks do not belong in the art gallery because the Fine Art world is based on outdated notions of economy and the preciousness of the artwork, while interactivity is about action and participation rather than soulful contemplation (Polaine 8).

Although I agree with Polaine that interactivity is about action and participation, I disagree that it is not about contemplation and should not find a home in the art gallery. Many interactive works (including the subjects of this report's case studies) require more than physical interaction and have meaning and a context within the gallery. Some subvert the traditions of the gallery in the same way as Installation Art, and are made with the express intention of being placed in the gallery so as to challenge its conventions. Artists cannot be expected to ignore technology and the world they live in, and neither should the gallery. Artists should continue challenging the institution of the gallery and the conventions that bind it, as they have been doing so since the advent of Post Modernism. Indeed, many galleries have begun to embrace interactive artworks and aid their evolution into the twenty-first century.

Artworks have always been judged on the impact they make on their viewers. Art galleries attract a particular type of viewer who comes to the institution for an experience of art, and will therefore spend time with a work in an attempt to understand its intention or meaning. The more time she spends with the work the greater impact the work makes on her, and therefore the more successful the work is considered to be. Therefore for decades of art production, the experience of the artwork has been an essential theme for the artist and the art viewer, whether this experience consists of simply viewing and contemplating the work, or involves actually entering into the work and immersing oneself.

Although there is no doubt that the tactile feel of a sculpture or the texture of a painting adds a sensory element to a traditional work of art, the impact of this limited sensory experience is far from the sensory experience of an interactive artwork, especially an immersive environment that requires that a viewer use her sensory ability and thinking mind to explore a work first hand, drawing her own conclusions from this personal experience (Stalker 84).

To recap, the traditional art viewer cannot interact with or experience traditional artworks in the same way that interactive works are experienced. This is because the interactivity in interactive artworks allows for every experience of the work to be different from previous experiences as the viewer can choose a different course of action in every viewing or interaction with the work. In traditional art viewing practices a viewer could only interact visually and mentally by viewing the work and possibly contemplating it, and was rarely encouraged to touch or sensually experience the work. Interactive artworks require their viewer to use her body and mind to interact, by clicking a button or using her body to trigger content and expose meaning. This can be challenging to a viewer accustomed to the traditional way of viewing an artwork in a gallery situation.

Viewer participation is essential for interactive artworks, because interactive works move beyond the passive spectatorship of traditional viewing and require that this viewer actively participate, since the meaning of the work is only realized through this viewer's interaction with it (Polaine 2).

"Toward the end of the nineteenth century, the museum assumed its definitive form as a place set apart for pure aesthetic contemplation and opposed to the external world of social praxis" (Groys 144). In this Modernist style of exhibition, a viewer's desire for sensual experience of an artwork was thwarted by the rules of the 'white cube': "eyes and minds are welcome, [but] space-occupying bodies are not or are tolerated only as kinaesthetic mannequins for further study" (O'Doherty 3).

In the 1960s, theorists began to recognize the power of New Media (van Tonder 10). They hoped that, through participation, we might rediscover the world for ourselves, using our own senses. Revolutionary new forms of participation were seen, for example, the Environments and Happenings invented by Alan Kaprow. Kaprow was driven to shift a viewer from a passive state to an active one, and required that each viewer make some contribution within the structure created by the artist, and help create and complete the work (Reiss 16). Then, in the Fluxus movement of the 1960s, not only did a viewer complete the work, but she actually became the work through her participation (Rush 24). The concept of an audience was eliminated and all viewers became participants.

In the 1970s and 1980s this form of art making and viewer participation was referred to as Installation Art (the significant difference being that Environments and Happenings were held in alternative spaces, whereas Installations were shown in galleries). Installation exists in a relationship between viewer and space, and requires the presence of a viewer as a necessary component: the spectator must be present in the work for the work to be complete.

With regard to the impact of Digital Art on traditional art practices, Rush has this to say:

In art, visual literacy is no longer limited to 'the object'. It must embrace the fluid, ever-changing universe that exists inside the computer and the new world the computer facilitates: an interactive art world that can be virtual in its reality and radically independent in its incorporation of the 'viewer' into the completion of the work of art. When Duchamp suggested that the work of art depended on the viewer to complete the concept, little did he know that by the end of the century some works of art (such as interactive films) would literally depend on the viewer, not only to complete them, but to initiate them and give them content. (171)

A postmodern mode of thinking and Installation Art has helped the art world understand that the role of the viewer in Digital Art is that of a mediator between the artist and the artwork and a facilitator of the artwork or art experience.

Some argue that today value is placed on the audience's ability to interact more freely with the exhibits and discover the work for themselves. Polaine maintains that it is this physical interaction that makes New Media 'new' (3). The computer's ability to perform calculations at high speed make it possible to create interfaces that link the human body or the motion of the hands and feet to images and sounds used in a work of art. Human-machine and human-computer interaction facilitates audience participation, and makes real-time interaction possible.

Movement-sensing installations offer the viewer the opportunity to become actively involved in the process of creating a work of art by influencing image and sound with their interactions (Winkler 1). Environments which use sensors to track human activity, location, and gesture, are often presented as open environments for exploration with "each 'realisation' determined by individual action, curiosity, and play" (Winkler 1).

Winkler finds that these environments suggest a new social and artistic dynamic, requiring that a viewer actively participate to create their own artistic experience (Winkler 1). Therefore he finds that Interactive Artists do not create finished works, but rather provide the potential for many works to be created through anonymous collaboration.

The incorporation of interactive artworks in the art gallery has set up challenges not only to the customs of the traditional gallery and the conduct expected of its visitors, but also regarding the technology requirements, maintenance requirements and policies concerning the purchase of such works of art. Galleries need to spend time and money installing and handling technology in their space, something that traditional gallery curators are not accustomed to.

This was the case when the subject of this report's second case study, Step Inside, was exhibited in (and eventually sold to) the Johannesburg Art Gallery. Nathaniel Stern, the artist, has described the challenges he faced in securing computer equipment, setting up procedures and training gallery staff to switch the equipment on and off and to reset the work if necessary (Appendix one line 180). No longer can the curator and gallery staff hang the work and forget about it, and no longer is the artist's job finished once the physical work is handed over. These interactive artworks have specific set-up requirements, require constant maintenance, and a working relationship to not only their viewers but also their creators and exhibitors.

The sale of this work also posed some difficult questions. When an interactive artwork is sold to a museum or gallery, does that institution purchase the work in its entirety like a single painting, or do they purchase a copy of the work, like one of a limited number of prints? Such new issues need to be addressed by both artist and purchaser (gallery). In the case of Step Inside being sold to the Johannesburg Art Gallery, it was agreed that the gallery could purchase a "composition" of the work, so

that the curators were given the freedom to implement it in new ways as long as they adhered to a set of specifications set out by the artist (see Appendix two).

This form of agreement is essential as many art museums, especially traditional museums, do not always have the ideal site to set up the work, with features such as sources of power and areas that block out external light. For Step Inside specifically, even the floor needs to be modified: “The ‘floor’ must be a hollow wooden floor, raised off the ground; this is to insure they will carry/resonate the sound of footsteps. They must be strong enough to hold the weight of viewers, but also allow for small vibrations in the wood with each step” (Appendix two). All such criteria aim to set up the optimal playground for the participant to explore each rendition of the work in its original grandeur.

CHAPTER THREE:

Playing with the Idols

Many interactive artworks, including the subjects of this report's case studies, use body and play to engage their viewers on a more complex and personal level, as a viewer becomes part of the work and deciphers if not guides its outcome. Yet although these playful interactions might be considered more successful than traditional artworks in terms of their ability to engage a viewer, in some cases Interactive Art is still finding it difficult to be taken seriously in the art world. This may be because the gallery considers itself a site for serious contemplation, and play seems to signify the opposite; or because the medium of expression which accommodates or encourages the play is considered populist and therefore a form of low art.⁴ This chapter will investigate the concept of play in the gallery and the ability of play to create meaningful experiences, and argue that the act of playing can yield serious insights and has a place in the art gallery.

Theories and studies of the concept and utility of play in the fields of art, psychology and physiology are voluminous, and it is not within the scope of this report to study each of these thoroughly. Rather, brief selective accounts will be given of those theories of play that will be of use in assessing how play is utilized in Interactive Art and how it influences and fits into the art gallery, with specific reference to the central works in this study.

i. A Historical and Theoretical Perspective on Play

In everyday usage the word "play" typically serves to differentiate between different parts of one's life: sleeping, eating, working . . . and playing. But there are nevertheless vast numbers of scientific investigations of the phenomenon of play in psychology, biology and the study of behaviour and development in animals and humans.⁵

According to Susanna Millar, in psychology Sigmund Freud and Jean Piaget are the two major theorists of play. Freud's theory in his work "Creative Writers and Daydreaming" focuses on the relation between imaginative play and emotion, whereas Piaget deals with play as an aspect of intellectual development (Millar 58).

Piaget studied childhood play and concluded that, because children learn more effectively through activity than through instruction, play helps develop the building blocks for learning and reasoning in a child (89). He also finds that play is inseparable from intelligence, as the individual creates adaptive intellectual structures of logic in and through her participation in play (157).

Freud studied the effects of play in adults as well as children. With regard to children, Freud found that play helps develop the child emotionally and physically because through play the child expresses herself symbolically:

We know that the child takes the same attitude to all impressions painful to him, reproducing them in the form of a game; through this manner of proceeding from passivity to activity he seeks to master mentally the impressions received from life... . In the play of children we seem to arrive at the conclusion that the child repeats even the unpleasant experiences because through his own activity he gains a far more thorough mastery of the strong impression than was possible by mere passive experience. (43)

Freud finds that while children use play effectively to deal with experience, adults tend to be ashamed of the phantasies⁷ and secret wishes that come to light in the act of playing, and have to mask or conceal them because they seem to conflict with or be impermissible in their social world. He therefore finds that for adults creative writing becomes a substitute or surrogate for this childhood play. Just as children construct alternative worlds to fulfil their wishes, so writers play out their latent desires or

phantasies in fictional form through play (37). Thus for Freud, adults still engage in play but are obliged to have recourse to modes of play – such as creative writing and art more generally – that do not conflict with the adult's social identity (37).

David Cohen also ponders the concept of adult play: "Psychology finds it hard to explain this general surge of playfulness. If the purpose of play is to prepare the child in various ways for adult life, what is the motive for adult play?" (155). Thus while psychologists regard childhood play as useful and essential for development, the notion of adult play raises difficult questions. It is therefore unsurprising that adult play is also problematic in the context of art; and that, conversely, artists who aim to challenge traditional conventions have found the concept fascinating, and have used their work to encourage viewers to challenge themselves in and through play.

In his book Play and Playability as Key Concepts in New Media Studies, Julian Kücklich finds that using the word "play" in New Media studies is using old terminology for a new phenomenon. He distinguishes two ideas of play: traditional play and digital play, and finds that, in New Media, that something is not serious does not mean that it is (traditional) play, and that something is made without a thought to its outcome does not mean that it is (traditionally) playful. Here Kücklich highlights an important issue regarding the concept of play in general, but especially in relation to New Media art: the fact that an artwork or an action is (digitally) playful does not make it trivial or meaningless. This notion will be explored further under the topic of serious and meaningful play.

At this point a definition of play for the Interactive gallery context seems necessary.

The word play is understood in variety of ways, in everyday use from playing with words to play in games, to the concept of the play of light on the ocean – where "play" refers to the spontaneous, sporadic action of a non-human entity (Salen and

Zimmerman, "Rules of Play" 303). Salen and Zimmerman concentrate on the study of play relative to game design and 'art-games'. They boldly suggest a general definition of play: "Play is free movement within a more rigid structure" (Rules of Play 304). Yet Salen and Zimmerman believe not only that play exists because of more rigid structures, but also that it exists in opposition to them. This idea is entirely apposite to the study of play in the gallery space, both because the boundaries of the artwork that the artist creates can be construed as the "rigid structure", and because the concept of play in the gallery space exists in opposition to the gallery and its traditions, another rigid structure.

Salen and Zimmerman insist that play also has a transformative aspect. They agree with philosopher James S. Hans when he states, "the role of play is not to work comfortably within its own structure but rather constantly to develop its structures through play" (Rules of Play 305). They define transformative play as the ability of play to create or transform into a new form through the act of playing; in some cases the force of play is so powerful that it can change the structure itself (Rules of Play 305).

In interactive artworks that utilize bodily play, such as the works featured in the case studies, the transformative aspect is that which creates meaning. Through the free movement of play the ways in which meaning was constructed in a gallery in the past are altered, and new ways and means of creating meaning are found. In this way the interactive installation participant is not only using play as a medium to construct the work, but also to challenge and change the structure that the play is working within – both the structure and norms of the art gallery and the structure of the interaction that the artist has built.

According to Salen and Zimmerman, all play involves free movement within a structure, but not all play has the ability to be transformative (Rules of Play 305). I believe that the capacity of the interactive play to be transformative largely depends on the player and her ability to use play as a medium to enable transformation and

discovery. Stern's works, which will be studied in the next chapter, use play as a medium to communicate meaning and aim to arouse interest in the work through the use of play. The 'new structures' that transformative play creates are the different conclusions or meanings that each participant comes to in his or her individual exploration and creation of the work.

When discussing play in relation to art, many theorists such as Martin Bax and Andrew Heiromni make reference to one of the most important and influential texts ever written on the study of play. "Nature and Significance of Play as a Cultural Phenomenon" is the opening chapter of Johan Huizinga's Homo Ludens. In his studies, Huizinga looks at play not in terms of psychology or biology, but phenomenologically, seeking to establish "what play is in itself and what it means for the player" (Salen and Zimmerman, "The Game Design Reader" 83).

Huizinga investigates the notion of serious play, and examines the role of play in law, war, science, poetry, philosophy, and art. He sees the instinct for play as the central element in human culture, and regards all human activities as forms of play. Huizinga relates play to the body, arguing that "play only becomes possible when an influx of mind breaks down" (3). While playfulness can be seen as the opposite of seriousness, one can nevertheless find seriousness in play. "Play is a thing by itself. The play-concept as such is of a higher order than is seriousness. For seriousness seeks to exclude play, whereas play can very well include seriousness" (45). Huizinga constructs a framework for the study of play and identifies the main characteristics of high order or serious play. These are that play is an optional or free activity, that play is not part of ordinary or real life, that play is limited in time and place, that play promotes social groupings, and that play creates order and has no material interest or profitability. Play is a function of culture, or culture is formed through play. As Huizinga himself puts it:

Summing up the formal characteristics of play we might call it free activity standing quite consciously outside 'ordinary' life as being 'not serious', but at the

same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means. (13)

Roger Caillois criticizes Huizinga for not attempting to classify games in Homo Ludens. Caillois expands on Huizinga's definition of play and offers a taxonomy of the elements of play. Focusing on play as competition, these four play forms are *agon* (competition), *alea* (chance), *illinx* (vertigo) and *mimicry* (make-believe) (84). The forms are based on the player's experience, and are used to analyse game experience, tune game designs in progress or generate new game ideas (84). Caillois enriches his classifications by introducing a pair of concepts, *paida* and *ludus*. *Paida* is free-form improvisational play, whereas *ludus* refers to rule-bound formalized play. These concepts are crossed with his four forms of play, resulting in a definitional vocabulary that encompasses a large range of play activities.

Whereas Huizinga and Caillois seek to identify the essential qualities of play, the anthropologist Gregory Bateson focuses on the significance of play as an act of communication. In A Theory of Play and Fantasy he argues that play was an important step in the evolution of how humans and non-humans communicate (317). He finds that play is an act of metacommunication,⁸ which means that while the act of playing may reference real-world situations, it is still always understood by the player that what she is doing is playing (316). Bateson's understanding of the communication "this is play" between two living beings means that they are saying: "these actions in which we now engage do not denote what those actions for which they stand would denote" (317). He explains this by way of the example of monkeys play fighting. In this instance both monkeys acknowledge that they are not engaging in a "real" fight with the intention of

hurting each other, but rather engaging in play. For example a playful nip represents a bite, but it does not mean the same as what a bite in a real fight would mean (317). Bateson goes on to state that “play is a phenomenon in which the actions of play are related to, or denote other actions of ‘not play’ ”(317), and underlines its seriousness by suggesting that “the evolution of play may have been an important stop in the evolution of communication” (317). He acknowledges that in some cases play becomes so serious in relation to the real world situation to which it refers that the player gets carried away and “must often be reminded that ‘this is play’” (321).

Brian Sutton-Smith is an interdisciplinary scholar and theorist who echoes Bateson’s idea that play is and is not what it may seem (Salen and Zimmerman, “The Game Design Reader” 85). Sutton-Smith investigates not only play itself, but also how play is defined and described within discourse, because he is interested in how our understanding of play is constructed. Through a metastudy of play he identifies a set of “play-rhetorics” (ideological discourses that shape the way we speak about play); or as he puts it: “the rhetorics of play express the way play is placed in a context within broader value systems” (Sutton-Smith, “The ambiguity of play” 303). These rhetorics present play as progress, fate, power, identity, the imaginary, the self and frivolity. Sutton-Smith describes a wealth of play forms and experiences, and concludes:

If we examine how the word “play” is used and concentrate on its so-called transferred meanings we find that of the play of light, the play of the waves, the play of the components in a bearing case, the play of limbs, the play of forces, the play of gnats, even a play on words....This accords with the original meaning of the word ‘spiel’ as ‘dance’, which is still found in many word forms (The ambiguity of play 306).

In this statement, one can see play in every aspect of life on earth, something that every human has engaged in at some time and something that is happening constantly all around us. Play is everywhere.

Salen and Zimmerman find that all these different attempts to define or theorize play have proved one thing: that there is something fundamentally ephemeral, mysterious and exciting about play. I agree with Salen and Zimmerman as they state that “play surprises and delights us, moves and transforms us” (The Game Design Reader 85).

ii. Seriousness and Meaningful Play

Debates concerning the seriousness of play have occurred in the fields of psychology, biology and Interactive Art.⁶ Some continue to regard play as a non-serious or trivial activity, yet one need only look at the salaries of sportsmen and women all over the world to see that our society takes play extremely seriously.

As mentioned previously, Johan Huizinga was the first well-known scholar to investigate the role of play in human civilization, and he concluded that the activity of play, long dismissed as trivial and frivolous, is in fact essentially what makes us human, and therefore very serious. Huizinga found that even in its simplest forms among animals, play is more than a physiological phenomenon or psychological reflex, but – to the extent that it teaches or prepares the animal for the tasks of adult life – is functional and has a purpose (1). Play in his opinion is therefore a fundamental characteristic of development. In Homo Ludens he remarks:

[Play] is a significant function – that is to say, there is some sense to it. In play there is something ‘at play’ which transcends the immediate needs of life and imparts meaning to the action. All play means something...(1).

The contrast between play and seriousness is always fluid. The inferiority of play is continually being offset by the corresponding superiority of its seriousness. Play turns to seriousness and seriousness to play. (8)

In Rules of Play, Salen and Zimmerman conclude that Homo Ludens is an attempt to elevate the significance of play in general. They regard Huizinga’s vision of play as

the perfect starting point for the study of meaningful play, and they classify meaningful play in two separate but related ways. The first definition refers to the way that meaning is created through the actions and outcomes of the player (Rules of Play 34). This definition describes what happens in the interaction that creates meaning. The second sense of meaningful play refers to the goal of the interaction; this definition helps to determine the relationships between actions and outcomes, to order to decide when meaningful play occurs (34). In this sense the concept of meaningful play is evaluative as it assesses the likelihood of meaning being created. In this definition the word “meaningful” is not about how the meaning is made, but rather about the emotional and psychological experience of inhabiting a well-designed system of play (34).

Dramatic art theorist Augusto Boal, who will be studied in depth in the next chapter, in his book Games for Actors and Non-Actors investigates the concept of the seriousness of play. Boal situates theatre in the universal realm of play and games, and shows that meaning can be created through play and bodily interaction. In his Forum Theatre, spectators are not allowed to remain passive observers of aestheticised action, but instead are forced into interaction and become what Boal terms “spect-actors”. The goal of Boal’s Forum Theatre’s game-playing is to empower the “spect-actor” to “try to change society rather than contenting [them]selves with interpreting it” (224). Just as in many ways Interactive Art aims to empower a viewer to become part of the artwork and take responsibility for it, instead of being content with merely contemplating it.

Whereas Boal studied serious play in terms of theatre and performance, Julian Kücklich investigates play in relation to New Media studies. He studies play and playability in New Media on both an individual and a collective level. His aim is to operationalise play terminology for New Media theory, and he argues that concepts of play may shed light on obscure New Media terms such as interactivity and immersion. He finds that there is considerable overlap between the concept of play as a place separate from everyday life and concepts of the virtual, immersion and simulation.

The theoretical problems caused by these seemingly paradoxical [New Media] structures are not solved by regarding them as play-structures. But the terminology of play allows us to speak about them not in exclusive, but rather in inclusive terms. Thus, the model of play could be extended to areas such as the status of the mind vs. the body in the information age. (Kücklich 37)

To put this another way, the space created by New Media is all around us, but we are never entirely inside it. Kücklich considers the terms playability, re-playability and playfulness. He finds that playfulness is a term primarily used in human-computer interaction (HCI) research, where it "refers to an individual's tendency to interact spontaneously with a computer" (7). Playfulness can be regarded as an attitude that promotes playability. Playability is closely tied to "replayability". Kücklich's notion of playability is the pleasure felt in playing or the desire to play as a result of the player's attitude and the game itself. Replayability is a measure of the desire to repeat the act of play in a certain situation. Generally speaking, repetition has been equated with boredom, and only lately has it been recognized as a possible source of pleasure. Especially in interactive artworks that yield multiple different outcomes, the concept of replayability can signal a successful work that engages its viewer and encourages her to carry on playing and possibly come to a different conclusion or outcome.

Torben Grodal argues that "[a] central element in those playful activities that we call games is ... their repetitiveness, because somehow repetitive (reversible) activities are felt as less serious, less 'real' than ... irreversible processes" (Grodal, cited in Kücklich 25). For Kücklich this indicates that repetition might have a central role in establishing conventional rules, and in this way contribute to the codification of play into a game. Thus, repetition emerges as a key concept with respect to both playability and play itself, it engages a viewer which allows her more time to play and therefore to find meaning in this play.

Opposing the idea that playfulness in artworks is serious and meaningful is the theorist Regina Cornwell, who believes that art production should go beyond the most obvious use of interactivity (such as the play experienced in video games), and that artists should explore more serious issues. Cornwell is concerned with the "inherent danger of interactive artworks succumbing to the pitfall of becoming merely entertainment and lacking the seriousness history has generally granted to work considered to be 'Fine Art'" (1). Cornwell asks: "Does interactive work, enforced by the association with the computer game and because it requires some kind of rapport with audiences, fall into a trap and simply aid the cultural climate of fun, somehow automatically operating against seriousness?" (12). For Cornwell, the association of play and Interactive Art is unfortunate and a potential source of confusion, because play involves fun and triviality while Interactive Art should be addressing "deeper issues" (1). She argues that "In an art world where clever and of-the-moment novelty, pastiche, and back-bend to incorporate the mundane are part of the fun offering, the serious has very little, if any, room" (2).

Sharing Cornwell's point of view is philosopher Martin Jay. He too criticizes the acclaim garnered by contemporary visual culture because he maintains that this culture typically deprives a viewer of the distance needed critically to assess and reflect on a work of art (107). Jay questions immersive environments' ability to allow a viewer to uncover meaning in a work, in a situation where a viewer cannot easily create distance between herself and the work and therefore cannot objectify the work, because the object would include a viewer. In this way, it becomes almost impossible to perceive the immersive environment as an autonomous aesthetic object for study. Roger Silverstone acknowledges this situation, pointing out that electronic media have blurred the boundaries between play and seriousness: "in our world of electronic media we can recognize the same playfulness, the same marked spaces and times for amusement, though the boundaries between play and seriousness are more permeable and less distinct these days" (51).

It must be acknowledged that theorists such as Martin Jay are not entirely incorrect in their observations that there is more distance between a traditional artwork and its viewer (the traditional artwork being an artwork which can be displayed in a traditional gallery, a painting, sculpture, print etc, and the traditional viewer being the viewer of this artwork who must conform to the traditional gallery's rules about how to view the artwork, this viewer does not touch or interact with the art object but rather views the artwork in detached contemplation), and that interactive artworks require that a viewer relinquish this distance together with the ability to objectify the work as a separate entity from herself. It is this lack of distance that will cause problems for the traditional viewer who requires depth or distance to critically assess a work, yet interactive artworks require a new type of viewer. The roles and expectations of traditional viewing are altered in these works, and many works are designed for a viewer to experience the work through in-the-moment reactions and conclusions. My first case study, Stuttering, is such an artwork, one which requires a viewer's full attention and full bodily interaction, and only through moment-to-moment interactions and reactions does the work reveal itself.

Regina Cornwell also makes a valid point when she argues that interactive artworks should address 'deeper issues' rather than focussing on interaction, and I think that many interactive artworks do exactly this. The central works of this study are two examples of interactive artworks that were designed to address particular issues and exact particular responses from their viewers. These interactive artworks are no less serious and the issues they address are no less serious than a non-representational painting such as Composition with Yellow, Blue, and Red (1921) by painter Piet Mondriaan.⁹

I am therefore more inclined toward theories that support the notion of play as a serious and meaningful act, including those of Johan Huizinga, Roger Caillois, Gregory

Bateson, Brian Sutton-Smith and especially Katie Salen and Eric Zimmerman. I find Salen and Zimmerman's account to be most useful because it assesses play according to its desired outcome and the player's emotional and psychological experience of the system of play. Therefore it finds meaning in what happens in the interaction and in the experience of the interactor: an interaction or an incident of play can be meaningful if it achieves its goal pertaining to outcomes of the interaction; or even if this is not achieved, the experience can still be meaningful if it has a meaningful affect on its player.

Finally, to summarize, the importance and seriousness of play in performing identity and social structure has long been recognized (Huizinga 1955), and, as recent studies of play have noted, play both expresses and simultaneously resists the structure of the system within which it exists (Salen and Zimmerman "Rules of Play" 331). From as early as 1907 theorists have attempted to determine what play is and why it matters, from Sigmund Freud through Johan Huizinga, Roger Caillois, Gregory Bateson and Brian Sutton-Smith. Game theorists Salen and Zimmerman have contributed to the ongoing discussion of play with their book Rules of Play. Yet the debate concerning the extent to which play is or can be serious continues.

iii. Play in the Gallery

An increased interest in touch, hearing and movement sensitive artworks, and a decrease in interest in purely visual artworks has led to new and engaging ways for viewers to experience art, through the use of the bodily interaction and 'play' associated with interactivity. Within any interactive system, this element of play could perhaps be seen as the crucial factor allowing the interactive artwork participant the freedom to become involved with the work and removing a sense of the artwork as a predictable structure. As Julie Thomas and Claudia Roda remark, "ambiguity is always embedded in the interactive, but this ambiguity can be harnessed to serve the sense of play, which of itself both supports and subverts the structural framework" (5).

Andrew Polaine asks "why big fine art doesn't understand interactivity". He finds that "Interactivity and playfulness are rarely exalted in conservative intuitions... either because they signify a lack of serious commitment or because these approaches are populist, which Fine Art labels lowbrow" (1). He criticizes the contemporary New Media Art world for producing works in which the meaning and usage are confusing. He finds these works elitist, tedious and dull, and concludes that "Playful interaction tends to be more successful in terms of interactive engagement" (1).

Playful interactive works challenge the accepted norms of the traditional gallery: they defy the ideals of serious commentary, critical depth for contemplation and the sacred white walls of respectful silence (Polaine 7). Interactive playful works involve making noise, moving around manically and laughing at times – actions not generally accepted in the gallery that under normal circumstances would lead to the visitor being escorted to the door. Andrew Polaine finds that the gallery often does not take such interactive works seriously and sees them as a diversion from the "real" art. Being in the gallery implies that the work is of a serious, even solemn nature, yet many interactive playful pieces are not meant to be completely serious: the very nature of play allows that the player be allowed to make mistakes and depart from normal social behaviour, and although the outcome of the play may be very serious, the actual act of playing is still seen as not serious (Polaine 7).

Polaine finds play the answer to interactivity in the gallery; more specifically, he finds a problem with interactivity in the gallery that he believes the act of play can solve. The problem he finds is that the average gallery visitor spends very little time engaging with the art object. Some Fine Art strategies attempt to engage a viewer by obscuring the interface and deepening the content and depth of the work in an attempt to draw a viewer in. Yet Polaine suggests that the opposite is more effective. By making interactions more simple and playful a viewer can immediately understand the content

and is more likely to be captured by it and spend more time exploring the work. If a work is well conceived, he believes, a viewer may be induced into a child-like play state in the middle of the gallery, engaging in simple playful interaction and coming to her own conclusion or meaning.

Nathaniel Stern has acknowledged this problem pointed out by Polaine: "And what I found was that it was a very special kind of person that would actually engage and interact with those pieces, most people would just kind of watch and talk about the work" (Johnson 2). As the next chapter will show, when we look at the progression of Stern's work from Stuttering to Step Inside, we can see that Stern attempts to solve this problem in the way that Polaine recommends: he makes the work more playful. Stern says, "Step Inside in many ways came out of what I thought were shortcomings of Stuttering" (Johnson 3); "Step Inside was a move to a more playful consciousness" (Appendix one line 102).

Polaine finds that exhibiting playful interactive works in a gallery can be detrimental to these works because the conventions of the gallery are imposed on the works; he believes that the only way around these problems is for the works not to be placed in the gallery:

The Big Fine Art world is based on a similarly outdated economy of the object and preciousness. Interactivity is still a young cultural form and one that is about action and participation, not soulful contemplation. These cultural forms simply fail to function in a gallery, they become abstracted from their origins like tribal totems inside glass cases ... this leaves the question of how this can ever be exhibited in a gallery, and the answer is likely to be that it no longer belongs there. (8) ...

If, then, engaging interactivity is based on play and play is based in such ideas as physical movement, humour, noise, activity and transgressive behaviour, is there any hope for Big Fine Art to accept these whole-heartedly into its realms? It seems unlikely and perhaps it is not sensible to do so. (7)

I disagree with the above statement, and believe that the gallery is indeed the place for playful interactive artworks. Even though in my interview with Nathaniel Stern he admitted that due to the challenges he faced in installing and maintaining the work at the Johannesburg Art Gallery, he would have enjoyed exhibiting Step Inside in “a more specialized exhibition/space for digital media” (Appendix one line 185), it is important that these works be exhibited in art galleries and art museums, and be archived with traditional artworks rather than separated from them. The status of these works as serious works of art is affirmed by their being accepted by serious art institutions.

In sum, the concept of play in the gallery is challenging for all parties involved. It challenges the normal conventions and rules of the gallery, it challenges the audience’s standard viewing practices and behaviour in the gallery, and it challenges the artist’s role as genius and author.

Although the gallery may seem like a rigid stable institution unwilling to change, it is not entirely this. The art gallery has changed over time from a purely contemplative space to one accommodating the participatory installation, yet it will need to continue to change with the times and with the changing art world. Just as it was challenging for the gallery to accept Duchamp and his work Fountain, so the task of altering the gallery to accept and embrace interactive play may seem daunting but is not impossible, and in many cases has already been achieved.

The implications of viewer participation are not all negative either. Although participation can confuse a viewer as to her role or identity in the altered space, it also allows her more freedom to create her own experiences and come to her own conclusions. Such changes may sound overwhelming for viewers who are used to traditional gallery viewing practices, but when the regulations of the traditional gallery are suspended and a viewer is given the opportunity to experience art in this new

dimension, the result could be a more memorable and rewarding experience of art and its content.

CHAPTER FOUR:

Case Study: Two Interactive Installations by Nathaniel Stern

This chapter will examine the work of well-known South African¹⁰ award-winning interactive artist Nathaniel Stern, with particular reference to his works Stuttering (2003) and Step Inside (2004).

While Studying Interactive Telecommunications at Tisch School of the Arts, New York University, Stern created his “Non Aggressive Narrative” (NAN), of which this report’s case studies Stuttering and Step Inside form part. Stern describes this NAN as a mode of Benjamin storytelling,¹¹ which tells stories in multi-sensory spaces where ‘you’ (the viewer) and I (the artist) can play seriously to make our own stories, and elicit our own meanings from our interactions with the work (Appendix one line 76). He declares: “I am not just asking you to perform. You are actually learning and changing the way you communicate when you interact with these works. It’s a bodily knowledge that happens through time and serious play” (Appendix one line 54). Stern’s interactive works that are part of his NAN challenge the boundaries between artwork and art spectator and create places for investigation and exploration of bodily performance and play.

From 2001 to 2004 Stern produced his “Odys” series, which included six video shorts that explore distortions of body and memory through mis/uses of language (Ridgway 2). His Odys characters communicate in slow stammering gestures and require that the audience make a personal investment in the character to grasp the work’s intentions. The subject of this report’s first case study is an Odys story.

i. Stuttering (2003)

Stuttering is a full-body interactive Installation Artwork that uses sounds and images to channel participants' movements, encouraging them to experiment and play using their body.

The use of interactivity and play in Stuttering was a reaction to the audience participation Stern found in his prior work [Odys]elicit (2001) (Appendix one line 39). [Odys]elicit was a large scale interactive installation artwork that captured its viewers movements and translated them into stuttering text projected onto a large screen, the viewers movements (whether small or large) triggered a visual display of the movement shaped passages from odys' text onto this screen, character by character. If the viewer chose to make small slow movements, the text would be displayed at a readable pace, yet if she chose to make fast movements, the text would display at a pace too fast to comprehend. Therefore in [Odys]elicit the viewer was free to move and transform text with their body and movement in a flowing performance manner which rendered an aesthetically pleasing image on screen. In Stuttering, a viewer is no longer allowed such freedom of movement and absorption into aesthetics, as the more a viewer moves, the louder and more confusing the Stuttering sounds and images became, and the less interaction is needed to comprehend the work. Stern intentionally created this work in such a way as to force a viewer to deal with the interactivity and the conceptual framework of the artwork above its purely aesthetic qualities (Appendix one line 43).

This installation is set up with 34 trigger points within a demarcated installation space. These triggers each correspond to an audio recital of a visual "quote", "phrase" or "stutter" (which is a digitally represented fragment of text placed in a box frame, visually displayed from a projector onto a wall) and a written replication of the quote printed on newsprint and scattered on the floor.

When the interactor steps into the space she triggers many of these “stutters” through body tracking software, and is confronted with an audio and visual noise as all the triggered audio stutters and written versions of these stutters play at the same time. The interactor must learn by experimentation and physical awareness that she must use her body carefully and purposefully to be able to comprehend the work by slowing down the audio and visual stutters.



Figure One: A screen view of *Stuttering*. Sourced from www.nathanielstern.com. November 2006.



Figure Two: Full view of a participant playing with *Stuttering*. Sourced from <http://www.artthrob.co.za/06feb/artbio.html>. November 2006.

In this way this work forces the interactor to develop a “spatial bodily understanding or awareness” and participate in play that is rule based. The term

“spatial bodily understanding” or “spatial bodily awareness” refers to the sensory awareness and movement of a viewer within the artwork. With a developed spatial bodily awareness a viewer learns the boundaries of the artwork in relation to the boundaries of her own body image, thereby allowing her full mobility in the entire artwork.

The play experienced in this work is rule based because of the way the work reacts to the interactor’s body by presenting many visual reactions and audio recitals at the same time, which tell the interactor that she will need to move her body according to a set of rules (determined, as Julian Kücklich earlier pointed out, through repetition of the act of play, as every repetition of an action teaches the player something about the game and allows her to decide whether that particular action should be repeated again for the success of the work). This encourages the interactor to move in new ways and use exaggerated gestures to get the effect desired. Of course the interactor has the free will to ignore the rules and continue to play with the work amid a frenzy of audio and visual noise. Yet in the gallery space this is highly unlikely, because the art gallery tends to attract the kind of viewer who would want to make the work function ‘properly’ in an attempt to understand it and ‘master’ it.

Stern’s interest at the time he created this work lay in attempting to make viewers of his works move in ways they normally wouldn’t in the gallery space (Johnson 2). Therefore Stern was challenging the norms and the place of viewers in the gallery. He says: “I thought of immersion as a side effect of playing with affect – the involuntary ability to affect and be affected – and how such art can sort of put the body in quotes” (Johnson 2). Stuttering achieves this, a viewer’s minimal movements and the phrases they trigger literally creating new meaning.

Stuttering draws attention to the spaces between speaking and listening, between language and the body, add to the complex experience of communication. Stuttering pushes us to explore the practices of speaking and listening. It suggests that

communication comes to and from us, from our body and gestures (Stern 1), and it invites us to use our bodies to talk or communicate, as the mind figures out the 'rules' and the body puts the rules into play. Stuttering thus creates a form of metacommunication⁸ between its participants and the work.

As outlined in the previous chapter, the theory of metacommunication as developed by Gregory Bateson allows for the participant to engage in a form of communication through play. Bateson's theory finds that this form of play, involving the transfer of stimulus, can be described as non-verbal communication, and usually occurs between two human beings. Yet in the case of Stuttering this form of play, or transfer of non-verbal communication, or stimulus response, takes place between human and machine, or human and artwork.

To summarize, Stuttering focuses on memory and storytelling experienced through the body as well as through the mind. It breaks the boundaries of speech and communication and creates a space of speaking and listening, movement and stillness, challenging a viewer to think with her body, to discover the work and find meaning through her bodily interactions and bodily play. In terms of its relationship to the gallery space, Stuttering functions as an artwork in an art gallery: it is contained in a clear interactive participatory space where only the audio stutters escape the demarcated space and intrude into the rest of the gallery.

ii. Step Inside (2004)

As Stern claims that Stuttering was a development from previous works, so Step Inside (2004) was created as a progression from the bodily interaction, play and performance discovered in Stuttering (Appendix one line 50). Step Inside takes bodily performance, play and the role of audience participation to a new level, where the work is fully immersing and playful.

Step Inside tackles the differences between the private and public spheres of the art gallery and addresses the problem of viewer participation or lack thereof in the Interactive Installation. It provides two spaces in its environment: one is a performance space or stage for the interactor to explore the work, and the other is for the spectator to watch and interoperate the movements of the interactor in the performance space, through the use of audio and visual interactions mediated by software.

The performance space is a built-up, cornered-off room which is monitored by body tracking software and a wire-sensored floor. The interactor's movement on the floor creates an amplified audio noise and projects a semitransparent outline of her body onto a screen; the amplitude of the sound produced by the participant's movements on the wired floor monitors the opacity of this outline.

The viewer can enter this space on her own and explore the work personally without the distraction of having the rest of the gallery watch her every movement, and therefore without feeling self-conscious of being on a stage. This space therefore allows for much more experimentation, encouraging the interactor to take time with the work and explore the many possibilities it offers.



Figure's Three and Four: Performers view inside the performance space of *Step Inside*. Sourced from www.nathanielstern.com. November 2006.

The viewers on the outside of the performance space become the audience or spectators, watching the interactors play and assessing their movements as they can only see the projected image of the performer and not her actual person, body and actions. This viewer is closer to a traditional gallery viewer, standing back in detached contemplation, speculating as to the participants' intent and identity. The difference is that spectator is encouraged to become more than just a viewer, to move into the performance space and interact with the work.

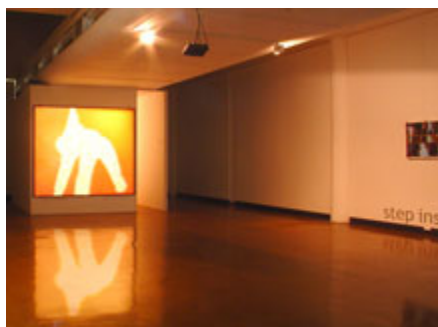


Figure Five: The spectator's view outside the performance space of *Step Inside*. Sourced from www.nathanielstern.com. November 2006.

Stern's written provocation pasted on the wall invites viewers to do this. It reads "Try walking, crawling, gesturing, with your body; play between silence and tapping, scratching, audio-theatrics on the floor." This provocation encourages all visitors to use, explore and play with the work, to move between roles, from spectator to interactor and performer, to become part of the artwork, mentally and physically. The notice continues: "You will have very different experiences when alone, with another or with many performers; time and space allowing." (see Figure Six)

Although this provocation encourages a viewer to explore the work through bodily interaction, it also explains how the work functions, thereby acknowledging that viewers might feel out of place when not knowing what to do or how the work is intended to function. The explanatory notice prepares a viewer for the experience of the work.

Stern admits in the interview (Appendix one line 136) that he thinks of himself as a provocateur, and he enjoys making comments and producing works that aggravate situations and challenge norms. In this case, Stern labels the statement addressed to his viewer as "a provocation", indicating that he is challenging the person in this space reading the text to be teased or dared into performing or participating in the way the work desires.



a provocation:

step inside is recommended for 1 or 2 viewer/participants inside the space, and any number outside - you will have very different experiences when alone, with another, or with many, performers; time and space allowing, spend four or five minutes on your own within its walls. Try walking, crawling, gesturing, with your body; play between silence and tapping, scratching, audio-theatrics on the floor. Surprise yourself with the stories your actions provoke. Whilst conducting your composition, keep in mind that external viewers will see your projected image, but not you. *step inside* frames the relationships between how we perform, and what we may or may not "see" from the inside-outside-in.

how it works:

step inside reads your profiled body, and fills it with white noise. Your footsteps, footwork, and all the noise you make on the floor, are simultaneously amplified and echoed in the space; the live, shifting volume of this soundtrack controls the transparency of your image, making a variable wave of embodied noise.



Figure Six: A copy of Stern's provocation from *Step Inside*. Sourced from Nathaniel Stern. December 2006.

Step Inside brings the role of the gallery viewer into the spotlight. In the above provocation Stern informs a viewer how she could or should interact with the work. In doing so it explicitly labels gallery visitors as either participants or viewers, and invites viewers to become participants. It allows its participants to become involved in the creative process of art making as they play with what is provided visually and via audio.

Both Stuttering and Step Inside are installations that exist not only as concepts but also as sculptural installation spaces, with both three-dimensional and two-dimensional elements. The behaviour of these works is determined by their interactors, as both works are vigorously interactive artworks encouraging if not obliging their viewers to change their roles as viewers and delve into a new realm of bodily performance and bodily play. With each of these works we can learn something about the different levels of interactivity possible in these types of artworks. [Odys]elicit allowed the interactor full and free movement, Stuttering limited the interactor's movements and aimed to channel them, while Step Inside acknowledged the interactor's

self-consciousness in interactive artworks and gave him/her a private performance space in which to move freely.

Whereas Stuttering was aimed at a single person's exploration of the work, that is, at one level of interactivity, Step Inside utilizes the gallery to its full potential and exhorts its viewers to become a second level of interactivity. As outlined by Augusto Boal in the next chapter, the spectator on the outside of the performance space is given no choice but to become part of the artwork. The installation acknowledges and highlights the spectator's role in the artwork, and may thus seem to restore the gallery to a traditional set-up of spectator staring at an artwork in detached contemplation, since the image that the spectator sees of the interactor resembles a large modern moving artwork. Yet although this set-up may seem to show a regression in gallery viewing practices, on the contrary, in fact this work attempts to advance gallery viewing practices by allowing the gallery viewer the opportunity to choose her action, interaction or role in this space, instead of simply being given a role to fulfil.

If we assess Stuttering and Step Inside according to Johan Huizinga's theory of play, we find that the interaction and play required to create either of these works is completely voluntary. A viewer may be enticed into action by Stern's provocation in Step Inside, but ultimately she decides whether to interact or not to interact, to play or not to play. The environment that Stern creates in these works is a very different environment from a viewer's everyday life. In the artwork's environment she is granted the freedom to use her body to play and explore in ways that are not generally accepted in everyday life, such as moving the body through complex poses or at cumbersome paces. So we can conclude that Stuttering and Step Inside meet Huizinga's second criterion of play, that is, that they are separate from the player's normal reality.

Huizinga also claims that play has no material interest and no profit can be gained by it (13). Besides a viewer being able to use her body and play freely without

judgement, obtaining an experience and an idea of content, there is clearly no material profit to be gained from an experience of either of these works. Not only does the participant not gain materially, but the artist himself has encountered problems when attempting to sell these interactive works. In 2004 the Johannesburg Art Gallery purchased Step Inside and immediately encountered problems with regard to copyright: the Johannesburg Art Gallery attempted to insist that the artwork was the only copy of the work and sought exclusive ownership of it. The problems of ownership and licensing in respect of playful New Media artworks is a topic that cannot be fully explored in this report, yet this example obliquely vindicates Huizinga's claim that play can have no material interest and no physical profit can be gained by it.

Huizinga maintains that play creates order or it is order, and that this order is reinforced by rules. In the case of these interactive works, not only does play have rules, but the interactive work has its own rules and so does the gallery space. The clash of rules is one of the main confusions attending playful interactivity in the gallery. The viewer is faced with the problem of which set of rules to follow, the rules of the traditional art gallery which prohibit the viewer from touching the art object, or the interactive artworks rules which encourage this. Stuttering and Step Inside both have their own set of rules, rules which are opposed to the traditional gallery rules. Works like this undermine and change the rules of the gallery, opening it up to a new realm of artwork and promoting a different type of viewer (the latter will be explored in the next chapter).

Yet although these works challenge the gallery, they retain a certain respect for it, a longing to be recognized and accepted into the art world as serious artwork. Stern is attempting to make artworks, his works long to be classified as art; they respect the sacred space of the art gallery. Stern indeed makes artworks that have context (a sound theoretical grounding or framework) and that can, in terms of their aesthetics, be

considered art. The 'Mondriaan' style ⁹ of Stuttering relates directly to a recognized mode of art making and has its stylistic origins in the history of Fine Art.

Although Stern may use play as a means or medium to communicate meaning, both his works have a solid theoretical framework, reinforcing the previously outlined notion by Julian Kücklich that just because a work is playful does not mean that it does not address serious issues. He has set out to make a serious statement about communication and the body in space (Appendix one reveals this): he has not merely made a work that is 'fun' and nothing else. In keeping with the artistic aim to challenge his viewers, his work goes beyond most obvious forms of interactivity and explores more serious issues, such as the exchange of viewer/participant roles in Step Inside, and modes of communication and bodily awareness in Stuttering.

Stern is interested in the relationships between the ways texts and bodies communicate, in the relationship between identity and the projection of self, in the dynamic between the viewer and the spectator, and in the process of meaning making that is play. He claims that "New Media is playful, it is a form of bodily knowledge discovered through play" (Appendix one line 19). His works suggest that an understanding and consciousness of the body is fundamental to the artwork and meaning creation, and imply that movement is vital to the body.

As discussed in Chapter Three, Roger Caillois regards play both as uncertain – its course cannot be determined nor a result predicted beforehand – and as separate and defined in time and space, and defined and fixed in advance. In Stuttering and Step Inside the interactive experience of each participant and the end result or meaning they find in their interactions with the work will rarely be the same, as each viewer creates her own rendition of the artwork and meaning during and after the experience. As Caillois explains, a viewer cannot understand the work merely by watching another viewer interacting and playing: the viewer must physically interact and experience the

work for herself to gain an understanding of it. As Stern points out in an interview with Paddy Johnson, a major problem with his works is that some people simply will not play with them, preferring to watch others do the playing; yet “they will never understand the works as they should from merely watching others interact, these works need personal bodily interaction, the viewer needs to learn from his or her own body” (Johnson 1).

As chapter three outlined, Salen and Zimmerman classify meaningful play in two separate but related ways. The first definition refers to the way that meaning is created through the actions and outcomes of the player (Rules of Play 34). This definition describes what happens in the interaction that creates meaning. In Stuttering the player is faced with the outline of her body and can see that this outline is triggering words and sounds. The participant’s movements change the output of the word triggers and she can see that it is her body that is ‘talking’ (creating the audio). In time the participant understands that she is being forced to slow her movements and become aware of her body as a tool for communication and language. This awareness of her body in space that the participant develops contributes to her understanding of the work and the creation of meaning; it is therefore in this context meaningful play.

In the same way, Stuttering epitomizes serious play, because in Stuttering the ambiguous ‘I’ and potential ‘you’ create a multi-sensory space for the ‘I’s and ‘you’s to play and make their own stories and meanings, so the act is play but the outcome is serious. Stern says: “It’s like a storyteller who provides counsel. It’s not someone who, in isolation sits alone. It’s about someone who goes on a journey and takes you on one when they get back, the storyteller does not provide answers, it’s like a therapy session” (Appendix one line 78).

To return to Andrew Polaine’s critique of play and interaction outlined above, Poliane finds that the simpler the form of play, the more understandable the work becomes and the easier it is to discern meaning in the work. Stern has acknowledged this, noting in an interview that “[Step Inside uses] simple interaction so the viewer can

get it immediately... I want it to be a magical space because of what it does to you, how it makes you perform." (Appendix one line 102). In this sense meaningful play is evaluative as it assesses the likelihood of meaning being created, and meaningfulness should be assessed not only with regard to the conceptual framework of the work, but also – and more importantly – on the basis of what impact the work has had on a viewer emotionally or psychologically.

Stern says, "I like the term 'serious play' because I find that the more time people spend with the work, embodying it on a level, the more time they have to actually learn something with their bodies that they didn't know already from their heads... I love watching people who spend time with work where they are playing and all of a sudden they find something that their bodies tell them, that they didn't know, when their bodies stutter or when they try to 'one-up' each other, that communication and the social dialogue is the backbone of my work" (Appendix one line 24). Stern thus acknowledges that communication, specifically social rather than verbal communication, is an important factor in the development of his interactive artworks, and in the development of the participant in these works. Stern's participants are involved in a form of what Gregory Bateson calls metacommunication, which carries the message that 'this is a competition'. It therefore means not merely 'this is play' but 'this is serious play'. By beginning to compete with each other, viewers of this work are engaging in serious play, play which is allowing their bodies to think, learn and experience, and then tell their mind, instead of their mind telling their bodies what to do and feel.

Step Inside's inherent playfulness was apparent even before the work was fully set up. Stern describes this: "In Step Inside the playfulness started with people throwing things on the floor, this actually started at the Brett Kebble awards when the janitors started throwing change on the floor and sweeping it up to get the sounds, and this was even before the cameras were set-up, the sounds were so beautiful that they were already trying to outdo one another." (Appendix one line 60).

Both Stuttering and Step Inside turn their gallery space into a place for exploration and play for body and self; they both respect this space and are contained by it. They encourage a bodily performance that entices a viewer to become something more than just a viewer, to become a musician with his/her body or painter with her actions. They encourage a viewer to play and perform.

iii. The Performance of Play

Step Inside and Stuttering both highlight play as a spiritual place (an alternate personal world or reality) where a viewer can escape the bounds of 'real life' and enter into a world with new and different rules.

Stern says, "with Step Inside I use play in order to accent performism, or that's what comes out when I try to accent performism, play is the way that it ends up" (Appendix one line 36). Whether it is intentional or not, play is a fundamental characteristic of Stern's interactive works. The works are provocations actively challenging a viewer to venture beyond her norms and play with new roles and possibilities for herself and for the artwork.

The works incarnate play and performance, as that which starts out as performance ends up as play. Both play and performance make use of the body, yet as this report has found in this study of play, the process and outcome of play is generally more experimental, creative and uncertain. Stern's use of New Media has allowed performance and participation to be experienced in multi-sensory environments that engage us and cue our behaviours and performances, as we learn about the capabilities of the environment and experiment with our body and perception of self through the act of performance and the medium of play.

In his paper entitled "The Art of Interaction", David Saltz remarks that "the ontology of interactive computer artworks seems less exotic if we look to the performing

arts instead of the visual arts as our point of reference" (118). This, he maintains, is because the performing arts have always had a greater focus on transitory and variable objects of artistic attention (118). He compares interactive artists to playwrights, composers, directors, designers and performers because they do not directly produce physical stimuli that an audience will experience, but instead produces what he calls "a blueprint for possible performances". In this way, just as each performance of a play is unique because different directors produce it, so each rendering of an interactive artwork will be different, depending on the participants or interactors that are interacting with the work.

Saltz questions whether interactive computer art can be considered a performing art. He claims that live performance is exactly the element that characterizes performing arts, and finds that, by definition, all interactive computer artworks engage at least one human participant in a live performance or series of actions (119). He finds that the difference between the live human activity that performers engage in and the activity that participants in interactive artworks engage in, lies in the audience for which they perform: performers perform for an audience, while interactors in an interactive artwork 'perform' only for themselves (119). Therefore the question of whether an interactive artwork is a performance would depend on whether the act produced in the interaction is being performed specifically for an audience. Saltz describes an interactive artwork in which performers interact with the system while an audience looks on as "staged interactions", and an interactive artwork in which the audience interacts with the system directly as "participatory interactions" (119). He concludes that if we accept that the distinguishing characteristic of performance is that it is performed for an audience, then "staged interactions" can be classified as performance and "participatory interactions" cannot. Yet Saltz is not completely happy with these categorizations because the difference between staged and participatory interactions is "not due to any feature inherent in the interactions themselves" (119). In performing art not only is the audience's encounter with the artwork an event, but the work encountered is itself an

event. Thus performance is both a medium and an aesthetic object in its own right

(119). Saltz finds that:

Each work of interactive computer art establishes a particular kind of relationship between live interactor and computer-controlled media. The extent to which a work is performative is a function of this relationship. (119)

If we assess this report's case studies in relation to Saltz's theory we find two very similar and very different artworks. They are similar in that they are both made in a way that makes it unlikely that the interaction or performance will proceed in a linear structure with a clear beginning, middle and end, and they both require live performances, or live human action to function. Yet in terms of their relation to performance art they are very different. In Saltz's understanding, Stuttering would be considered a virtual reality system and would fall into the category of "participatory interaction" because its participants play an active role in structuring their own experience of the work. However, the mode of interaction is not inherently performative. Saltz's understanding of a virtual reality system is of a system more interactive than a hypermedia system (which is a mode of interaction often found on the World Wide Web, in which graphics, audio, video, plain text and hyperlinks are combined in an interactive environment to create a generally non-linear medium of information sharing), because "hypermedia allow the interactor to intervene periodically by choosing from among the works and images presented to them, but virtual reality systems must respond to a constant stream of input from the interactor" (121). Virtual reality creates the illusion that the interactor is moving in a three-dimensional image by constantly updating perspective renderings to correspond to the interactor's input (121).

The participant in Stuttering is allowed control over what she hears and sees of the artwork during her participation in it. In this way she is allowed to choose her own path through the work, yet is still not intentionally performing for onlookers: she is

exploring the work, or as Saltz would suggest, she is touring the work in her personal capacity rather than performing the work.

On the other hand, Step Inside is a much more complex work, and would seem to fall between the two types of interactivity (participatory and staged). The decision whether to label this work performance art, according to Saltz, would depend on the perspective of the person interacting with the work. If the interactor entering the 'performance space' of Step Inside begins interacting with the sounds and images in the form of an enquiry, evaluating what reaction their input creates, then this interactor would not be considered a performer, but rather an explorer or tourist. Yet if the interactor acknowledges that she is being watched by onlookers and interoperates the set-up as an invitation to 'take to the stage', to play and experiment with the variety of sounds and images presented, then this event that the interactor has produced could be considered performative and a 'stage interaction'.

Saltz concludes that "a participatory interaction is performative when the interaction itself becomes an aesthetic object; in other words, participatory interactions are performative to the extent that they are about their own interactions" (123). He argues that performers perform works – actors perform plays, musicians perform music and dancers perform dances – so that it is the work that is the direct object, and it is what the performer does that brings an instance of the work into the world. To perform in Step Inside is not to perform the work, but to perform *with* the work, because the artist (Nathaniel Stern) has presented this interactive environment as a work of art in its own right. And therefore what is important here is what develops between the work and the interactor and the action or event produced.

Dramatic art theorist Augusto Boal developed his own type of performance that incorporated the use of play and performance in everyday life. In his book Games for Actors and Non-Actors, he situates theatre in the universal realm of play and games, and

seeks to show that meaning can be created through play and bodily interaction. He introduces 'The Theatre of the Oppressed' which is a type of social theatre and consists of three main categories. The first is Image Theatre, in which the performer uncovers a truth about a society or person without using spoken language, and does this by using her own body and other spectators' bodies to sculpt still images of her life. Invisible Theatre is the second category, and involves using the public as participants or actors without their knowledge. In this theatre the public become active spectators watching a situation unfold while not realising that it is not 'real life' and they are not involved in it. This type of communication places both performer and audience in a process of learning together and from each other, rather than a situation of one-way instructive teaching.

Boal's final category is Forum Theatre. In Forum Theatre a theatrical game is composed in which a problem is posed and the audience is invited to suggest or enact a solution. In this way the actors and audience members engage in a contest, with each trying to bring the play to a different end.

Many interactive artworks embody some if not all of these types of theatre, the most obvious in Stern's works being that of Image Theatre, involving as they do the actors and viewers using their bodies as a tool to create a 'work'. Stern's work also displays features of Forum Theatre, because his works can be seen as a game in which participants must enact solutions and engage with the work to produce content and therefore meaning. According to Boal's theory, the participants in Stern's interactive artworks can be seen as performers, especially the participants in Step Inside who literally enter a performance space or stage and perform for spectators outside of this space, as well as for themselves. So Stern's works could be considered a type of Performance Art, yet the difference between the dramatic art performer or even the artist performer and the participant in Stern's works is the participant's intention and the outcome.

In typical Performance Art the performer acts out a previously planned chain of events. This actor is confident in her actions and will finish her performance on a fixed or already decided outcome. Although Boal encouraged everyone including the man on the street to perform and be an actor, generally the average person finds the requirement to act or perform for an audience difficult, and therefore will only take on this role if misled into it (as Boal did in the case of his Invisible Theatre). On the other hand a participant in an interactive artwork is generally an artist or gallery viewer. This person's intention regarding the work and the outcome of interaction is somewhat different. This player experiments with the work and his body, whether that be with his body or voice, in an attempt to arrive at an unknown outcome. The player is unaware of what the work will require him to do, and even if the work is rule based he will still be experimenting and playing for an undefined period of time. The player may also exit the work at any time because to him there is no end to the work (as there would be to a performance) – unless the player discovers something about himself or about the work and in doing this feels as though he has achieved an understanding of the work and can move on.

Boal uses performance and play to engage everyday people in a situation or problem, enticing them to take up a debate or aid an actor by offering their body as a prop. In this way he turns his spectator or even just a passer-by into an actor or active part of the production. He dubbed this new active spectator a "spect-actor" (a combination of "spectator" and "actor"). Boal's spectactors are not allowed to remain passive observers of aesthetic action, but are instead forced into interaction. Even if they choose not to interact, to stand on the sidelines and watch, to Boal they are still spect-actors because the choice to stay and watch is a form of participation: in order to say nothing the spect-actor must make this choice and in doing so is acting.

Similarly, interactive artworks such as Stuttering and Step Inside force a viewer to reflect on her experience as she makes a conscious decision to either view the work passively or participate by acting. Saltz's remarks are apposite:

I have proposed that participatory computer Interactive Art is performative but not a Performing Art. This may be its greatest strength. Freed from the need to 'perform' an interactor may well be freer to do and to experience. This freedom, however, is gained through a devil's bargain. The modernist ideal of presence and immediacy is achieved only by surrendering another ideal that the theatrical avant-garde of the 1960's pursued with equal passion: the establishment of authentic human contact and a renewed sense of community. (Saltz 126)

Just as the spect-actor in Boal's play theatre needed a new classification that fully described her role in his theatre, so Stern's interactors/participants/viewers would benefit from a new description that will give them more of an understanding of their role in these artworks.

CHAPTER FIVE:

Revealed

This study of the art gallery and its participants, and of bodily play in relation to Nathaniel Stern's Stuttering and Step Inside, has acknowledged that the development of Interactive Installation Artworks is an exciting new style of participatory art. Yet this new art forms brings with it changes in typical art viewing practices, and in this way it has also changed the role of a viewer of the interactive artwork. This new kind of viewing practice is encouraged to play and use her body as a tool to explore the artwork.

This chapter will delve into the way Interactive Installation Artworks like Stuttering and Step Inside encourage a form of bodily playfulness. An attempt will be made to derive a new definition or classification for the interactive art viewer. The chapter will also explore what the inclusion of interactivity and play in the art gallery means to a viewer and the artist, thereby indicating the significance of play in interactive artworks such as Stuttering and Step Inside.

i. Classifying a Viewer

In an interview Stern was asked how he classified the viewers of his works. He answered:

In NYU we called them users, I hated this, it is not a Windows application, it is an artwork. The word viewer in this context is also misleading because they are viewing themselves... The prints that I am making lately are for people who don't interact... I know some people that have never interacted with my works and only watch others and that is not getting the impact of the work. It is very different experiencing my works with your own body than watching someone interact... So generally I say viewer, but if allowed the space or luxury of not being concise I will call them viewer-participants with a dash, yet in some cases they are just

participants. Because of the politics of the gallery I would never call them users.

(Appendix one line 121)

Stern thus acknowledges the changing roles and classification of a viewer in the gallery, especially with regard to interactive artworks. He is very aware of the politics of the art gallery and the traditions that reject change. He says: "I am a provocateur, because I like to play; when talking about my prints I will call them participants and when talking about the interactive work I will call them viewers" (Appendix one line 136). In this statement Stern jokingly draws a viewer's attention to the fact that in his interactive artworks, a viewer's identity is dubious and uncertain.

Stern's works challenge viewers to make meaning from a combination of text and physical play. This is a type of meaning making or discovering meaning that is very different from the meaning created in object-based or traditional artworks, where (to put it simply) the artist makes the work with an intention in mind and a viewer deciphers the intention through contemplation of the work.

But it is not only the viewer who undergoes a transformation with regard to interactive artworks. The role of the artist has also changed, as Andrew Hieronmyi points out, the artist must to some degree become a programmer or technologist in order to create this type of experience for the viewer (10). The artist must possess skills and understand a technology that is normally not associated with the art world. Therefore we can also call the interactive artist an interdisciplinary artist, as the interactive artist combines the techniques of the art world with the technologies and media of the world of science and technology. Understanding the artist as a programmer could account for some viewers' being referred to as "users", because information technologist developers and programmers refer to their 'audience' or consumers of their works, as users.

Not only has the boundary between artist and technologist become more fluid with interactive works, but another sacred gallery boundary is broken by the act of play in installation works. This boundary separates the artwork and viewer, ensuring they live their own separate lives, each looking at the other but never literally needing each other. In interactive works such as those examined in this report's case studies, a viewer is given the opportunity to step into the artwork and become part of it: she no longer gazes at the art in awe but becomes involved in creating it. That the artwork can only work and be seen in and through the playing body of a viewer shatters the traditional gallery boundary.

Stern's conceptual framework is very much centred on the work's dialogue with the social world it is placed in. He finds with his interactive works that children tend to play more easily and without reserve, whereas adults tend to mask their play or are ashamed of what the act of play is making their bodies do. This is because the play conflicts with what is deemed acceptable in the adult's social. The development between Stuttering and Step Inside shows that Stern has acknowledged this problem in his work and has therefore provided the adult with a 'performative space' closed off from the rest of the gallery and social world. Step Inside's two different levels of communication and play allow a space where the stage is set for a play in which everyone is making their own stories and judgments and identities, based on the performances of players in the interactive space whom they cannot wholly see. It is through the participant's play that she becomes the artwork, and through this movement and play that a viewer creates a link between the mind and body, thought and action.

Stern comments:

And what I found with watching people interact with Stuttering at the Johannesburg Art Gallery and at the Substation (Wits University), was that if there were just one or two people in the space they actually spent a long time with the work, discovering with their bodies, which was my intention, but if there

were a lot of people, they started to try and outdo each other and perform.

(Appendix one line 45)

Thus Stuttering encouraged its viewers to interact with each other in a way that a traditional gallery viewer would not encounter. It encouraged them not only to interact and perform but also (unintentionally) to compete. By bringing out the competitiveness in its viewers, Stuttering challenges and changes them. If the work can make its viewers compete then it could be considered a kind of sport or game, and we could see them not as viewers but as players in a game competing for victory.

"So", says Stern,

Step Inside was a response to that, it was giving people a performance space and it was actually making a literal wall between performance of self and perception of others and so that's why it became more of a playful piece and had a social interaction between the watcher and the interactors. (Appendix one line 50)

Stern's Stuttering aims to pull the passive viewer into the role of active participant. The work demands a player who realizes the work through her performance, and only through this interaction and bodily play does the work become meaningful. Step Inside, on the other hand, not only needs this dialectical relationship between the work and its player, but incorporates a relationship among the work, its player, and an audience. In this way a viewer is given the opportunity to be transformed into something other than the object-based art world's viewer, while at the same time allowing a viewer to remain unchanged and simply view the work. The only problem with this is that if a viewer chose to simply view the work and not interact there would need to be another viewer willing to interact to create the work for the first viewer to view and contemplate. In this way Stern is giving a viewer an opportunity to play multiple roles and change roles depending on where she chooses to stand and how much she is willing to interact.

While this report has established a broad classification for this new kind of artist by calling him or her “interdisciplinary”, the viewer has yet to be classified. Up until now (as outlined in the first endnote), for consistency, this report has used the default word ‘viewer’ to refer to the participant / viewer / interactor of these interactive artworks, even where it were possible that another classification was more relevant. So, are the viewers of an interactive environment audience members, participants, players, performers, viewers or interactors? It is high time to define and differentiate these terms.

The term ‘audience’ is described in Key Concepts in Communication and Cultural Studies as:

The unknown individuals and groups towards whom mass communications are addressed. In its original sense the term refers to that relatively restricted, but public, group of listeners who can be encompassed within hearing of a performance. Goffman and others working in the dramaturgical tradition have utilized the term in the analysis of everyday interaction, breaking encounters down into actors, actresses and audiences (15).

The Oxford Dictionary describes participant as a noun derived from the verb “to take part”. A player is “a person taking part in a sport or game, or a person who is involved and influential in an activity”. Performer is the noun derived from the verb to perform, which is defined as to “carry out, accomplish or fulfil, to present entertainment to an audience”. A viewer is a “person who views something”. Interact is a verb which means “to act so as to have a reciprocal effect,” and interactant is the adjective derived from the verb (Soanes and Stevenson).

In his essay “Interactive Audiences?” Henry Jenkins studies, from a marketing perspective, the way in which the average viewer has become interactive and participatory through her involvement with the media she consumes. He studies how

online fan clubs have the ability to change the storyline and outcome of a programme. In this situation the fans interact with each other, criticizing and voicing their opinions about the direction in which the programme is going, and producers of these programmes read what the fans think and can reply and discuss issues with the fans via the Internet. For example, *Star Trek* (an American science fiction entertainment series) fans are the first largest group of activist audiences, who lobbied to keep this series on air and even promoting or even protesting for specific changes to the series. Jenkins writes: "The distinctions between authors and readers, producers and spectators, creators and interpretations will blend to form a reading-writing continuum" (164). The essay concludes that the average consumer can become more interactive through the New Media, participating in it and shaping its outcomes (160).

An Interactive Art event that points out the viewers' uneasiness in a gallery situation that calls for interactivity can be seen in the work Funny 13 (2000) by American artist Carlos Amorales. Funny 13 (2000) is an interactive work that confronts a viewer with an image of a masked 'devil'. This masked creature dances to disco music and tries to get a viewer to dance along and participate, but traditional gallery conditions forbid this type of behaviour, putting a viewer in a situation where she is unsure of what action to take (De Oliveira, Petry and Oxley, "Installation Art in the new millennium" 166). The viewer knows that simply viewing the work as an audience member may be seen as impolite, but dancing along and participating could open her up to ridicule by other observers. This predicament relates to the self-consciousness of a viewer and her desire to have a secluded viewing experience, for a viewer cannot see without being aware of being seen. The viewer is both part of the work and an onlooker of the work, an ambiguous and confusing situation for a traditional viewer to be placed within.

I believe that clarifying the behaviour expected of a viewer when viewing these types of works will help a viewer to feel less awkward. For example, if a viewer is

referred to as a participant it may be easier for her to participate without feeling out of place or uneasy about her role.

As gallery viewers become more at ease with interactivity and can see the benefits of participating, so the act of 'putting oneself out there' and participating may not seem such a daunting task.

In The Fundamentals of Human-Computer Interaction, Andrew Monk takes the cognitive psychology approach to study information perception and how humans take in information or decipher meaning in relationships between themselves and non-humans. He finds that in computer-human relations vision is the primary sense, meaning the easiest way that humans understand and take in information via the computer or technology is through their sense of sight. We understand what we see more easily than what we hear or feel. For this reason it makes sense to call the audience of computer artwork 'viewers'.

Therefore one could argue that classifying the audience of Stern's works as viewers is acceptable. Yet I would argue that simply calling them viewers would imply that they are spectators, not interacting or using any sensory ability other than sight, which is not true. Without a human body interacting and playing these works do not function and their content and meaning does not exist, so we need to find another term that can be used with 'viewer' to explain that the audience member is using her primary sense of sight, but also her body and its ability to play and interact.

We might therefore be tempted to call the audience member a 'player' because she is completing the work and deciphering its meaning through the action of playing. Yet again, 'player' may not be the best descriptor, as 'player' is a loaded word that has an association with the computer gaming industry and physical sports.

As Stern himself has pointed out, calling the audience of interactive artworks 'users' is not appropriate as the word 'user' most commonly relates to the computer engineering and software production industries. So this report still faces the challenge of finding a word to combine with the word 'viewer' (which we have already found to be an indispensable descriptor) that does not make inappropriate reference to other industries.

The next possible addition could be 'performer', and it seems a logical assumption from this report's previous study in chapter three, that viewers of Stern's works become at least to some extent performers, especially in the case of Step Inside, where they are given their own small stage on which to perform. This work can in a sense be considered Performance Art, yet the difference is that the gallery visitor becomes the performer rather than the artist.

As mentioned, Stern has his own ideas about the labelling of a viewer in his works. He finds 'viewer-participant' to be the best way to describe the viewers of his interactive artworks. But the word 'participate' can mean merely talking – for example, one could participate in a debate – and therefore the word 'participate' does not give a clear understanding of bodily interaction. Stern's works are realized through physical action within a responsive environment heavily reliant on sight. The audience members that choose to take the jump from being merely a viewer to becoming a player or interactor share in a collaborative performance in which their social interactions complete the work. Therefore the body is an integral part of this work, and the term describing this interaction must include not only sight and performance but also the incorporation of a viewers' body.

As the works are interactive artworks, the most obvious term to explore would be 'interacter'. If 'interact' is a verb, then interactors are the people or beings that carry out the action of interacting. To include the performative nature of the interaction we could combine 'interact' with 'actor' to form the word interactor. In the same way that

Augusto Boal coined the term "spect-actor" so I intend to combine interactor (a combination of 'interact' which implies body, and 'actor' which implies performance) with the primary sense in human-computer relations, that being sight, and coin the term '*spect-interactor*'.

In Boal's explanation of his 'spect-actor', spectators are forbidden from remaining passive observers of aesthetic action, and are instead forced into interaction. Step Inside gives a viewer the opportunity to be either a spectator or spect-interactor: she can interact and perform as a spect-interactor, or she can merely watch others interacting and remain a spectator. Stuttering requires interaction, especially if there are no other spect-interactors interacting and playing. While interacting a viewer becomes a spectator of herself and her own body's movements in profile, and of the graphical content that her body's performance produces through projection.

Now that we have established a term for re-classifying viewers of Stern's works, we can explore whether or not this classification could be applied to the viewer's experience of other interactive works.

The term 'spect-interactor' has been coined for interactive artworks placed within an art gallery. These works' main focus is on the visual sense and a coordination and knowledge of the body. However not all interactive works found in the art gallery involve a commitment of one's whole body: some rely on the clicking of the mouse or pressing of keys and not the body as their interactive component. For example, well-known interactive artist Scott Snibbe created Bubble Harp in 1998 and exhibited this work in 1999 at the Tokyo Intercommunications Centre. In this work the main focus is on a conceptual framework for relating to gesture. It uses interaction via a button on a pen or mouse and the recording of the exact temporal and spatial movement of the viewers. Through the interaction with the buttons the creator can draw out a string of points emerging at short intervals from their movement (Snibbe 1). Bubble Harp does

not involve body and performance to the same degree that Stern's works do, so in this case it might be difficult to justify labelling a viewers of this work 'spect-interactors'.

Another work of this nature by David Rokeby entitled 60 (1995) was designed in 1995 for the "I am Listening" show of sound sculptures at the Glendon Gallery at York University in Canada. This work is an interactive sound installation that amplifies the buzz of 60-Hertz fluorescent lights, with the movement of people in the space monitored by cameras that track movement mounted on the ceiling. This work involves body and movement, yet it is not performative and has no visual component, and so its viewer would not be served by this new nomenclature. I must point out that the fact that such a work does not match this classification does not make it any less of an interactive artwork, but merely a different type of Interactive Art.

'Spect-interactor' is a term that can be used to describe the viewers of all artworks that are interactive, are placed in a gallery, involve a sensory visual aspect and require a degree of whole-body performance or action to complete the work. Therefore works such as Camille Utterback and Romy Achituv's Text Rain (1999) would fit into this category. Text Rain is a playful interactive installation that uses a viewer's body to lift and play with virtual falling letters that are projected onto a wall in front of them. In the Text Rain installation participants stand or move in front of a large projection screen. On the screen they see a mirrored video projection of themselves in black and white, combined with a colour animation of falling text. Like rain or snow, the text appears to land on participants' heads and arms. The text responds to the participants' movements, and can be caught, lifted, and then let fall again. The falling text will land on anything darker than a certain threshold, and "fall" whenever that obstacle is removed. This work fits the stated guidelines and therefore this work's viewer could usefully be called a spect-interactor.

From 2002-2003 Scott Snibbe produced his Screen Series (2002) that was exhibited at the Bealle Centre, University of California at Irvine. Each work in the Screen

Series initially consists of a “screen”, which is a rectangle of pure white light projected onto a wall. Through computer mediation, these projections react to the presence of viewers as soon as they step between screen and projector, thus putting the body and projection on equal footing, or even making the body dominant over the projected image. In so doing, they allow viewers to create cinema with their bodies, either through reactive projections that respond to a viewer, or through porous projections that record viewers' movements. The works in this series exhibit a visual dimension and utilise a bodily performance, and thus incorporate the exact elements that would allow us to identify its viewers as spect-interactors.

ii. Encouraging Playfulness

In old media like literature and television the amount of control that the user had and the amount of control that the producer had were relatively stable. In New Media, however, the amount of control is constantly shifting – both on the level of individual use, as exemplified by digital games, and on the economic level, as exemplified by the changing roles of producers and consumers. While users were once conceptualised as mere vessels that received any content the media would pour into them, these notions were challenged by concepts of ‘active audiences’ and new modes of spectatorship. (Kücklich 37)

In his works Nathaniel Stern both challenges and respects traditional gallery viewing practices. He understands the politics of art and exhibition thoroughly, and in an interview stated that it is because of these politics that he is wary of assigning a label to the viewers of his interactive works placed in gallery space (Appendix one line 135). His works defy the respectful silence of the traditional gallery: they involve making noise, moving around vigorously and laughing at times, actions that are not generally tolerated in the gallery.

According to Ridgeway,

Stern sets out to create meeting places that break down the boundaries between art and audience; to craft spaces of unfolding and potential, in which both the “body/self,” and the work, materialize as a locus of exchange. His interactive pieces work to implicate participants in his narratives, weaving them into events shot through with thoughtful intention and distracted passivity (2).

In conventional art viewing, the artwork and the viewer are separate and remain separate, they each live their own separate lives, as it were; yet in Stern’s works the viewer literally steps into the artwork and completes it (hence the name Step Inside): the spect-interactor no longer gazes at the art in awe but creates it. The artwork can only function and be seen through the body and its ability to play; and it is this bodily play that puts the viewer in the work and breaches the boundary between the artwork and the viewer.

In the previous chapter this report established that a structured traditional gallery requires a specific author and a completed, structured work that can be contemplated and interpreted. Stern’s works and use of play invite a viewer to lose herself in the act of playing, and in this unstructured activity discover her own meaning. Stern’s works thus dramatize Roland Barthes’ concept of the “death of the author”. Barthes argues that the reader is in fact the creator of the text, not the author: “The reader is the space on which all the quotations that make up a writing are inscribed without any of them being lost; a text’s unity lies not in its origin but in its destination” (148). Similarly an interactive artwork’s, such as Stuttering and Step Inside, meaning lies not in its origin (with the artist) but in its destination (with the play and interaction of its viewers). In these more fluid interactive experiences the artist experiences the work at the same time as a viewer, which blurs the boundary between viewer and artist. Barthes believes that “the birth of the reader must be at the cost of the death of the author” (148). Thus, according to this notion, the birth of the spect-interactor must be at the cost of the ‘death’ of the artist.

According to this theory the spect-interactor is the most important aspect of the work. In Stern's interactive works the artist too becomes a spect-interactor because, although he is the author and creator, he also experiences the work at the same time and through the same means as the spect-interactor. Stern's works enact Barthes' theory to the extent that they refuse to be limited to one particular reading or meaning, and are constantly shifting and fragmenting through realized by various author-readers or spect-interactors.

In an interview Stern has remarked:

New Media is playful! It became inherently (on the surface) more accessible. One of the reasons I like working with interactivity is the various access points, immediately people find an entrance point, one of the problems (and that is the playful side) I find is that no matter how easily accessible that access point is it also becomes further and further away from whatever conceptual framework [the artist is] working in, there is a greater leap to that space. (Appendix one line 7)

Essentially Stern is pointing out that in New Media the interactive experience or playfulness of a work can overshadow the actual meaning of the work unless a viewer takes time with the piece. With New Media and interactive artworks, a viewer does not in the first instance wonder what the piece of work means, but rather what it does. But while New Media may be superficially more accessible, beyond this a viewer needs to make an effort to discover meaning and content.

In this same interview Stern also stated that because in interactive works "there is a greater leap" to the conceptual framework of the work, and to the setting and politics of the art gallery, interactive artworks are particularly appealing to an audience Stern describes as "a small academic group" (Appendix one line 12). This audience is committed to looking for the 'greater meaning', making it easier for the artist to produce work that has 'multiple access points' to its meanings because they will 'get it'. In this way Stern is using the gallery and its viewers to his advantage. He knows that the

traditional viewers of the art gallery will seek the meaningful intention within his work, engage in serious play and make the effort to interact with the aim of finding or creating meaning or an understanding of the artwork.

Therefore, to the extent that Stern's works encourage bodily performance and play, they also challenge a viewer to become something more than just a viewer, to become a musician or a painter with her body, to become a spect-interactor. These works turn the gallery space into a workspace and a playground. They infringe on the gallery's jurisdiction and merge viewer and exhibit, creating a space for the exploration of body, self and art through the medium of play.

iii. Reflecting on the Significance of Play

So, what does the incorporation of interactivity and play in the gallery mean to the gallery, the gallery viewer and the artist? And, does play in an interactive artwork offer a more profound experience than traditional art viewing, and if so does this prove that play is a serious and meaningful act?

As this report has established, artworks that require interactivity and play make a significant impact on the gallery and its viewers. They turn the gallery into a place where spect-interactors can explore and experiment with the work and in doing so explore and experiment with themselves and their own body (through the bodily awareness discussed earlier). This does not imply the exclusion of social reality: on the contrary, "Interactivity also provides for artists concerned with social issues the opportunity to involve viewers in very heightened ways" (Rush 203).

To make room for interactivity is not to say that there is no merit in the aesthetic contemplation of traditional viewing practices, or that these practices are not attuned to the tactile, physical or sensory qualities of the works that are viewed. On the contrary, the contemplative relationship between viewer and artwork is a complex perceptible

relationship. But the effective removal by Interactive Art of the distance previously required to view and critically contemplate an artwork challenges if not endangers the critical potential for aesthetic contemplation and reflection. As Rene Van de Vall points out in his paper "Immersion and Distance in Virtual Spaces", this requires that a viewers of such interactive or virtual spaces exemplify forms of critical distancing "from within" (141). Critical to Van de Vall's concept of finding critical distance from within is the concept of self-reflexivity. This is the feeling one has of one's movements and perceptions in one's interaction with a work (141). Self-reflexivity is in practice very similar to the concept of a bodily awareness within an artwork, as discussed earlier in this report. In order to achieve critical distance from within or in a virtual interactive space requires that the experience is not passive, for "being in an experience is not the same as being at the mercy of it" (Van de Vall 149). What is required is not only a bodily knowledge and receptiveness, but a mental distance enabling reflection. One can become absorbed in a work and still have the mental distance to reflect upon one's experiences and interactions within the work.

Van de Vall supports the contention of this report that the interactive experience provides a more profound experience of a work of art than traditional purely contemplative receptiveness. According to Van de Vall, "aesthetic feeling may be mobilised as a sensuous form of contemplation" (152). Phillipa Stalker agrees, arguing that,

"the experience of the artwork has always been central, whether to painting or an interactive work, and so to be able to immerse oneself in the artwork experimentally perhaps delivers more of an impact as opposed to simply viewing and appreciating the aesthetics of a more traditional work" (84).

Interactive play merges the high and mighty gallery with the playground, the theatre and the cinema. It brings technology into the gallery, and in doing so brings the gallery into the 21st century. These artworks form part of the evolution of the gallery,

and although artists such as Marcel Duchamp and art movements such as Installation Art began the process of constructing the gallery as a place for participation and interaction, playful interactive artworks attempt to do this on a more intense level by offering altogether new kinds of experience.

Playing with interactive works in the gallery encourages a prolonged experience with the work and puts greater emphasis on the body as a vehicle for creativity and exploration. Using the body as a medium to explore and understand the work engages the spect-interactor on an intimate level that yields the spect-interactor a more profound experience of the work and connection to it.

These installations allow for the body to be the trigger and determinant of meaning. Meaning in Interactive Art is not set by the author of the work as inherent in the work, but rather meaning is created in the interactions or play of a viewer with the work. As Winkler puts it, "Realization is determined by individual action, curiosity and play. What makes interactive digital installations different from that of art installation or interactive performances is that the work only becomes realized with the performer's participation: they not only complete the work they become it" (1). Interactive works are in fact unfinished works which need spect-interactors to finish them, allowing in fact "for many works to be realized through anonymous collaboration" (Winkler 1). In this way the work's meaning is held by the spect-interactor and her decision to invest time, energy and self in the work.

This report's investigation into the significance of interactivity and play has revealed issues that pose profound challenges to the world of art. The incorporation of interactivity in the gallery has required the re-invention of viewers as spect-interactors. Artists need to learn to understand and work with technology, and gallery curators need to be able to incorporate the technology into the gallery and appreciate that the space of the gallery has undergone an important change.

The spect-interactors' experience of the work and reaction to it bring it to life and determine its success. This can make interactive art production a very risky and frustrating job because the artist loses a degree of control over the work and its final success. The artist becomes the designer of the experience and can only do so much to ensure that the work is received by the spect-interactor in way he intends. For example, Stern says that in Stuttering, "what they [the spect-interactors] learn and what emerges as they physically engage with it, and how they reflect on that later: this is all precisely the 'work' of any given work. They have to stand like statues, then twitch or nod or shake just one piece of themselves. These interactions have been compared to Tai Chi or Butoh in some reviews" (Sherwin 4). So in this case the spect-interactor who does not behave in this way and interact as desired, or who chooses not to engage with the work, would then be responsible for making the work unsuccessful.

Nathaniel Stern acknowledges these problems with interactive art, especially the problem of getting the spect-interactor to spend enough time with the work to allow the work's meaning to emerge. It is because of these problems that his work has moved in a different direction, towards a print-based medium that he calls "Compressionism". Stern says that his Compressionism works "came out of a desire to engage those viewers who did not want to interact, to invite them into the possibility of playing with some of the questions, experiences and understandings of flesh and movement that they might be missing" (Sherwin 4). In this Compressionism series Stern uses a custom-altered digital scanner that he straps to his waist along with a battery pack and begins by scanning anything and everything from flowers to paving, tables and – most famously – lilies in a pond (see Figure Seven). Stern then takes this scanned image into Photoshop and re-stretches and hand-colours them, then prints them, in the traditional forms of lithographs, etchings, engravings and woodcuts (Sherwin 4).



Figures Seven and Eight: Nathaniel Stern using his custom-made digital scanner to produce a print for his Compressionism series. Sourced from <http://www.artthrob.co.za/06feb/artbio.html>. October 2006.



Figure Nine: A Compressionism scan, entitled *Emmarentia Lilies*, intended to be printed as a lambda print on metallic paper. Sourced from <http://www.artthrob.co.za/06feb/artbio.html>. October 2006.

Stern claims that the physically performative way that he uses his body and technology to take these digital scans constitute a form of interaction: "I might scan in straight, long lines across tables, tie the scanner around my neck and swing over flowers, do pogo-like gestures over bricks, or just follow the wind over water lilies in a pond" (Sherwin 4). This mode of creating a work of art through a full body performative experience is his compromise with the immersive playful performative interactive

artworks such as Stuttering and Step Inside. Although his Compressionism works are representational of his body and the landscape he is scanning over the time he takes to perform the scan, these works return to traditional saleable print media. And although the works might be considered more aesthetically pleasing, they allow a viewer to retreat to the role of the traditional passive viewer in search of contemplative distance and time for soulful contemplation. They lack the tension that an interactive artwork provides, with the opportunity it affords for one to immerse oneself in the work, encounter the work with one's own body and draw a conclusion from this personal physical experience.

Endnotes

¹ The role of the viewer in these Interactive Art environments has evolved and therefore so has this viewer's classification. The viewer in this situation could possibly be referred to as not only a viewer but as a participant, user, player, or interactor, and in certain instances, particular descriptions may be more appropriate. This report acknowledges these changing roles and classifications, and in its final chapter investigates and attempts to clarify this, yet until such time, for consistency the preliminary word 'viewer' will be used in all instances including those where it is possible that one of the other descriptions will have been more appropriate.

² Avant-garde, in art, describes artists and artworks that are experimental and innovative, and push the boundaries of what is accepted as the norm (Greenberg, "Avant-garde and Kitsch" 3)

³ Assemblage is an artistic process similar to collage in which found objects are combined to form a three dimensional artwork (Gowing 856).

⁴ Low art or low culture refers to some forms of popular or mass culture such as media and communications, in opposition to high art or high culture, ⁴ referring to Fine Art, Design and Architecture (Irvine 1). Fine Art examples of low culture include Kitsch, Camp, Tattoo Art and Exploitation Films.

⁵ Jean Piaget in The beginnings of Play, studies play from the perspective of psychology theory. Gregory Bateson in "A Theory of Play and Fantasy" from the volume Steps to an Ecology of Mind, studies the concept of play across many disciplines, including mathematics, philosophy, communications and psychology (314). Sociologist, Linda

Hughes, studies childhood play and social behaviour or social play, and in studying the role of emotions in play, Brian Sutton-Smith takes an interdisciplinary look at play in terms of history, anthropology, folklore and education (296).

⁶ Arguably the most significant scholar of play, Johan Huizinga in his book Homo Ludens, investigates the role of play and its ability to be meaningful in human civilization. Both Huizinga and Gregory Bateson study biological play and find that play in animals is an extremely serious act which helps the animal prepare for real life situations. Katie Salen and Eric Zimmerman in Game Design Fundamentals, study the significance or seriousness of play in relation to game design and gaming experiences.

⁷ Sigmund Freud in Creative Writers and Day-Dreaming finds that when people grow up they stop playing, and therefore one would think that they stop experiencing the pleasure that is associated with this childhood play. Yet Freud argues that adults don't really stop playing at all, instead they exchange the pleasure of play with another pleasure, the pleasure of phantasizing (37). "...the growing child, when he stops playing, gives up nothing but the link with real objects, instead of playing, he now phantasies. He builds castles in the air and creates what are called day-dreams" (37). Therefore Freud uses the word phantasy to describe the adult substitute or surrogate for unguarded childhood play.

⁸ Metacommunication, a term coined by Gregory Bateson, is communication about communication. It involves the exchanging of signals, bodily signals, which communicate messages. Bateson discovered this phenomenon of metacommunication in monkeys playing, where the animals fight and bite each other but are aware that these activities are not serious and they are not actually fighting and seriously hurting each other but rather 'play fighting' (316). In this way the animals use a form of metacommunication to communicate to each other that what they are doing is playing

and therefore they will continue to bite each other as part of the game but not as hard as they would in a real fighting situation, because the animals are aware that 'this is play' (316).

⁹ Piet Mondriaan was a Dutch painter who invented an abstract non-representational form of painting called Neo-Plasticism, these works were characterised by a grid of vertical and horizontal black lines and the use of the three primary colours (Gowing 875). Nathaniel Stern calls his work Stuttering 'Modriaan style' because it is aesthetically similar to this style of painting, and exhibits geometric black lines and the use of solid primary colours.

¹⁰ "Nathaniel Stern has been a South African for some time now, after falling in love with (and marrying) South African drama academic Nicole Ridgway and moving to Johannesburg in the early 2000's." (Borland 1)

Nathaniel Stern was born in New York, United States of America, where he qualified with a BS in Textiles and Apparel Design from Cornell University, a Masters in Interactive Telecommunications (ITP) from Tisch School of the Arts, New York University (NYU) (Sherwin 1).

Stern moved to Johannesburg, South Africa in 2001 where he became an adjunct part-time lecturer (distance teaching) faculty member of the Minneapolis College of Art & Design, and a freelance lecturer for the Wits School of Arts' Digital Arts MA (University of the Witwatersrand), and various other South African universities and institutions (Rhizome.org), and a practising artist on the South African art scene. From 2001 – 2006 he positioned himself into the South African art scene, winning various awards (such as the previously mentioned Brett Kebble Art Merit Award's) and situating his works into institutional collections such as the Johannesburg Art Museum, University of the Witwatersrand, South African Broadcasting Corporation, Sasol, CorpCapital Bank,

and the University of South Africa (UNISA) (Rhizome.org). He is currently working towards a PhD on Interactive Art and Embodiment at Trinity College, Dublin.

¹¹ Benjamin storytelling refers to the text "The Storyteller" by German cultural critic Walter Benjamin. In this text Benjamin tells open-ended philosophical stories that require the reader to look at one story from various angles and deduce his own meaning or understandings of the text. Walter Benjamin is well-known for his essay "The Work of Art in the Age of Mechanical Reproduction" which challenges its readers to consider that the artwork or literary work in today's age is formed not by its author but rather by its reader. Stern describes his NAN (Non Aggressive Narrative) as a mode of Benjamin storytelling, which tells stories in multi-sensory spaces where 'you' (the viewer) and I (the artist) can play seriously to make our own stories, and elicit our own meanings from our interactions with the work (Appendix one line 76). He declares, "I am not just asking you to perform. You are actually learning and changing the way you communicate when you interact with these works. It's a bodily knowledge that happens through time and serious play" (Appendix one line 54).

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**Appendix One: Nathaniel Stern Personal Interview. New Town:
Johannesburg. 14 October 2006.**

1 Catherine Bland: What do you think of the concept of play in art, specifically
2 Interactive Art, and especially with regard to your Interactive works?

3

4 Nathaniel Stern: One of the reasons I love working with interactivity is the
5 various access points that it can have, immediately people find an entrance point.
6 But one of the problems with that, and that is the playful side, is I find that how
7 easily activated that access point is, it also becomes further and further away
8 from whatever your conceptual framework your working, there is a greater leap
9 to that space. For example with Cameille Utterback's Text Rain or with my Odys
10 [elicit], its great fun to start playing with it but its so much of a greater leap to
11 start talking about the symbolic order of these works. Jenette Wincertson was my
12 inspiration for that work, talking about her dreamscapes from her text floating
13 out of her head, but I mean if you start from a space that is quite academic your
14 speaking to a much smaller audience but then they will get it immediately,
15 whereas if you start from a perspective that is closer to play allot of people will
16 find something interesting in it but those layers are much further away in order to
17 get to the conceptual framework. So I like the term serious play because I find
18 the more time people spend with the work, actually embodying it on some level
19 the greater capacity they have to actually learn something through their bodies
20 that they didn't know from their heads if that makes sense.

21 I think it's a bit funny when we talk about play, because New Media is playful, it
22 is a form of bodily knowledge discovered through serious play and obviously play
23 is a very important aspect to some of the work that I do, but I'm almost like the
24 opposite of William Kentridge in some ways because in his process he is playing

25 when he is making work and its very serious work, and I'm always working very
26 seriously and its always very playful work that is produced. I must admit, I love
27 watching people who spend time with work when they are playing and all of a
28 sudden they discover something that their bodies tell them that they didn't know,
29 when their bodies stutter or when they try to 'one-up' each other, and that
30 communication and that social dialogue is kind of the backbone of my work.

31

32 CB: What are your views on "Play versus Performance", when looking at Step
33 Inside the viewers are performing but playing at the same time?

34

35 NS: I recognise play as being important but I'm coming from a different angle, I
36 look at perform vs. performance, we talk about it a little bit in the implicit body paper.
37 I always find it funny when people say odd things like 'I have a body' and to me
38 its more like, no 'you ARE a body', the assumption that we know what a body is,
39 and I think a body is something that is performed as incipient as always already
40 starting or beginning and I think that that play is exactly what this embodiment
41 is. With Step Inside I use play in order to accent performism, or that's what
42 comes out when I try to accent performism, play is the way that it ends up.
43 When I made Stuttering, and I always work based on failure, if I start back at
44 [Odys] elicit which was kind of my response to Camille Utterback's work, what I
45 was trying to there was talk about stutters and make things come out of
46 accidents, and what happened was it was too beautiful, nobody cared, nobody
47 was talking about 'Lacanian Structures of signage', everyone was just dancing in
48 front of it, so I decided to make something ugly, and something that wasn't just
49 free and motion, but actually made people move, and that's where Stuttering
50 came out of, and what I found with Stuttering was that when I was watching
51 people use it at the Johannesburg Art Gallery and at the Sub Station, was that if

52 there were just one or two people there they actually spent a long time with the
53 work, discovering with their bodies, which was my intention, but if there was lots
54 of people there, they tried to out-do each other and they would perform.
55 So Step Inside was a response to that, it was giving people a performance space
56 and it was actually making a literal wall between performance of self and
57 perception of others and so that's why it became more of a playful piece and had
58 a social interaction between the watcher and the interactors or the on-lookers
59 and the people who were actually using doing the performing. I am not just
60 asking you to perform. You are actually learning and changing the way you
61 communicate when you interact with these works. It's a bodily knowledge that
62 happens through time and serious play, you have no idea if it's a woman, man or
63 child in the performance space, its just a figure in there, and they loose self
64 consciousness. And part of it is fake because people see you walk in or walk out
65 but the performer has time to gather themselves before they 'face their
66 audience'. In Step Inside the playfulness started with people throwing things on
67 the floor, this actually started at the Brett Kebble awards when the janitors
68 started throwing change on the floor and sweeping it up to get the sounds, and
69 this was even before the cameras were set-up, the sounds were so beautiful that
70 they were already trying to outdo one another.

71 I was reading a lot of this sociological book at the time of Step Inside, and there
72 was this great segment called 'performance of self in everyday life', where they
73 talk about this guy who is on the beach, and he is totally performing, like walking
74 slowly to portray "I am 'model Jim'" and when I wipe my brow "I am 'serious
75 Jim'", and I loved that notion of performing for others and I imagined what would
76 happen if I wasn't even me that I could perform, if I could literally project an
77 image of self, what would that look like.

78

79 CB: So all your works are theoretically based?

80

81 NS: When I first made Enter Hector, which was the first of my interactive works, I
82 didn't possess the language that I do now, I was very much just playing and I
83 wasn't theoretically sound at all, but I just kept saying, 'its like Malcavich, your
84 entering into Hectors portal. With time my works became more theatrically
85 based, my NAN, you know it? They are influenced by Walter Benjamin, tell stories
86 in multi-sensory spaces where you, the viewer, and I, the artist, can play
87 seriously to make our own stories, and elicit our own meanings from our
88 interactions with the works. It's like a storyteller who provides counsel. It's not
89 someone who, in isolation sits alone. Its about someone who goes on a journey
90 and take you on one when they get back, the storyteller does not provide
91 answers, its like a therapy session.

92

93 CB: When you made Step Inside did you intentionally incorporate the play aspect,
94 did you think to yourself the viewer/player is going to be entering this way and
95 using this to do that?

96

97 NS: I think it's important that people will play in the social dialogue, but also that
98 people will discover something when they are alone in the space. In the same
99 way that all Minimalists works look the same and all Jackson Pollock's look the
100 same, you actually have to spend time with the work. For example, Enter Hector
101 and Stuttering both use body tracking software where you touch a word in order
102 to trigger spoken text, however with Enter Hector the text actually runs way from
103 you so its very much a frustrating piece where its asking you to force Hector to
104 speak and chase after him. When I made Stuttering I was very aware that it had
105 too many trigger points and I was asking you to not to interact. So I think I'm

106 very aware of the performative nature of what I'm asking people to do, as
107 apposed to play or not play, and then depending on the situation it may be more
108 or less playful for the viewer. But I think always already when you think with
109 your body it's a different kind of consciousness, its literally affect, and I think the
110 way that affect often communicates with the mind, because body doesn't actually
111 'think' per say, its abject and stubborn and forces us to think. I think often the
112 body tells us more simple things that we then need to later unpack within the
113 symbolic order. But in the moment its telling us pleasure, its telling us fun its
114 telling us anger, its telling us heat, and since we are not having sex and were not
115 angry, it becomes play.

116 Step Inside was a move to a more playful consciousness, I thought 'simple
117 interaction', you get the interaction immediately, footwork anything on the floor
118 makes echoed sound effects live body tracking, immediately you can get that
119 relationship. I hid all the technology, I don't want it to become this magical
120 space because of the technology used, I want it to be a magical space because of
121 what it does to you, or how it makes you perform. And this is an important
122 aspect of my work, and majority of interactive work including some of my
123 favourite artists, tend to be open and about freedom on a certain level or
124 openness and responsibility, where anything you do to the space responds to it. I
125 do the opposite I try to get people to perform in very specific ways, by making
126 them chase things, by making the environment too responsive, and in that sense
127 that's where it becomes extremely performative where you learn something with
128 your body, perhaps that's where the playfulness dialogue comes from as a
129 response.

130

131 CB: Stuttering and Step Inside function in the art gallery space, would you not
132 agree that the viewer in this space has evolved over time and with your works in

133 particular, they are not traditional viewers. I want to prove this and I want to
134 suggest a re-classification or description for the viewer in this space. How would
135 you classify the viewer in these artworks, or would their classification depend on
136 the work, for example in this work they are viewers and in that work they are
137 performers?

138

139 NS: It's hard to say, and I think beyond classifying them I think it's a very
140 political issue as well. In NYU we called them users, I hated this, it is not a
141 Windows application, it is an artwork. The word viewer in this context is also
142 misleading because they are viewing themselves. And yet on the other hand
143 there is something interesting about it because they are gallery goers and they
144 viewing themselves on some level. I mean with Pollock's performative works it
145 was about imagining the performance as much as it was about the work. Except
146 in the interactive works they are 'becoming'. The prints I'm making now are very
147 much kind of digital Pollock type works and its simply because I wanted different
148 access points for the same stuff. I've been exploring for those people who refuse
149 to perform in the gallery space. Many people who appreciate my work, like for
150 example Clive Kellner, have never even used it, they've watched others use it,
151 and that is a very different kind of experience, and for those viewers I want to
152 make works that are more efficient if you are not going to perform. But to get
153 back to the original question, because of those politics I tend towards saying
154 'viewer' but very often if I'm allowed the luxury of not having to be concise, I'll
155 call them viewer participants, with a dash, and to specific audiences I will call
156 them participants, because of the political notions of the gallery space I would
157 never say user. I am a provocateur, because I like to play, when talking about
158 the prints I will call them participants, and when talking about the interactive work
159 I will call them viewers.

160

161 CB: How do you deal with this willingness/unwillingness of viewers to perform?

162 The rules of the gallery that traditionally prohibited viewers from touching or

163 interfering with the artworks cannot apply to your works, so what do you do

164 about this type of traditional gallery visitor, do you just accept that they will not

165 perform?

166

167 NS: No, I wouldn't say I accept it, but it leads to more works. I pay careful

168 attention to how people use work and the progression of my work is linked to how

169 people react. Part of Step Inside already addresses that issue, where people

170 don't want to move in front of others, so you go into a space that is 'your'

171 performance space. I found that telling the security guards how the artwork

172 works and letting them reset the software gave them a bit of ownership of the

173 work and this helped because they started to tell the viewers how to use the

174 works, like they would say, "wave your arms around", "do this"...etc. and this is

175 fantastic. This is what happened in the first interactive work I set up, which was

176 in up-state New York, and the security guards took amazing ownership of the

177 work to the point that they forgot what I looked like and they were telling me

178 how to use it when I came back a few months later, which is lovely. And I think

179 another thing is that its led me to my other works, looking at my works and the

180 people that don't perform has led me to my performative prints where people can

181 imagine what the performance was like. I think there are always going to be

182 compromises and failures, and these just lead to more questions that lead to

183 more work. I guess what I'm saying is I use that to inform my process instead of

184 trying to find an answer. Rather than making people interact with that specific

185 work, it will rather lead into a different question for the next work.

186

187 CB: So you believe in the notion of 'serious play'?

188

189 NS: I link play to performance, I don't work from a space where I try to provoke
190 play. I'm very interested in performance and play is a very necessary part of
191 performance. I think it ridiculously naive to separate play from the gallery space
192 especially since the 1960's, since Post Modernism and people like Jeff Koons. I
193 like using the term 'serious play' because it seems contrary and paradoxical but
194 to me it is not this at all, play is very serious, children learn their most important
195 lesson in life through play. If you watch children play, they are very serious, they
196 argue over rules, they learn how to negotiate and social structures, it may be fun
197 but it is also very serious. When we adults play at Las Vegas, its very serious, we
198 can end up in jail that is very serious. I don't think of play as something lesser
199 than seriousness or even separated from seriousness. I think the arguments
200 around the seriousness of play are stupid arguments, it's like arguing "what is
201 art" or "what gets to be art" and "what isn't art". When people say something
202 isn't art they are trying to dismiss it as something that doesn't have value, so if
203 they are going to do that they should be talking about its value not its
204 classification as art or not art.

205

206 CB: What were the challenges you encountered when installing Step Inside at the
207 Johannesburg Art Gallery or any other institution? Also, I remember you
208 discussing some challenges with the sale of Step Inside to the Johannesburg Art
209 Gallery in one of the digital soirees; would you please talk through those again?

210

211 NS: The main challenges for Step Inside at the Johannesburg Art Gallery were
212 securing computer equipment, writing the software in such a way that it was easy
213 to turn on and off, and reset when necessary, training the staff to do so, and

214 mostly just making sure they kept in touch with me about maintenance and
215 needs, which were especially more difficult in South Africa and downtown. To
216 their credit, given they had an entirely new staff, they did okay for most of the
217 exhibition. Still, a more specialized exhibition/space for digital media would have
218 done worlds better.

219 With regards to the sale, similar issues exist. For me, an institutional sale is a
220 great opportunity for archiving new media / interactive work. I gave them not
221 only the software and source code, but also pseudo-code instructions (see Figure
222 Ten) and rights to re-write the ware as needed in future. They therefore own the
223 "composition" of the work, and can implement it in new ways and still call it mine,
224 so long as they follow my specs. I made their version compatible with Mac and
225 PC, both Intel and g3/g4/g5, and also handed over any idiosyncratic equipment.
226 It was a book, a disc, microphones and a camera, with floor plans, too.... I also
227 worked with the American Consulate to have an eMac donated to the museum,
228 which could potentially run it (and in fact did for the length of my solo exhibition).

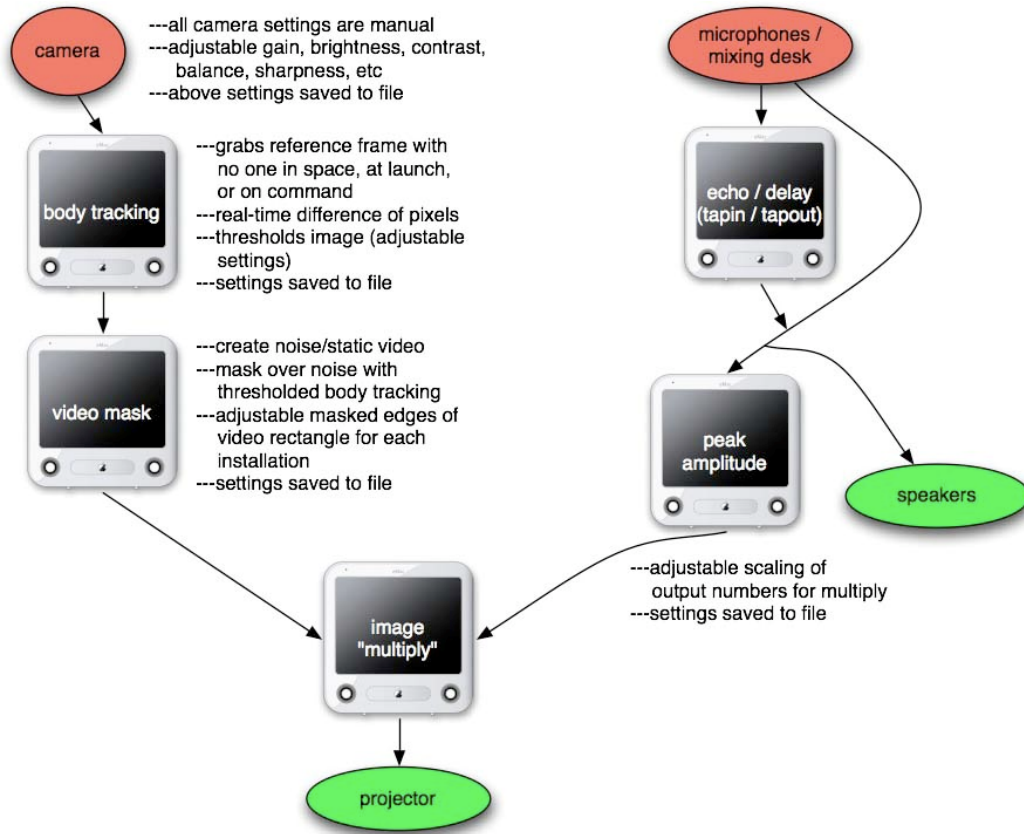


Figure Ten: The pseudo-code given to the Johannesburg Art Gallery in the sale of *Step Inside*. Sourced from Nathaniel Stern. December 2006.

**Appendix Two: Step Inside Installation Specifications. Sourced from
Nathaniel Stern. December 2006.**

1 ***step inside, technical information & floor plans***

2 The included "step inside" application software is a Universal Binary application
3 for Macintosh OS X 10.4.6 or higher, and works on both PPC and Intel-based
4 Macs in native format.

5 Please see the "source" folder for more information on the software and how to
6 update it or transfer to PC, and the "first-set-up.doc" file for how to calibrate the
7 software after you've set up the installation (below).

8

9 **The installation will require the following hardware and materials:**

- 10 1. Computer. Must be a minimum of G4 1GHz processor and 500MB of RAM
11 for Mac (or better) running 10.4.6 or higher, or equivalent PC running
12 Windows XP or higher. Please see source information for more about a PC
13 version. This machine must have audio input, graphics card / vga output,
14 and firewire or live camera feed equivalent.
- 15 2. Digital Video webcam (preferably firewire). Recommended is an IIDC
16 camera such as the unibrain fire-I, for body tracking
- 17 3. Projector & projector cable (approximately 10 meters long – see floor
18 plans, below), + BP (back projection) material (or equivalent fabric)
- 19 4. Mixing board (for input to computer; must have at least *5 quarter-inch*
20 *mono or stereo inputs* + pre-amp) and cables (inputs start from center of
21 each rostrum, and must mix down to left channel of the stereo mini-jack
22 input on computer, which will be at the entrance to the installation – see
23 floor plans)

- 24 5. amp, speakers & cables (must take output from computer; this is a mini-
25 jack that can be converted to RCA or equivalent / necessary jack with the
26 proper cabling). Speakers will be mounted on the "front" wall – they
27 *cannot* touch the floor (see floor plans)
- 28 6. 5 meter (or longer), 6-pin to 6 pin firewire cable (for camera, below)
- 29 7. 3 directional lights, to be hung on back wall (see floor plans)
- 30 8. Lots of power points and extension cords!
- 31 9. All materials necessary for construction of space (see floor plans)
- 32 10.5 Shure "oyster pick-up" microphones (for footstep tracking)
- 33 11. statement / provocation for right-hand wall (print out "provocation.tif on
34 included cd)

35

36 ***step inside, floor plans and construction***

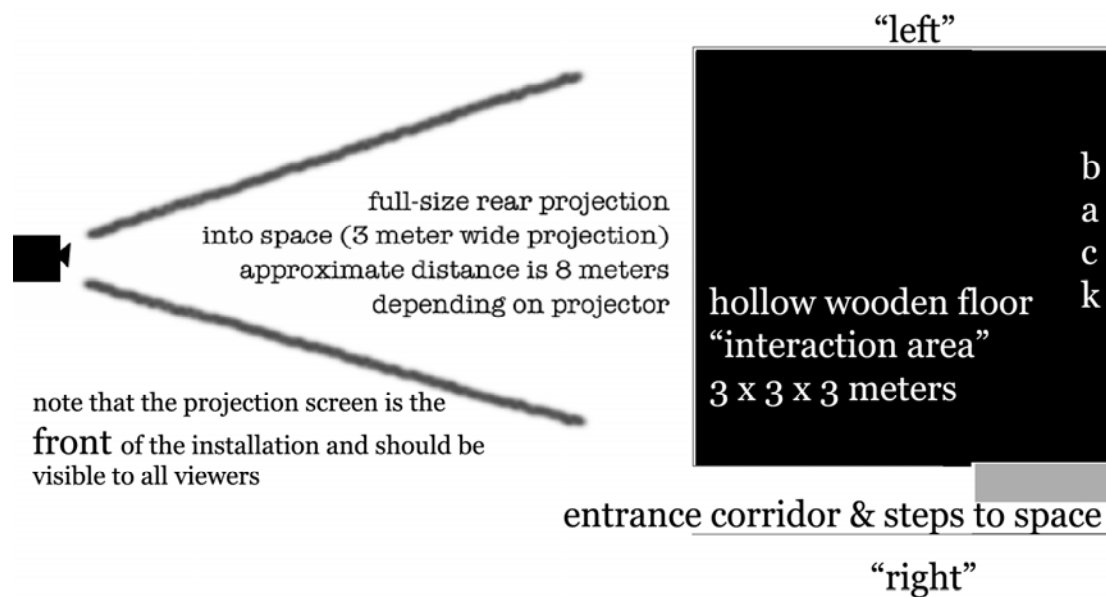
37

38 **1. Top view**

39 The first image, below, is a bird's-eye view of the installation. The interaction
40 space (in black) is 3 x 3 x 3 meters, but the **installation in full is 3 x 3.5 x 3**
41 **meters**. Viewers enter the "right" wall (bottom of image) cut at 2 meters in
42 length, and the **back wall is 3.5m long**, for a fifth wall to act as a corridor
43 entrance.

44

45 The front wall (left of image) will be have a hole cut in its center to reveal 3x2
46 meters of BP (back projection) material, and the outside of the installation must
47 have enough space for a full-size rear projection. This projected image is for *both*
48 viewer-participants on the inside, and non-participant viewers on the outside. All
49 walls should be painted a flat, matte white.



50

51 The “floor” must be a hollow wooden floor, raised off the ground; this is to insure
52 they will carry/resonate the sound of footsteps. They must be strong enough to
53 hold the weight of viewers, but also allow for small vibrations in the wood with
54 each step. They will need to have *carpet strips* placed between their legs and the
55 ground below them; this is to insure that footsteps outside the space will not
56 effect the installation, and that they do not move (which would cause false
57 footstep triggers). The “oyster pick-up” microphones should be evenly spaced
58 underneath, and attached to, the floor – with thin but durable double-sided tape.
59 Depending on the structure of the space (how many pieces of wood and beams),
60 between 3 and 5 of the microphones will suffice.

61

62 The mics will go to the mixing board desk, be pre-amped and mixed, for evenly
63 sounding footsteps through out the space, then sent out the left channel to the
64 computer, through its mini-jack input. The computer may be placed underneath
65 the floor or locked separate from the installation.

66

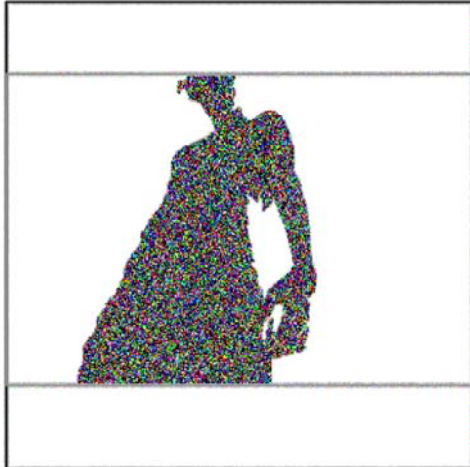
67 *Not shown*, is a small, removable step to be placed at the entrance, to help

68 viewers onto the platform; it must be movable so adjust the mics if need be.
69 The back wall will hang the printed provocational statement.
70 This piece requires ***extremely consistent lighting*** in order to run efficiently.
71 We must either close off any and all windows in the vicinity or build a ceiling with
72 the space.

73

74 **2. "front," inside/projection view**

75 This 3 x 3 meter wall should be cut out in the center, and frame BP (Back
76 Projection) material (or equivalent fabric), to allow for a large rear projection into
77 the space (projection dimensions will be approximately 3 x 2 meters). This
78 projection will also be visible to viewers outside of the space. Top and bottom
79 will vary based on the rostrum height, and should leave an approximate 4:5 ratio
80 of space on either side of the screen – top being 4, bottom, 5, as shown.



81

82 **3. "left" wall, inside view**

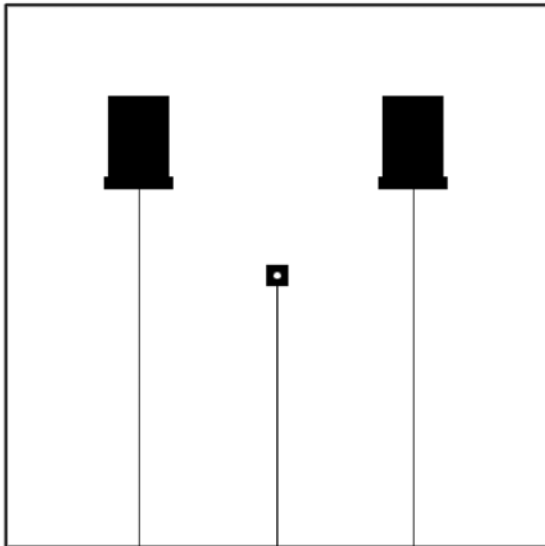
83 After entering the right side of the installation, viewers will be in full view of the
84 camera and speakers, on the left wall. The speakers must be inside the space,
85 while the camera may sit outside with a small hole for its lens. Cables should be
86 hidden as best possible, inside, behind, or taped to this 3x3 meter wall.

87

88 The speakers must be hung (rather than placed on the floor) in order to insure that there
89 is no feedback into the microphones below the floor. Initial set-up will in fact require
90 adjustments of balance between volume of the speakers and potential feedback into the
91 footstep pick-ups.

92

93 In between the speakers and the shelving we will build, you should place a thick carpet,
94 or some other soundproof material. This will further insure against feedback, as well as
95 camera vibrations (which would make the body-tracking software less efficient).



96

97 4. "right" wall (entrance) inside view

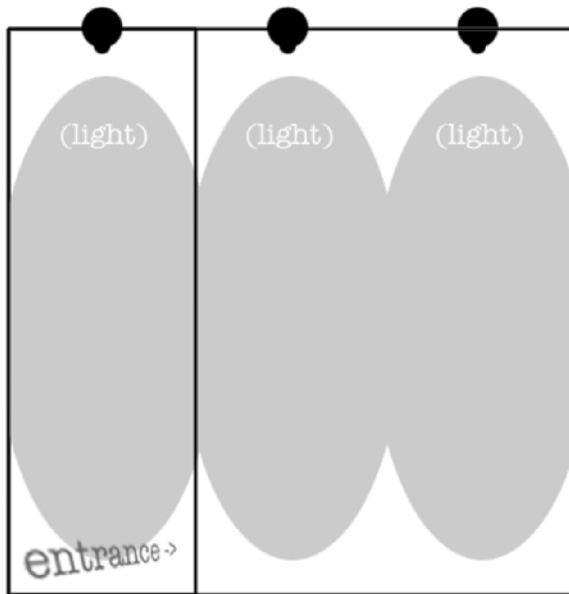
98 This view is what will be behind us, upon entering the space. Note that this is actually
99 two walls, which together create an entranceway – one is 2 x 3 meters, making a
100 doorway, the other is 3 x 3 meters, creating a corridor like entrance.

101

102 In order for the camera to "see" the viewer/performers, it must differentiate between
103 them, and the space around them. For this reason, we must hang 3 directional lights,
104 from just off the top of the wall, and point them down onto the entire right wall. From
105 the camera's eye, this will light the space behind the viewers, but not the participants
106 themselves, thus making it "easy" for the computer to differentiate bodies against the
107 backdrop. To clarify, we do not want any shadows in the space, so do not light the

108 participants – rather, light the wall behind them.

109



110