

Preserving New Media Art: Re-presenting Experience

Jean Bridge

Visual Arts & Interactive Arts and Science,
Brock University
St. Catharines, Canada
jbridge@brocku.ca

Sarah Pruyn

Theatre Studies, University of Guelph,
Guelph, Canada
spruyn@uoguelph.ca

ABSTRACT

There has been considerable effort over the past 10 years to define methods for preservation, documentation and archive of new media artworks that are characterized variously as ephemeral, performative, immersive, participatory, relational, unstable or technically obsolete. Much new media cultural heritage, consisting of diverse and hybrid art forms such as installation, performance, intervention, activities and events, are accessible to us as information, visual records and other relatively static documents designed to meet the needs of collecting institutions and archives rather than those of artists, students and researchers who want a more affectively vital way of experiencing the artist's creative intentions. It is therefore imperative to evolve existing preservation strategies for new media art, to include material that provides a rich sense of what it was like to be dynamically present in the live artwork. This paper proposes that simulation strategies with the aesthetic, mechanics and dynamics of the videogame platform, are capable of delivering complex user experiences that can be applied to new media artworks for the purpose of providing users, who may never see the original artwork, with an appreciation of the artists full creative intentions. We further propose that such an approach should be differentiated from the documentation or recording of a particular instance of artwork. We suggest that new creative iterations or versions of new media artworks be designed specifically for this medium through collaboration between artists and game designers and/or developers. Such novel interactive iterations of new media artworks should be conceived so as to enable otherwise temporary artworks to persist in a different form into the future so they may inspire the next generation of artists and inform criticism and research through a direct interactive engagement with the art.

The model of videogames is one marked by diversity and flexibility of means that can exceed the verisimilitude required of simulation or direct mimesis of the live artworks. The creation of a new version of an artwork, which in itself is a construct of the creative imagination, can include virtual worlds and/or mixed reality environments and employ diverse interfaces, emergent behaviours using artificial intelligence and logic engines to fulfill conceptual and exploratory levels of immersion, agency and user experience. The application of videogame design and technology to artworks raises questions of theoretical and practical concern having to do with their desirability as a means of artistic expression, the potential capacity of such re-presentations to deliver affective experience of an artwork as well as their ability of extend the life of new media artworks.

Keywords

Art, performance art, relational art, interactive art, new media, art preservation, archive, art documentation, videogame, simulation, representation, experience, interaction, aliveness, virtual, authorship, instrumentality

1. INTRODUCTION

This investigation has evolved from our interest in finding documentation of artwork by artists who produce technologically mediated installations, performances, interventions, activities and events - the nature of which may be variously limited in time or duration, performance based, immersive, interactive, relational, or otherwise unstable or dependent on obsolete technology. For the purpose of this paper and ease of communicating the diversity of types of artworks that may be relevant in this discussion, we will call these 'new media artworks' or simply 'artworks'. We continually find it challenging to locate documents or records of past artworks that provide us with a sense of how the artwork's system behaved or the nature of the lived experience of the work. For instance, we wanted to know more about Phillippe Chailot's *Samples of the Ghat* project – an interactive installation exhibited in 2008 [8]. After searching for it we found documents on the Rhizome ArtBase [40] that included a brief artist's description, an artist's statement, a list of installation components including software and hardware and a short video. The video showed us some of the mechanics of the installation and several people interacting with it. With this information, we gained a sense of the appearance of the work and an idea of what *Samples of the Ghat* was meant to do. How can this general information be expected to help student, educators, artists and others with a stake in art history and practice, accrue a rich understanding of the artwork? Could this documentation have impact on curatorial choices? Could a new version of this artwork be created and preserved that would enable those of us who are deeply curious to engage with the artist's concepts and the expressive dynamics of the work in a more authentically experiential way?

Despite the enormous amount of research, scholarship and practice that has been undertaken in the past decade to advance preservation strategies, archives and archival methods and documentation of new media artwork¹, we are still left with a preponderance of fundamentally static and information-based records of significant new media artworks. These projects [7, 9, 10, 14, 16, 20, 26, 36, 37, 40, 41, 45, 46, 51] have made possible a vast amount of artistic production and activity to be documented, archived and disseminated in varied ways that enables new media art to enter the mainstream of art history and criticism ([22] p.8).

Yet these archives are often only accessible in websites reserved for researchers or paying subscribers and are comprised of often dry, factual and discursive information largely designed for the museum and archive professionals. It is extremely hard to locate compelling material that makes the art come alive or that captures the authentic experience of the spectator/participant/user when they first encountered it. Documentation of new media artworks, seems by definition, to be informative rather than engaging.

2. LEAVING DOCUMENTATION BEHIND

Because it is through documentation that we are able to experience most artworks, we initially focused our research on the quality of the documents surrounding specific artworks that are available to artists, educators and researchers interested in the experiential qualities of artworks. As a result of this work and our parallel experience of live, performative and interactive artwork, we see significant limitations in what the documentation, recording or even imitation of new media artworks can accomplish. [10, 14, 20, 36, 37, 40] Typically documentation consists of a) quantitative details of a piece - its measurements, hardware and software components, actors, collaborators, venues etc.; along with b) recorded views of the work in the form of image/sound/video capture; and c) qualitative information about such things as the artist's intent for the work or audience members' responses to the work.[34] But, we rarely see documents that allow us to experience the fundamental conditions essential to the work as might have been present in exhibition or performance. The standard conventions applied to the documentation of new media art leave us with effective but not affective records of artworks. Perhaps it is time to move beyond the accepted conventions for documentation with their focus on the aggregation of information and capture of visible properties. We propose that artists, who wish to do so, should create parallel iteration or versions of new media artworks that are themselves an expression of the artists' concepts and intentions adapted to a new medium. This would be especially valuable for representing artworks that are immaterial, immersive or ephemeral and that depend on performance or use. Such dynamic and interactive iterations would then ideally build preservation into their design strategy so that the work can live on in another relevant form that can be accessible in the future. We suggest the technologies and practices associated the simulations and videogames constitute a viable framework and set of tools for this purpose.

3. WHY VIDEOGAMES?

We use the term videogame rather than video game or computer game following the Videogame Style Guide and Reference Manual [38] for the way it encompasses a flexible convergence of moving images, simulated virtual worlds, rules and constraints, affordances, interaction, immersion, story and space of possibility. We have framed our notion of iteration or re-presentation (versus direct documentation) around the use of videogames as a mechanism for simulation and affective experimentation. A simulation is a model of reality defined as a system [44]. It is a dynamic, simplified, accurate and verifiable representation of a real world phenomenon. One could see a simulation as a form of documentation. Yet most contemporary new media artworks, especially those that themselves are invented constructions with layered associations; that are performative, poetic or relational in nature, would be highly resistant to direct modeling; to reduction

or simplification. As Espen Aarseth has pointed out, simulation is essential to videogames. ([1] p.45-55) Yet, it does not define them. As much as videogames are a platform for simulation, they are also a platform for game and play, conflict and cooperation, goals and consequences, artificial or imagined situations, constructions and behaviours as well as the widely contested space of drama and narrative. [44] Play is central to our choice to focus on videogames as an "environment for experimentation" where the player's or user's action is required and where there is an inevitable degree of indeterminacy. [19] Videogames exploit a diverse range of mechanics or actions and control mechanisms within which the dynamics of play can occur. These drive aesthetics as a set of purposes or desired responses evoked from the player as she interacts with the system. [24] Such a complex medium will inevitably demand the artist adapt the work to the possibilities videogames afford. Moreover, we understand that the medium bears considerable weight in determining the message of the work. [32] Hence our eagerness to move beyond documentation if we are to employ simulations or videogames as a means to preserve a dynamic version of an live new media artwork. While dominated by the entertainment industry, videogames are used also to train, persuade, and engage users in a growing diversity of experience.

Videogames exploit a wide range of aesthetics to create simulated environments and virtual worlds that, at their most sophisticated, deliver an extraordinary verisimilitude to natural reality. They provide interfaces and affordances that enable multiple and complex points of view and they deliver highly responsive systems of interaction with multivalent options and choices for the participants. While others may not do so, we see videogames as also including uses of mixed realities, sensing and pervasive computing. It is not hard to see how this medium could serve the purposes of many contemporary artworks in attaining complex participation and relationality.

4. IS THERE A SIMPLER WAY? IMPROVE PRESERVATION STRATEGIES

At first, this proposal may seem redundant. After all, why not preserve the initial new media expression for future exhibition or performance through established strategies? This is a worthy approach, especially given the tools now available to institutions with which to manage the material and immaterial aspects of their collections. New media and contemporary art has taught us nothing if not that the essence of an artwork lies in our experience of it ([13] p.55-6). Preservation is indeed an ideal way to ensure the artwork is not lost to future generations. However, preserving an artwork in the confines of a museum and occasionally exhibiting it hardly meets our objective of access. Consider the accessibility of a painting held in a museum's collection. It can be photographed and its likeness disseminated widely in print and on the web. The artwork becomes available to anyone who is interested in it. It is true that the document through which the public accesses the original is at a remove from the original, but that does not change the fact that the artwork is in common currency. Hard-to-capture new media artworks do not have this luxury. They are inaccessible to us except through static after-the-fact documents or highly compressed web videos. For much contemporary new media artwork, the vital potential of the work is lost or closeted in museums and archives.

5. IS THERE A SIMPLER WAY? IMPROVE DOCUMENTATION

So, why not simply improve upon documentation techniques to provide more robust information about artworks – even simulated models of work we cannot experience at first hand? For some works that are capable of video capture or lend themselves to simulation, this is a reasonable approach. Video and even simulation can be a potent way to record how the artwork, event, activity or performance appeared and it can record how the audience or participants engaged with the artwork. Despite this, the video document can only be viewed passively and will not provide the viewer with an actual engagement with the artwork. VR panoramas and simulations provide other options for a more spatialized view of the work or setting and one that affords degrees of user-control. Yet while such representations provide a spatial impression they are unlikely to transmit the work's full expressive potential. Many archives supplement such visual documents with other created documents – still images, records of the process of creation, code, scores, scripts, curatorial and other interpretative essays, interviews with audience members or users, even audience or user-generated videos or stills. Scrutinized and taken as a whole, these archive collections yield a powerful grasp of the range and effect of the artwork. Yet they do not (nor in most cases are they meant to) provide anything close to an immediacy of experience – a sense of the eventfulness of the artwork.

When we consider the role of the created documentation of an artwork we must consider the fact that much performative work is only known through its documentation. This is a fact that has troubled performance art for decades. The mediated documentary forms that constitute the record of these artworks raise important questions about authorship, medium and authenticity. Derrida suggests that the document imposes a “stabilizing immobility” that can eclipse the original. ([12] p.50). In this regime, many artworks are re-interpreted through the process of documentation – an extreme example of which is the re-enactment of classic works of performance art by Marina Abramovic in *Seven Easy Pieces*. ([43] p.145-152). Her performance of the work of other artists distorted these works while, at the same time, providing a recording of an embodied reading of those artworks, the originals of which had little or no direct documentation.

Clearly there are substantial benefits to be derived from created documentation. Lizzie Muller's interviews with audience/participants of David Rokeby's *The Giver of Names* amply demonstrates this [34]. Many initiatives and creators have produced multimedia CD-ROM's and DVD's that form a collection of documents related to specific art activities or genres of activity. Among the most laudable of these is the Anarchive project [17], which goes beyond the conventional models of documentation to produce what they describe as original works - individually expressive approaches based on the deeply evolved principles and concepts specific to the artists involved. Hence, the artist/subject is invited in the Anarchive project to experiment with the interface and interactive system of the document/original work to create and (with the help of programmers, art historians, designers and writers) implement a creative expression of their work and interests. This connects to Marcel Duchamp's compulsion to document and archive his own oeuvre in the *Boite en-Valise*, 1934-41, a portable miniature monograph including sixty-nine reproductions of the artist's work

[35]. This also opens up Hal Foster's notion of the artist as archivist; as gatherer, assembler and curator of what already exists as they bring external documents into the orbit of their own work ([18] p.5).

Despite the creativity, even originality, underlying all these documentary initiatives, they are always reflective – a rearview effort that follows on and supplements the so-called original. While these documents are not likely to be confused with the original artworks, it could be argued that in some cases they go so far as to become another iteration of the original. As we all know, in digital terms, the original is very hard to pin down. What they almost invariably fail to do is provide a deep sense of the experience of the artwork itself.

6. THE INEVITABLE: VIDEOGAME PRESERVATION

There is no use pretending that preservation of a videogame is not a problem. The same impediments that exist to preserving all variable media are also there for videogames just as they are there for new media art. As we have stressed earlier in this paper, there has been a great deal of work in the general sphere of variable media preservation and it bears repeating that there are a range of accepted strategies for preservation; each of which is arduous. [39] The University of Texas at Austin is a leader in producing both research in this area and housing archives. This work and other major work in this field is outlined by Megan Winget and Caitlin Murray. [52] Storage is the most direct way of protecting and archiving any and all components of a work that enable it to be viewed or exhibited. That means processors, operating systems, consoles etc. This is an approach taken by the several active videogame archives and museums in existence today. While it is a never ending task that is labour- and space-intensive, storage is a viable way to maintain arcade, console and pc games with no internet component. It is not helpful for videogames that rely on the internet such as massively multiplayer games. Then there are the technical preservation strategies that pertain to viewing new media or videogames. These are: migration or the regular upgrading of equipment or source materials: and emulation at either the system or software level to run obsolete media. These strategies are more applicable to the preservation of videogames and art that uses the internet as a platform or access point. On the level of exhibition and performance a more radical preservation strategy is re-interpretation or the recreation of the work in more contemporary forms or media. As we have seen in the previous sections of this paper, archives are eager to document every aspect of the creation, instantiation and performance of variable media because this really is the most reliable way to ensure that a comprehensive understanding of the work exists when and if the other methods fail. But as we have shown, such information is seldom engaging or makes the work capable of being shared or exhibited.

Our suggestion that artists undertake to create videogame versions of new media artworks is made with a full understanding of the difficulties that continue to exist for the preservation of all variable media. We urge that such works include, at the level of artist and creation, a preservation strategy that can be integrated into the fabric of the project. This alone would be a significant step toward management of the preservation of such a work. However, if the videogame iterations of new media artworks were made in conjunction with or under the auspices of museums or

archives and have the weight of these institutional resources, there would be even greater reason to hope that the work would persist into the future. Yet...there are no guarantees.

7. DISCUSSION

It is not difficult to imagine that some artists want to preserve their new media artworks in some form rather than leave them to be interpreted through documentation. In order to do this, the immediacy of the experience central to the performed or participatory artwork (especially where the artwork is ephemeral and/or cannot be reconstituted) must be generated. A new version of the artwork that re-interprets or re-presents the creative impetus of the original artwork; where the artist herself is capable of being virtually entered and experienced; and that could persist over time would, of necessity, be understood as another expression of the artist's concept rather than a copy of the lived artwork. The conventions and tools of the videogame are a way to create such an artwork in terms of complex computer-mediate user experience. We do not, for the purposes of this article, propose a particular genre of game or system of affordances. Neither will we outline specifics of game design and mechanics that could be applied to artworks. Coming from the domain of fine arts, we are interested in mobilizing the concepts of simulation, immersion, interface, interaction, artificial intelligence, user-control, agency, narrative, play, discovery and experimentation that are instantiated in videogames. We anticipate that the current and emerging methodologies for interactivity (sensing, interfaces, databases, expanded artificial intelligence systems, logic engines, physics engines) can be productively deployed in both conventional and novel ways to projects and contents aligned with art.

This approach will not be a solution for all artists or for all projects. Such an approach will require artists to expand their process of creation outside their discipline (even outside their creative frame of reference) to include collaboration with videogame designers and developers. This will be a natural progression for artists such as David Hoffos (<http://davidhoffos.com>) or Janet Cardiff (<http://www.cardiffmiller.com>) whose work directly engages participants in imagined worlds and who already depend of the creative and technical abilities of others to realize their work. But for some artists, used to a more self-contained model of creation and authorship, necessary adjustments will have to be made. It will be incumbent on the artist to evaluate the benefits and demerits of employing this complex, collaborative and synthesizing medium for their artwork. We envisage the videogame medium as a valuable option for projects such as elaborate or immersive installations, performances or extended events, which are framed in time and space so that they are difficult to capture; works that are ephemeral and do not persist beyond the performance or event; works that are hybrids of the live and digital and can benefit from being integrated into one platform.

To assist us in evaluating the strengths and weakness of using videogame methods and technology to create new or extend existing artworks, we have identified a series of issues that should be considered especially, as they apply to any given concept or aims in an artwork. To do this we are in essence comparing the live presentation of an artwork or event to a virtualized, newly

mediated iteration. We will try to use examples where possible to concretize our discussion.

7.1 Imitation and Re-presentation

It would be easy to interpret our proposal as suggesting that live artworks be imitated or somehow copied in a simulation. We do not advocate this approach, but rather hope to see artworks either created as a new iteration or version of the live work. This can be articulated as re-presentation - acknowledging the way a new version of an older work enables the presentation of the artist's ideas again in a new mode. It also references representation - not in the sense of image or likeness - but instead as Stuart Hall defines it; "the channel through which meaning production happens." [23] We see this structuralist approach to representation as useful for the way it casts meaning as something that is produced by participants in culture; something that is not stable or true. Hence a re-presentation of a performance, event or activity in a videogame mode, would not attempt to simply imitate the first instance of an artwork but rather it would generate a new iteration to engage participants in the interactive production of meaning.

The re-presentation of a new media artwork using videogame technology must constitute an original artwork or at the least a new version of the artwork that contains the essential characteristics of the original live artwork while not seeking to imitate it. The new artwork must be consistent as an expression with the fundamental properties and capacities of the medium. In this context, a transposition of concepts and ideas from the live artwork to a new medium will inevitably necessitate change and transformation and therefore produce a distinct version of the artwork. Few artists would be interested or willing to simply translate live work to a virtual stage. The tradition in the visual arts of faithfulness to the medium is evidenced in printmaking where an artist is loath to reproduce a painting as a print when the medium of lithography, silkscreen or etching affords so many new opportunities for expression.

7.2 Experience

Before it may be argued that an experience of an artwork can be approximated by a videogame, a greater understanding of the nature of experience is needed. This is a big topic and one that is addressed in a very useful way in the work of John Dewey. In *Art as Experience*, Dewey says: "There are conditions to be met without which an experience cannot come to be... every experience is the result of interaction between a live creature and some aspect of the world in which he lives" ([13] p.45). It does not really matter, in Dewey's estimation, if the interaction is between a person and a machine - the experience still has patterns and structure in relationships as well as actions and consequences joined in perception. Videogames, like art, are no more or less inside the world in which we live. Moreover, videogames, even videogames as artworks, can clearly deliver highly complex and affective situations and occurrences within which to engage. The agency of the player in choosing actions that respond to and influence the system's behaviour is something that game designers and developers are expert in building and for which game engines, in ever increasing levels of sophistication, are designed.

As we go further down this road of comparing the experience of an artwork to a videogame, it is useful to keep in mind an observation made by Dewey, that: "The scope and content of the

relations measure the significant content of an experience" ([13] p.46). So, we must look to the intensity of the experience that may be affected by background knowledge and skill, past experience, flow of perception and feedback (doing and receiving in Dewey's terms). Affective videogames and other forms of interactive media build upon users' knowledge and previous experience and supply information or context where such may be necessary for satisfying play. Consider cutscenes and backstories supplied in videogames to bridge knowledge and action. Similarly, a successful videogame or virtual world facilitates perception - particularly in the representation of space and even place - wherein immersion in a spatialized milieu benefits from 600 years of development in theory and practice of illusionistic representation (at least in the tradition of Western art). The videogame users' experience of space is, in fact, far less limited than it is in a live experience where we cannot fly or adjust our point of view to satisfy our whim or curiosity.

In further solidifying the case for art (and by extension videogames) as experience, Dewey argues that experience is dependent on active reception and involves surrender. He considers perception to be a "going out of energy in order to receive" ([13] p.55) and suggests that the "beholder must create his own experience. His creation must include relations comparable to those that the original producer underwent...with the perceiver, as with the artist, there must be an ordering of elements of the whole that is in form, although not in details, the same as the process of organization the creator of the work consciously experienced. Without an act of recreation the object is not perceived as a work of art" ([13] p.56). It is not hard to imagine how a videogame model, where a high degree of agency, roleplay, strategy and exploration determine outcomes, could offer opportunities for creation of authentic experience. Moreover, the provision in videogames of creation and modification tools with which to personalize characters, avatars and environments and the availability of game engines to modify the system of the game itself, have and will allow participants the capacity to literally build their own experience. It is more than conceivable that artists would find the sharing of creation a compelling option. Consider Rirkrit Tiravanija, whose artwork is fundamentally a situation or event. Interested in sustenance and the shared economy, he reorganized a gallery into a temporary kitchen in which he cooks and chats with visitors. The core of this work is the experience of the sensorium and social relations: "it is not what you see that is important but what takes place between people", Tiravanija explains. "It is not about looking at art. It is about being in the space, participating in an activity. The nature of a patron's visit to the gallery has shifted from emphasis on looking at artworks to experiencing the gallery as a space for social interaction. The transfer of such activities as cooking, eating or sleeping into the realm of the exhibition space puts visitors into very intimate if unexpected contact; the displacement creates an acute awareness of the notion of public and private, the installations function like scientific experiments: the displacement becomes a tool and exposes the way scientific thought processes are constructed. The visitor becomes a participant in that experiment" [46]. This work constitutes space of possibilities. Surely in a game model we can transpose gallery or exhibition space into virtual space and enable complex social interaction, the combination of which can be as disruptive of our own objectivity and enplaced expectations as a lived experience.

7.3 Interaction: Toward a Collaborative Approach

We will not be the first to point out that "interaction" has become an overused and generalized term, making it difficult to understand just what is meant when a work is described as being "interactive". Some academics are content to define interaction as the "process of action and reaction between already existing bodies and objects" ([6] p.4). If we accept this definition as adequate, then most CD-ROMs are interactive. Joke Brouwer and Arjen Mulder, however, do not see this definition of interaction as sufficient. They believe that interaction should not only include action and reaction, but must also cause "bodies and objects to change and variation to arise. Interaction is not a deformation of existing forms, but rather an addition of information, an informing" ([6] p.4).

Compared with Brouwer and Mulder, Steve Dixon provides a related but more comprehensive understanding of interaction, specifically interaction in performed digital media art [15]. Dixon divides interactivity into four levels, from the least to the most interactive. The level of interaction in an artwork is no indication of the aesthetic quality of the art under investigation, but is a useful tool to determine the nature of the relation of the audience/participant to the artwork ([15] p.564). These levels are nearly self-explanatory: navigation (level one, where the user guides themselves through different pre-programmed narratives or activities), participation (level two, where the user has some ability to shape the media they are interacting with), conversation (level three, where the user and the media take part in a dialogue) and collaboration (level four, where the user collaborates with the media to make something new) ([15] p.563-4, 566, 579, 584, 594). Artworks may belong to multiple levels at once, or, to different levels at different times. For example, Dixon characterizes CD-ROMs as being "quintessentially navigational" but explains that some CD-ROMs, such as Laurie Anderson's *Puppet Motel*, are participatory as well due to their high use of creative activities ([15] p.565).

Though videogames have been called the "most truly interactive digital applications" due to their immediacy, Dixon assigns most single user games to the level one participation category. He does not consider them conversational since "although a type of dialogue is clearly going on between the gamer and the program, the software rarely offers real flexibility to the dialogue" ([15] p.565). Games become conversational when multiple people play them at once, but rarely ever do games become collaborative since "game worlds tend not be flexible enough to admit genuinely new ideas" ([15] p.565). We believe that using videogames for new iterations of artworks will stretch their interaction capabilities. By seeking to recreate artworks in a videogame environment, artists in concert with game designers will be pressed to discover and experiment with ways that the nature of videogaming itself can be more collaborative: how can the interface better accommodate the user's desires? Is there anything that the user is prevented from collaborating on in the game that they can collaborate on in real life? How may this be remedied? *Desert Rain (1999-2003)*, an interactive play based on the first gulf war by the performance group Blast Theory, is a good example of a collaborative new media artwork that can be translated into videogame form [11]. *Desert Rain* began as an installation and performance. In it, six players/ audience members are each given a picture of someone they are supposed to kill (their targets). Next, the players enter

separate cubicles with three walls on each side. All of the cubicles share a fourth wall, which is a sheet of water, where VR images and avatars of the participant's are projected. Communicating with each other and actors on headset, the players must work together to navigate through the virtual world of deserts and bunkers to destroy their targets. As translated into an online videogame, people participate and communicate with text instead of headsets. Though the relationship between the players and the software of the game may not be collaborative, the relationship between the players themselves is collaborative as they map out different routes to complete their tasks.

7.4 Aliveness

Brian Massumi, building on the theories of Alfred Whitehead, comments on the subtle and dynamic relationship in lived experience and art that operates between the poles of qualitative thinking-feeling, presentationally immediate experience and the more instrumental, object-oriented action-reaction form of experience ([31] p.74-75). He suggests that in interactive art, a greater aliveness or vitality effect is achieved where effective causality is in balance with, perhaps even subordinated to, the presentational immediacy. It is his claim that the flow of action creates a sense of stability (even where it is two-way) and its attendant affordances overwhelm the qualitative relational aspects of possible interactions. "That's why you so often hear the comment from participants (of interactive art) that it feels like a video game...this is the trap that is automatically laid for it" ([31] p.75). Massumi goes on to suggest that interactive art must look to suspend and even disrupt causal action-reaction chains and explore semblance, self-consciousness and self-abstraction. Such ambiguities are naturally best suited to situation and event supported by open interactions that expose their relational potentials ([31] p.78).

Take, for instance, Rafael Lozano-Hemmer's notion of relational architecture (what Massumi prefers to call "technically staged aesthetic events), that for him emanate a lived quality to predictable affect ([31] p.90). Lozano-Hemmer's artwork *Body Movies, Relational Architecture #6 (2001)* presented in the Schouwburgplein, Rotterdam [29] presented large-scale projected portraits of citizens on the walls of buildings surrounding the plaza. These images could not actually be seen by participants until nighttime when lighting in the park enabled visitors to cast shadows that revealed the presence of the projections. This public artwork stimulated a wide range of playful and surprising interactions and collaborations between the participants themselves and between the participants and the projected images. The artwork created real and virtual bonds between people. It became a kind of situated play of cover and release where visitors changed the artwork and the artwork changed them. Would an art project like this be any less alive if it were played in a MMORPG?

7.5 The Virtual

It is becoming more accepted that the separation between the "real" and the "virtual" is not clearly demarcated. Brian Massumi describes seeing as action appearing as potential, so all visual perception is "virtual". He goes on to explain "We never just register what's actually in front of our eyes. With every sight we see imperceptible qualities, we abstractly see potential, we implicitly see a life dynamic, we virtually live relation" ([31] p.74). If we see an iron sculpture - even a representation of one -

in front of us, we simultaneously sense the coolness and texture of the iron, though we have not ascertained that the sculpture is cool or have knowledge of the iron's texture. The real and the virtual are constantly happening at once. It is not our intent to use this philosophical argument on perception as a "get out of jail free card". We are not going to contend that building an iteration of an artwork as an immersive virtual world will not lessen its authenticity because during perception, reality and the virtual are always wedded anyway. With an understanding of perception as constituting an ongoing relationship between the real and the virtual, we posit that our proposal to use videogame simulations for new iterations of artworks may generate productive challenges to the nature of the relationship between the real and the virtual.

Tamiko Theil is a new media artist with concerns similar to ours. She queries "How can a virtual reality representation of an actual site compete with the richness of actually "being there"? If a site no longer exists, how can a simulation "bring the stones to speak," imbuing empty form with an aura evocative of the fascination of the original?" ([49] p.153). Thiel answers her own questions by constructing immersive virtual environments of locations such as the Berlin Wall or the Manzanar Internment Camp in Eastern California. She believes these simulated environments can give users experiences that approximate what they would feel actually being in Berlin or Manzanar. This is not accomplished, or accomplished only because of, the calibre of the technology Thiel uses, but due to the layers of meaning (cultural, social, and political) that are woven into the environments. It is the interactions the user has with the "genius loci of the site", and not the impressiveness of virtual equipment, which make her work affective ([49] p.153).

Like Thiel, we anticipate that simulation in videogame applied to the sites in particular new media artworks will capture not just appearance of reality, but will be capable of constructing an environment as a situation within which interactions can unfold. Though an artwork in complete virtual submersion cannot be a precise duplicate of the same work in reality, this does not erode the virtual work's capacity for creating valuable experiences. It is the audience/ participant, who complete - even influence - the shape of the artwork through their relationship to it. This fact cannot be any less significant if the artwork exists virtually or in real space and time.

7.6 Content, Variability and Authorship

We have already commented on the limitations of merely translating a new media artwork to a videogame. The content of artworks, be they performances, installations or events, are not so easy to pin down and transpose. Many contemporary artworks might better be described as a set of variable but essential characteristics rather than a specific authorial content. Definable content might be possible for a scripted play or piece of music. But, for a work that depends on the agency of participants, neither content nor meaning is stable or predictable. Work in new media and relational artworks are inevitably highly variable and open to continuous change, exchange and collective diversity. It is really up to the artist to identify and seek to implement the most effective means to create the type(s) of situation or behaviour within which they wish to situate their concepts. This attitude to creative outcomes is manifest in interactive installation artworks like *The Seeker*, by Leon Cmielewski and Josephine Starrs

exhibited in Cyberarts 2007 ([28] p.166-9). This work projects three types of data based on inputs from visitors and databases. These enable people to track and visualize in maps, diagrams and satellite imagery, their personal family migration. The projections that are thusly generated compare the trajectories of individuals and cultures using contributed and harvested data. The visual results as the work evolves in live performance are constantly changing; revealing dynamic connections related to personal, political and global displacement. Cmielewski and Starrs have not so much created content as they have produced a framework or instrument for the creation of visual information. We have come a long way since Roland Barthes declared the *Death of the Author* and we cannot underestimate the liberating effect it has had on contemporary art practice [5]. Despite the highly participatory nature of videogames, this open and provisional approach to content is not shared by game producers. The content of most entertainment videogames, with all their affordances, controllers, and immersive components are rigidly determined by the producer. This is especially true for the many videogames that are franchises that depend on their brand identity and the conventional tropes of game genre, narrative and play for their livelihood. So, while we often do not know the author of a videogame we can make no mistake as to the studio or publisher ([48] p. 164-6).

7.7 Challenging Instrumentality

Many critics have faulted interactive media and especially videogames for being driven by technology and the leaden reasoning of late capitalism; for making works that are a demonstration of technological and instrumental forces, rather than artistic or creative potentials. It is easy for artists who are trained to master tools with which to express themselves to become captivated by the technology of the medium itself and let it dictate the nature of the work. Here, the distinction between presentational knowledge and discursive knowledge may be an interesting way to look at this problem ([33] p.58). Presentational knowledge is, in this dichotomy, intuitive, instinctive and somatic. It is ineffable. Discursive knowledge, in contrast, can be fully articulated in language, analyzed and legitimized is philosophy and science. Whether interactive or not, "art contains other insights than cannot be expressed solely through logical reasoning" ([33] p.58). This presentational layer can distinguish art from information, entertainment or craft. Where technology for its own sake or the instrumentality it represents is foregrounded, the poetry of an artwork is genuinely diminished. Notwithstanding the many ways that artists have used technology to challenge the hegemony of reason and to create affective works of art, we have all seen far too many artworks that sag under the weight of the discursive. And, it is hard to argue that videogames are not captive of the toolmakers - of techno-wizardry; and that their content and gameplay are not driven by an economic imperative. We do not see the predominately fantasy and escapist themes that make videogames so successful in the marketplace as something that is intrinsic to the medium. Artists collaborating with videogame designers and developers will undoubtedly contribute to an expansion of the expressive dimensions of this medium so currently captive of market imperatives.

Videogame developers and publishers are competing to be on the leading edge of advancements in the realism, speed and spectacle of graphic display and the latest user interface or controller. Interestingly, we see in videogames that innovative technology

breakthroughs like the Wii or music instruments that facilitate embodied engagement, follow the time-honoured use of metaphor that links them to already existing common tools or situations. So, the Wii is like a tennis racket or golf club. *Guitar Hero's* embodied interface imitates the performance of a guitar-playing rock star. There is not much surprise here. The technology provides the excitement and the game is yet another predictable window or reflection. Fans and game bloggers are eager for more substantive surprises and authentically creative products. "Audiences constantly demand video games fight familiar boundaries" says Leigh Alexander in the online game magazine Kotaku.. [3] Yet he points out that games that deliver "art and legitimacy" do not penetrate the market. In the art world it is another story. Artists, whose professional currency lies in their willingness and ability to challenge conventions and disrupt deeply held assumptions and expectations, have no choice but to be the shock troops capable of breaking through the lines of demarcation so firmly entrenched in the videogame industry. Given the extremely limiting economic models that drive the videogame industry it is hard for insiders to break out of the prison house of game development so strictly enforced by the marketplace ([2] p.260). There is a stalwart cadre of independent game developers who struggle to innovate. They are severely limited in what they can accomplish within the constraints of genres, consumer expectations and the economic model. Yet in projects like *Escape from Woomera* and *acmipark*, indie developers Julian Oliver and "Kipper" are going out on a limb to produce transgressive games that verge on artworks ([48] p.178-9). Within the industry, Valve Software, creators of *Half-Life*, have recognized the desire among fans and emerging developers to participate in the creative process by making game assets and even new games. Therefore mod tools and software developer kits are made available. Famously, it was these tools that made the indie game *Counter-Strike* possible. It has proved to be an encouraging model of mainstream success for indie game developers - though one that is hard to repeat. The fan-based phenomenon of machinima and mods defines a lively and creative culture of counter-gaming that seeks to infuse games with new meaning unintended by their commercial developers. Having seen the mod *Counter-Strike* emerge as a mainstream franchise of its own, it is worth noting the counterpoint of *Velvet-Strike (2002)* - a collection of anti-war spray paints that graffiti gamers can use on the walls, ceiling and floor in *Counter-Strike* ([50 p.11]). However, when artists get their hands on game development tools and/or collaborate with game designers, we see creative expressions that offer up new poetics, critiques or rejections: the dominant assumptions of progress and technology. The art game *Passages 2007* by Jason Rohrer is an example of an artwork that affectively engages human values and the inevitability of death with bottom-feeding technology [42]. The game allows players to experience an entire simulated lifetime in 8 bit graphics, from marriage to rickety old age. Rohrer, in this and other games, uses an extreme economy of means to enable conceptually sophisticated discoveries.

7.8 Barriers to Entry

There are a lot of reasons why artists would not want to re-present or create a new version of an artwork using videogame models and methods. But, ruling out the obvious lack of interest in the medium or lack of relevance the medium might have to the artist's practice, there are some not insignificant roadblocks to be overcome. These roadblocks are considerably greater for artists

whose concepts or process are not already engaging with technology-based media. Artists who use various new media will already be familiar with and understand many of the exigencies of working with tools and concepts that are constantly challenging their abilities and established knowledge. Hence they will know that adapting their practice to a new medium as demanding as videogames will be both daunting and exhilarating.

While we have already acknowledged the death of the author in art, this does not mean that visual artists are not accustomed to being the captains of their own ship. We must also point to the theatre model in which companies of artists work toward a common artistic goal typically interpreted by a director. Nevertheless, some individual artists may chafe at the need for common, shared or otherwise distributed ownership that arises in collaborative creation of complex multidisciplinary projects such as videogames that require designers, programmers, asset creators, animators, videographers, writers, researchers and more. This said, many artists, especially those that are fully engaged in new media practices, have found successful ways to assist each other and even fully collaborate. Many artists barter with others for technical expertise. Others plan the budgets for their artworks to include the expense of programmers, lighting or audio designers. A number of artists including those in performance genres define their practice around collaboration and move freely in and out of collaborative ventures. An example that comes to mind in visual arts is Phillippe Perrano and Pierre Huyghe who have collaborated on many occasions including *No Ghost Just a Shell* [25]. For this project they acquired the copyright and original image for a manga figure called Annlee, which they subsequently offered free of charge to a series of artists for their use in their artworks. They also produced and shared video animation of Annlee. Each of the projects realized with Annlee was considered a "chapter in the history of a sign" and has a life both within the individual artists' activities and within the joint collaboration between Perrano and Huyghe [25].

Yet the willingness of new media and performance artists to collaborate, trade and share toward the production of an artwork from which they may or may not see any economic return, does not necessarily translate into the eager partnership of game designers and developers, character and scene animators and others involved in the mechanics and dynamics of videogames to sign on to such artist-generated projects. Most people with simulation and videogame development capabilities are likely to be able to earn a good living in the videogame industry with their skills and are therefore going to be reluctant to collaborate on an experimental or speculative project. The result is that artists will be challenged to find the range of skilled technicians needed to carry out game-based projects. Fortunately we see many young people developing diverse skills, including programming, new media production and design, in fine arts-based undergraduate and graduate university and college programs. These along with intrepid indie game designers will be the pool of talent from which artists will build the capacities for game production.

Such discussions inevitably lead to matters of cost and the economics of simulation and videogame development. Pure simulation projects and the talent that supports them generally gravitate around visualization studios that work on contract for clients requiring models for various forms of analysis. These are fee-for-service projects where the cost of services can range dramatically depending on the scope of work. Mainstream

entertainment-based videogame projects – especially independent ones - often coalesce around individuals who collaborate on a shared concept. Next-generation console game projects can cost millions to produce and take several years to complete. They require entrepreneurial sophistication and large-scale financial backing and are almost exclusively controlled by large publishers such as Microsoft or Sony. These projects and other smaller scale PC or casual games must satisfy investors, pay staff and successfully find an audience in the entertainment market to enable them to turn a profit and continue making videogames. Projects such as we envisage that will emerge from artists' desire to create videogame versions of live artworks and will range in scale and complexity from simple Flash games to sophisticated virtual worlds within which a relatively rich dynamic of human agency and interaction can take place. Other projects may include hybrids with mixed realities, mobile technology or telepresence. Such projects will need to be well and competently mapped out in industry standard design documents that enable creators to accurately predict costs and timelines that can far exceed the normal thrifty budgets of live projects. For theatre artists this will not be so much of a challenge as it may be for visual artists. Still, the matter of where the money comes from and what strings are attached represent huge issues.

8. CONCLUSIONS

In the coming year, we hope to seed and facilitate creative experimentation and a search, in partnership with artists, theorists and game professionals, for best practices in this hybrid domain. It is only realistic, in our estimation, that such experiments a) be supported through cultural and arts funding; b) effectively link into the creative capacities of the videogame development community; c) build a strategy for preservation and accessibility into the project; and d) protect each project's need to test new, sometimes untried options and genuinely take risks. We intend to make the case to as broad a range of Canadian and other arts and media funding agencies as possible for support of research-in-praxis, facilities, equipment, and multidisciplinary collaborations to enable artists to work with other creators and technicians to prototype projects that will result in complex videogame artworks. We would also hope to generate authentic ties with the videogame industry, especially independent videogame developers who may be eager to expand the conceptual, aesthetic and functional vocabularies of their field in collaboration with artists. Similarly, we will seek to form links to artists already working in areas related to videogames so as to build upon the advances currently emerging. And, we will also be interested in forming relationships with other relevant initiatives in the artist-run culture, museums, new media incubators and wherever else they may exist. With respect to the need for experimentation, we are not blind to the fact that such enterprises can get messy. It will be an ongoing challenge to structure and manage projects so that they can take necessary risks while, at the same time, remain focused on real outcomes.

Finally, while the videogame field is dominated by entertainment-oriented products that generally play it safe with their brands and cater to spectacle and fantasy, it also provides space for serious and persuasive games that are enriching our understanding of domains like history and education. This use of videogames in fields outside entertainment engages not only entrepreneurial projects but also projects for research. So, videogame designers and developers will increasingly find opportunities to produce

outside the confines of hot entertainment titles. This is a medium for the expression of ideas that cannot be easily pigeon-holed. While the aesthetics of the medium may be defined, for some, by clever gamic perspective; speed; and spectacle, ([50] p.5) the medium itself does not lack for creative mojo nor the potential to creatively shift cultural paradigms. For Joost van Dreunen videogames imply "a sweeping reconfiguration of the relations between an observing subject and modes of representation that effectively nullifies most of the culturally established meanings of the observer and representation" ([50] p.6). Therefore many see videogames as leading a transformation in the way we communicate and express ourselves. Videogames produce a genuinely novel exchange between designer and player and, on a more abstract level, producer and receiver; sender and reader. James Gee suggests that playing a game is closer to "living inside a symphony than reading a book or watching a movie" [21]. Like the new media art practices we have described, videogames are active, interpretative, social and relational. Lev Manovich says that videogames have a deeply creative dimension represented in a 'cultural layer' that may not be evident in code but is apparent in interface and experience in such a way that "we are no longer interfacing to a computer but to a culture encoded in digital form" ([30] p.70).

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10. NOTES

¹ Many initiatives to preserve and make accessible records related to new media artworks have been undertaken over the past decade by museums and archives in acknowledgement of the fragile state of our shared digital cultural heritage and as a result of the urgent call from United Nations Educational, Scientific and Cultural Organization (UNESCO) resulting in the 2003 Charter on the Preservation of Digital Heritage. The surge in the development of preservation strategies and practices has largely followed the needs and protocols of conservators, curators, librarians, archivists and others whose job it is to maintain and preserve digital cultural heritage. These initiatives, many of which are supported by the Daniel Langlois Foundation, have generated valuable methodologies for description and documentation of new media artifacts (Capturing Unstable Media Conceptual Model – CCM and Anarchive - Digital Archives on Contemporary Art); for development of theory and practice related to mapping multiple options, strategy and tools for preservation (Creative Archiving at Michigan & Leeds – CAMiLEON, The Variable Media Network, Documentation et Conservation du Patrimoine des Arts Mediatiques - DOCAM, Cultural, Artistic and Scientific Knowledge for Preservation, Access and Retrieval - CASPAR, Investigating the Significant Properties of Electronic Content Over Time - InterPARES, International Network for the Conservation of Contemporary Art - INCCA and Digital Preservation Europe - DPE); for defining essential characteristics (Investigating the Significant Properties of Electronic Content Over Time INSPECT); for examining the role of artists' intentions (Variable Media Network); for developing methodologies in information retrieval (Coordinated Approach to the European Effort on Audio-visual Search Engines – CHORUS), including notation

systems (Media Art Notation System MANS) and ontological structures for databases that include the artwork's components, installation specifications, iterations, collaborators, commentaries etc. (Single Point of Access Semantic Media Repository Framework SAMY); for internet archives of new media art (Open Museum, Digital Performance Archive, Rhizome ArtBase, Database of Virtual Art and Ars Electronica Gateway to the Archives of Media Art: GAMA); and for systems for sharing of internet archives (Open Archiving System with Internet Sharing OASIS).

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