

Real|Unreal: Crafting Actuality in the Documentary Videogame

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A Thesis
In the
Doctoral Humanities Program

Presented in Partial Fulfillment of the Requirements
at Concordia University
Montreal, Quebec,
Canada

CONCORDIA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

This is to certify that the thesis prepared

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Entitled: Real|Unreal: Crafting Actuality in the Documentary Videogame

and submitted in partial fulfillment of the requirements for the degree of

Ph.D. Humanities (Arts & Science)

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Abstract

Real|Unreal: Crafting Actuality in the Documentary Videogame

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Real|Unreal examines the emerging phenomenon of documentary videogames—specifically, how gamemakers might craft a stronger understanding of actuality in these works. To do so, gamemakers must first find ways of reclaiming indexicality within a digital medium, and second understand how games work as expressive, meaning-making frames. Using a framework based on theoretical work primarily drawn from documentary and game studies, *Real|Unreal* presents an analysis of three documentary videogames that pick up key aspects of the indexical/expressive relationship: *JFK Reloaded*, which uses an algorithm as the indexical grounding in a re-engagement of a well-known archive; games in the commercial *Brothers in Arms* series which, by juxtaposing extensive archival and making-of documentation with third-person gameplay, create a phenomenological shift in which we view the later as-real; and *Escape from Woomera*, which enables an experience-centered performative inquiry within a re-created environment. In conjunction with these three analytic case studies, it presents a fourth practice-based case consisting of topical design sketches within the context of an original documentary videogame, with a goal of moving beyond known methods and exposing practical challenges of documentary game creation. By interweaving framework, analysis and creation, *Real|Unreal* gives documentary videogame creators the theoretical, analytic, creative and pragmatic support needed to further exploration of the genre.

Table of Contents

LIST OF FIGURES.....	VIII
01 INTRODUCTION	1
01.1 What is a documentary?	3
<i>Why videogame documentary?</i>	<i>6</i>
01.2 Interactive documentary.....	9
<i>Games and non-fiction interactive art.....</i>	<i>13</i>
<i>A brief history of documentary videogames.....</i>	<i>15</i>
01.3 Theorizing documentary games.....	20
01.4 Methodology	24
<i>General outline.....</i>	<i>24</i>
<i>Justification of practice based research</i>	<i>25</i>
<i>Action case method.....</i>	<i>27</i>
<i>Reflective practice as a supporting method.....</i>	<i>28</i>
<i>Adapting action case methods to practice-based arts research.....</i>	<i>29</i>
<i>Relationship between design experiments and case studies.....</i>	<i>29</i>
01.5 Practice overview.....	30

<i>Overview of the Grime container project.....</i>	<i>30</i>
<i>Outline of the design experiments.....</i>	<i>30</i>
<i>Evaluation criteria for practice.....</i>	<i>32</i>
02 DOCUMENTARY VIDEOGAMES, REAL AND TRUE.....	33
<i>Game form and artifice.....</i>	<i>40</i>
02.1 The indexicality gap.....	41
<i>Indexicality and the problem of the digital.....</i>	<i>44</i>
<i>Edges of indexicality.....</i>	<i>48</i>
<i>Crafting indexicality in digital media.....</i>	<i>51</i>
<i>Indexicality and expressive framing as pre-conditions for documentary videogames.....</i>	<i>57</i>
03 GAMES AND THE REAL.....	59
03.1 The tenuous actuality of rules.....	60
03.2 Games and “real” action.....	72
<i>Exploring specific cases.....</i>	<i>77</i>
04 EXAMINING INDEXICALITY IN JFK RELOADED.....	79
04.1 Simulations as index and expressive frame.....	81
<i>Actualizing algorithms.....</i>	<i>83</i>

<i>Framing the situation</i>	85
04.2 Use of analog indexicality	87
04.3 Challenges in game design.....	89
04.4 Indexical design sketches	94
<i>Sketches: Integrating Media</i>	95
<i>Sketches: Playing with Data</i>	98
05 PHENOMENOLOGICAL SHIFT IN <i>BROTHERS IN ARMS</i>	103
05.1 As-real: the phenomenological shift.....	109
<i>Familiar faces: juxtaposition and shift in Brothers in Arms</i>	114
05.2 Design sketches for phenomenological shift.....	118
<i>Sketches: Becoming Real</i>	119
<i>Sketch: Rotoscoping</i>	122
06 <i>ESCAPE FROM WOOMERA</i>: PERFORMATIVE INQUIRY AND THE SUBLIME	125
06.1 Really there?: longing for transparency	128
06.2 Re-creation and enaction	132
<i>The ludic (re) enactor: re-creation as performative inquiry</i>	136

06.3 Documentary as sublime third space	140
<i>There is no way to escape: return to Woomera</i>	142
06.4 Performative inquiry design sketches	146
<i>Sketches: Using touch to vivify content</i>	147
07 CONCLUSION	152
<i>Index, Shift, Perform: revisited</i>	152
<i>Real Unreal: A Summary</i>	155
07.1 Final reflections on design sketches for documentary videogames	157
07.2 The future of documentary videogames	160
REFERENCES	164
APPENDIX A: DOCUMENTARY VIDEOGAME LIST	174
APPENDIX B: DESIGN DOCUMENT (<i>GRIME</i>)	176
APPENDIX C: PRODUCTION CREDITS (<i>GRIME</i>)	180

List of Figures

<i>Figure 1: Design Experiment; Initial Approaches and Examples.....</i>	<i>32</i>
<i>Figure 2: This study positions documentary games as the interrelation of an indexical claim and expressive framing.</i>	<i>34</i>
<i>Figure 3: Initial experiment in creating a photographic interactive environment in a 3D engine.</i>	<i>95</i>
<i>Figure 4: Initial collaged environment design (with photo).....</i>	<i>96</i>
<i>Figure 5: Photos presented for discovery under the introductory grime layer. The first two images are used poetically to recall moments of grimewriting experience. The last one is from Moose's practice. The images have been altered in saturation and colour balance to better blend with the 3D modeled grime surface.....</i>	<i>96</i>
<i>Figure 6: Interview integrated directly into the "narrative space" of the game environment (rather than presenting media in a window).</i>	<i>97</i>
<i>Figure 7: Alternate character subjectivities for data representation. Motion video available at http://vimeo.com/25639859 (password docgames) and on the companion DVD.....</i>	<i>99</i>
<i>Figure 8: Processing data during the visualization process.</i>	<i>101</i>
<i>Figure 9: Street view: various stages of the "regriming" process, over time.....</i>	<i>101</i>
<i>Figure 10: Environmental (air quality) data reinterpreted as a "regriming" process. The link manifests as more argumentative than indexical.....</i>	<i>102</i>
<i>Figure 11: Video of the transition can be viewed at http://vimeo.com/5352070 (password docgames) and on the companion DVD.....</i>	<i>119</i>
<i>Figure 12: Early version: fade-to-real, incorporating text, a camera icon, and a button linking to a clearer version of the photo set.</i>	<i>120</i>

Figure 13: Final version. Create three "mutant mickeys" and a photo appears of the actual design. More information can be accessed (if desired) via the game inventory..... 121

Figure 14: Stills from rotoscoped Moose interview, tunnel. Original source: AgIdeas (used with permission)..... 122

Figure 15: Rotoscope in context 123

Figure 16: Integrated character test, 3D + 2D rotoscoping..... 124

Figure 17: The introduction presents a more freeform, paidia style of interaction, to maintain focus on the touch gesture itself..... 148

Figure 18: Powerwashing on wall..... 150

01 Introduction

We are at a turning point in the development of the videogame as a cultural and expressive form. Commercial game companies that have perpetuated the creation of a homogenous, single-audience game market, driven exclusively by an entertainment imperative, have begun to recognize the limits of this model: the point at which their growth cannot be sustained by more of the same. At the same time, regulators (particularly in the United States) have become increasingly vocal about what they see as sex, violence, and “inappropriate” content allowed to run rampant in videogames (McCullagh, Hamilton). Change is further fueled by the rise of independent gamemakers, who by disseminating their works at festivals, exhibitions, and online, fill in perceived gaps in innovative content and game play. Events such as the Independent Games Festival (IGF), Indiecade, and SXSW Screenburn serve to increase exposure for videogames outside of commercial distribution channels, and create an environment conducive to exploring new approaches and genres.

Real/Unreal examines one such genre—the emerging phenomenon of documentary videogames. Specifically, it investigates how gamemakers might craft a stronger understanding of actuality (a perception that such games represent actual people, places, events, and/or processes) in these works. In doing so it explores formal, artistic, and socio-cultural implications of designing videogames with non-fiction contents and contexts.

A videogame combines a powerful form for designed interactive experience (a game), with a rapidly evolving and highly mutable medium (computational multimedia). We can assess the documentary quality of videogames using similar criteria to other documentary forms, as long as we understand what those criteria are, and what it means to be a documentary. With few exceptions, a documentary is an expressive framing of indexical documents, which plays off the connection created between the viewer and the world. It is a mode of representation with its own unique materiality, history, theory, and conventions of practice.

There is no reason this tradition can't be extended into videogame creation, but there are certainly challenges. The first test for documentary videogames is to address what it means to document, within a digital medium still making sense of its relationship to the material and historical world. In particular, digital technologies challenge traditional notions of indexicality (a mode of representation that mandates contiguity between referent and sign) that underpin the documentary form. Secondly, we need to better understand how games serve as expressive, meaning-making frames, not only so we can understand how our games will create documentary experiences, but why we might want to.

This research aims to identify strategies for crafting actuality in videogames—strategies documentary gamemakers need to make strong arguments for the documentary nature of their games. These techniques include strengthening indexical bonds between game elements and their real world referents, prompting a

phenomenological shift, such that players treat otherwise non-indexical material as indexical (a popular technique in documentary animation), and/or embedding players in a performative inquiry. These strategies allow gamemakers to create games that are recognized as both representing the actual, and doing so in a manner clearly understood as documentary.

01.1 What is a documentary?

Part of the trouble in conceptualizing a documentary mode within games is that documentary itself is a fuzzy category that defies fixed definition—in fact debates over the documentary status of animation, reality TV, and certain films are common. Critic and filmmaker John Grierson was the first to plant a flag claiming the genre, defining it as “the creative treatment of actuality” (13). Documentary critics and theorists have noted the inherent paradox in this definition—questioning, to paraphrase Brian Winston (*Claiming* 11), what *actuality* really remains following *creative treatment*. However such an objection only holds if we are looking to the definition as an arbiter of documentary inclusion, as opposed to a set of principles which can help guide our practical judgment as to what types of work are accepted as documentary in particular contexts. Grierson’s position has always been less about creating a binary flip switch between documentary and fiction, and more about assessing the documentary quality of a given work.

In contemporary theory, Bill Nichols suggests the fundamental charge of documentary is to stimulate and/or satisfy a desire to know about the world (an

epistephelia)(*Representing Reality* 31). Documentary status is conferred through a mix of elements: specifically that a film is identified as a documentary in its production (how it is made, the filming conventions it employs, the claims of its filmmaker) and/or reception (including the phenomenological orientation of the audience, its positioning in film festivals, etc.)(*Representing Reality* xi). While Nichols' explication of how the documentary label gets applied is valuable in exposing the social and cultural factors that constitute documentary, it is important to remember that, like most documentary theorists, Nichols takes for granted that we are talking about motion pictures (film, video, and occasionally animation) when we are talking about documentary. This can serve to obscure the ways in which presumptions about the medium itself (notably, its indexicality) are made implicit.

Documentary not only maintains a tie to the world beyond the film, this tie is of a certain quality—specifically, Michael Renov maintains documentary presents a relationship to the real *exceeding analogy* (Bruzzi 2000, italics mine)¹. Due to indexical status alone, you can view any film as documentary (as Nichols [*Representing Reality* 1] and Vivian Sobchack [*Carnal Thoughts* 268] observe), which problematizes approaches to documentary based *solely* on viewer perception or successful rhetorical argument. Approaching documentary videogames solely from a position of individual reception, rhetoric or phenomenological stance is not a mistake *per se*, but such positions need to be further defended against a broader

¹ I would expand this to include the figural in general, as there are a number of figurative configurations (for example, synecdoche) that might also blur lines of reference.

cultural understanding of documentary. If players are to identify a game as documentary, gamemakers and researchers must present a stronger case than “arguably, this game could be seen as documentary.”

The term *actuality* frequently comes into play in documentary theory—largely stemming from its inclusion in Grierson’s foundational definition. It is a term that tends to operate unproblematically as a reality that is present, material, tangible, and/or specific. The actuality of documentary is arguably linked to the medium’s indexicality, and in fact can be seen as a particular formulation of the indexical bond (a relationship that will be developed further in the following chapter). However actuality is only ever an ideal. Many of the compromises documentary makes surrounding this ideal have sedimented out of practice and practicalities. The determination of actuality in documentary is negotiated between representations grounded in the real world and the ways in which they are presented.

It is also important to note that various sub-genres of documentary negotiate actuality in specific, contingent ways, and that these adapted criteria represent the particular histories, representational imperatives, and technical and conceptual constraints of these sub-genres. For example, autobiographic documentary places heavy emphasis on the creator as a guarantor of actuality, which allows for a broadened range of what might constitute indexical content (i.e. a creator can warrant the actuality of content that might otherwise be read as fictional or

subjective). Performance-oriented documentaries, such as “rockumentaries,” tend to provide more space for documentation (i.e. sound and video documentation of specific performances), and may test conventions of what we consider non-fiction (as the documentation presented is in and of itself a performance). Animated documentary (which is discussed in later chapters), commonly uses indexical audio to make up for a gap in indexical film/video. While videogame documentary may, too, present its own twist on the conventions of documentary, creators deviating too far from a core conception of documentary run the risk of rendering their work unrecognizable as a member of the genre. As such, this research treads very carefully when looking to such “special cases” for models, taking care to acknowledge that particular re-interpretations of the standards of documentary manifest in particular sub-genres are not necessarily representative of documentary conventions as a whole.

Why videogame documentary?

Given the constraints placed around the documentary genre, it is fair to ask why anyone would want to use the name *documentary* to describe a videogame in the first place. Why not use a less-contentious, more inclusive, term like *non-fiction*, over a term so deeply implicated in recording technology such as film? For one, using the term documentary to describe videogames such as *JFK Reloaded*, *Escape from Woomera*, and *Brothers in Arms: Road to Hill 30* makes it easier to establish expectations, which in turn affects ways of understanding a given work. For all the

baggage that comes with the documentary label, there are still conditions of production and reception to work with (and/or subvert) that are evoked in making the documentary claim. Second, it is useful to differentiate these works from educational and “serious” games (just as Grierson was attempting to do by defining documentary against other non-fiction films like newsreels, travelogues and training films (Bruzzi 5), so as to distinguish works that approach the presentation of reality from an expressive and artful (rather than primarily instrumental) position. These works have different goals and expectations, and occupy a different space within culture. Finally, determining how the documentary drive manifests itself within both computational multimedia, and the specific form that is the game, is in and of itself worthwhile in the ways it makes visible our continuing desire to capture and make meaningful aspects of “real” experience, if only ever as an ideal.

It is important to note that the *game form* need not be, in and of itself, documentary. The game, acting as an expressive frame for indexical documents, instead structures documentary experience. It facilitates engagement, enables certain kinds of experiences and suggests certain interpretations over others. Michael Renov suggests documentary (in film) actively cultivates the illusion of immediacy via ontological claims to the real² (cited in Bruzzi 3). Documentary may invite viewers to be a fly on the wall, to take part, or to witness. As Alexander Galloway (83) notes, the primary phenomenological reality of games is that of action

² This varies according to documentary style and approach. Indeed, many documentaries play with and even subvert such claims.

(rather than seeing)³. It is action that most powerfully intertwines players within game experiences, and is the locus for understanding how players relate to games, the world, and the intersection of the two. But like “really seeing” in film, “really doing” in games is contentious. In particular, an ill-defined notion of *real action* features prominently in activist and serious games rhetoric, which in turn impacts discussion on documentary games. The drive for transparency may also obscure the ways in which such an experience is designed, and on the part of documentary makers, crafted. A closer look is needed at ways of understanding player-performed, designed action, particularly in documentary games.

Popular understandings of games are often skewed by traditional games, and commonly regulated to children’s culture. However videogames are evolving into a rich, highly varied form with a great deal of expressive potential and an increasingly diverse audience. Graeme Kirkpatrick argues contemporary videogames stand somewhere in between traditional play-structuring (including ways we might conceptualize traditional games) and aesthetic/art works that stimulate the play of imaginative and cognitive faculties towards aesthetic experience (75). However games are still bound within formal elements and technical capabilities of computational media systems, and these in turn constrain the ways in which we can use them to speak of the world. Presenting the limits and opportunities for games to

³ Although Joost Raessens suggests documentary videogames, “try to break through the dominance of action to do justice to the complexity of experience: feeling, reflexivity, and action in their mutual relation” (216).

act as documentary can improve critical literacy with regard to games, and demonstrate a deepening understanding of the complexity of ludic expression.

01.2 Interactive documentary

Digital media not only affects the interactive potential of documentary, but also explodes the contextual borders of consumption. Documentaries are no longer bound to theatre or TV length, and now commonly include additional commentary, reflexive material on reception, and unused content. They are also easier to integrate into responsive communities, and may be more accountable because of it. Sandra Gaudenzi suggests that the use of digital and networked technologies are creating a paradigm shift that reconfigures documentary makers (and audiences) not as observers, but as enactors (“Overview” 6). She argues interactive documentaries employ different logics than linear documentary, and as such, do not fit readily as an extension of linear documentary practice—however, both forms can be seen as a means of documenting reality within different authorial and audience imperatives and material constraints (“Chapter 1” 8). Specifically, digital media “facilitates and pushes towards a documentation of reality that is active, dynamic and collaborative” (“Overview” 2). Gaudenzi observes the interactive documentary form does not rely solely on being digital, nor in documenting, but necessarily “*documenting in an interactive way*” (“Chapter 1” 8).

Interactive documentary has branched out in a number of different areas, one of the most dominant being database documentary. In this form, documentary

content is fragmented and stored in a database, then selected and presented in a manner that often lets the user construct an individualized path through the documentary. While this might seem a denial of authorial control along the lines of the traditional observational documentary, the selection of material to integrate into the documentary is itself an authorial act, or sometimes a curatorial act (in the still-rare case of user added content). Additionally, in tools like Florian Thalsofer's *Korsakow* system (one of the most popular database documentary production systems), the relational rules behind narrative notes are creator-defined (but largely transparent to the user).

The documentary database model hails a particular sort of user. They are called upon to explore the system thoroughly—rewarded with a fragmented image set they are left to interpret (indeed, the entire model is contingent on an engagement of associative thinking). The need to alternate between viewing and doing creates a difficult interaction paradigm—once you get settled into a viewing position, the system makes a demand on you to functionally advance the work, and to create associative linkages with other components. One of the challenges in such a system is constructing a compelling experience built upon meaningful choice—the risk being, that without such meaningful choices, interaction becomes less about agency and more of a barrier to access. However, because the database documentary model tends to foreground cognitive and functional interactivity⁴

⁴ Eric Zimmerman identifies four modes of interactivity: 1) Cognitive or interpretive, 2) Functional or utilitarian, 3) Participation with designed choices; and 4) Cultural participation (158).

(modes more familiar within traditional documentary storytelling), over explicit and cultural⁵ interactivity (modes favored by game creators), it creates less of a cultural barrier to entry into the interactive documentary space. The database model is also very accommodating of traditional documentary content, such as video.

One compelling example is Stephen Foster's *The Prince George Métis Elders' Documentary Project*. While at its core a database documentary, the design would seem to counter some of the systemic problems with the model. Like many database documentaries, users can decide to drill down to find more information on particular interest areas. Narrative links are established between different story segments, and the stories can run directly as a traditional documentary, allowing the user to tailor the level of functional interactivity. Because of the interplay between linearity and fragmentation, more information can be presented than in a traditional television or theatrical documentary format.

Another interesting project that pushes the database documentary model is Katerina Cizek's *HIGHRISE/Out My Window* project. In this work, documentary content is organized via a series of highrise windows. Unlike some cases of database fragmentation, the construct of viewing the stories through this interface is

⁵ The Canadian National Film Board (NFB)'s Challenge for Change program has long promoted analog and culturally interactive documentary works, focusing on engaging communities being documented with the act of documenting itself. The program's recent renewal builds upon this existing tradition— now using digital technologies to facilitate not just explicit, but cultural interaction.

poetically integrated: we feel like we are peering in to the various highrise apartments. The fragmentation and moments of user-created connection are poetically consistent with the story being told. When the project does restrict agency as one drills down⁶ (allowing for fragments of linear storytelling), the shift in mode remains fully consistent with the position of window voyeur.

Jonathan Harris' *The Whale Hunt* is an interesting example from documentary photography, that combines functional interactivity with data visualization to both structure and affectively infuse a series of three-thousand, two hundred, fourteen images of an Inupiat whale hunt in Barrow, Alaska. While there are different ways to access the photographic set at the base of the work, one of the most fascinating is a timeline linking both the photographs and Harris' heart rate, captured throughout the nine days he spent documenting the hunt. The juxtaposition of indexical bodily data and often startling photographic image works to reincorporate the lived, embodied experience of witnessing (perhaps numbed by the sheer number and force of shocking imagery to which a contemporary audience is exposed) into documentary viewing.

Other experiments with digital documentary's potential include works centering on user-created content. Brett Gaylor's *Rip! A Remix Manifesto*, is itself available for user remix, and contains moments of remixed content (although the film proper is a set work attributed to Gaylor). Again the interaction (remix) itself

⁶ One exception would be the 360° video "easter eggs" found within the work.

contains a rhetoric that links it with the content and is intended to engage users in an enacted understanding of some of the central themes of the work (enactment will be addressed further in Chapter 6).

We can recognize that these works are doing a similar thing to what documentary gamemakers are attempting to do. They are presenting indexical content, and they are using an interactive, expressive frame to comment on this content. The ones that are particularly successful go one step further, and they use interaction, not simply as a functional tool, but to connect with the user through enactment.

Games and non-fiction interactive art

Contemporary artworks commonly incorporate documents and non-fiction contents and contexts. However, there are notable projects that have used similar technologies and aesthetics to videogames, without explicitly using games or game-like engines.

One such project is *GONE GITMO*, a speculative simulation of the Guantanamo Bay Prison, created in the virtual world *Second Life* by Nonny de la Peña and Peggy Weil⁷. Using the *Second Life* environment allows de la Peña and Weil to create an accessible virtual version of what would otherwise be an inaccessible experience. The experience is primarily based on detainee, journalist, and observer reports, but

⁷ *GONE GITMO* was developed at a MacArthur sponsored residency at BAVC New Media Producers Institute in 2007 and is currently hosted by the USC School of Cinematic Arts.

also integrated US Department of Defense video footage. Screens throughout the space display integrated video—for example, the documentary testimonial of detainee Mozaam Begg’s father, reading a letter from his imprisoned son.

Another is Tamiko Theil and Teresa Reuter’s *Virtuelle Mauer / ReConstructing the Wall*⁸. The work is a virtual reality 3D installation with embedded archival materials. The goal of the work is to engage participants in a full-scale kinaesthetic environment that evokes the experience of living in the shadow of the Berlin Wall in the mid 80s (although the work contains flashbacks to different points in the wall’s timeline). A similar spatially situated experience is evoked in *Block H, a Counter-Strike* mod and installation featuring the re-creation of partisan wall murals in Northern Ireland, created by Faith Denham. While appropriating a game engine, the work does not particularly engage gameplay outside the game’s presence in the overall installation—if anything, the first-person perspective is used iconically to comment on the relation between the worldview of the first-person shooter, and the historical conflict in Northern Ireland. However the use of first person perspective gives viewers access to a particular configuration of space and image that, for obvious political reasons, is a challenge to historically preserve.

⁸ Note this is a distinct work from the 2008 *Half-Life 2/Garry’s Mod* recreation of the Berlin Wall cited in Bogost, Ferrari and Schweizer (65-66).

A brief history of documentary videogames⁹

In the early part of the 2000s we began to see games that started to go beyond the educational imperative to try and document reality. This initial pat of “edutainment” games that crossed into documentary and independent gaming included games such as 23 YYZee’s *Pax Warrior*, a decision-led simulation on the United Nations’ role in Rwanda, and *EyeWitness*, a game demo created by the Hong Kong Polytechnic University in which players took the role of a photographer documenting Japanese atrocities in Nanjing.

Around the same time, a number of artists experimenting with the digital game form began exploring documentary content (often with an embedded comment on the unreality of gaming). These works embodied a number of different (and interesting) approaches to capturing “reality” within a digital context. Maia Engeli and Nina Czegledy’s *Medieval Unreality* project took the form of a workshop in which participants documented and contextualized their personal experiences of Albanian “blood feuds” by modifying first person shooters. In 2003, members of the gaming lab c-level¹⁰ created *Waco Resurrection*:

Revisiting the 1993 Waco, Texas episode, gamers enter the mind and form of a “resurrected” David Koresh through a specially designed voice activated, surround sound enabled, hard plastic 3D skin. In an attempt to defend the Branch Davidian compound against internal intrigue, skeptical civilians, rival theologians and the inexorable

⁹ See Appendix A for a more comprehensive list of identified documentary videogames.

¹⁰ The production team for *Waco Resurrection* includes Eddo Stern, Peter Brinson, Brody Condon, Michael Wilson, Mark Allen, and Jessica Hutchins.

advance of government agents, each player on the network plays as a "Koresh". Ensnared in the custom "Koresh skin", players are bombarded with sounds of government psy-ops, internal voices and the clamor of battle, and empowered to voice messianic texts from Koresh's exegesis of the book of revelation, wield a variety of weapons from the Mount Carmel cache and influence the behavior of both followers and opponents by "radiating" charisma. (E. Stern, n.p.)

Waco Resurrection took a non-literal, highly performative approach to its treatment of a non-fiction event. Rather than attempting to simulate the Waco siege with historical accuracy, it instead interwove primary source materials (including the writings and songs of David Koresh) within an exploration of the underlying dynamics that may have fueled such an event. As artist Eddo Stern explains: "The connections between religious beliefs, constructed mythologies and historical fantasy (super powers and a self published religious text) were starting points for exploring the Waco events as a "subjective" documentary rather than an accurate historical reenactment through game" (Jansson).

Interesting examples of documentary games also occur as pervasive games—including non-fiction, live action role-play (LARPs) such as *Prosopopeia (Där vi föll)*, in which players are "haunted" by non-fiction characters (Montola and Jonsson). The UK game art group Blast Theory has also created pervasive games that incorporate documentary content, such as *Desert Rain*, which uses video testimony from Gulf War observers, and *Ulrike and Eamon Compliant*, which integrates the biographies of German journalist Ulrike Meinhof (1934 – 1976) and IRA informer Eamon Collins (1954 – 1999).

Few commercial developers have attempted documentary works, and the ones that have tend to meet with commercial and critical resistance. One of the longest running and most successful attempts at creating “journalistic” games is Kuma Reality Games, best known for their series *Kuma/War*. Since 2003 the company has published free non-fiction games that re-create war and terrorism scenarios, by combining news reports (and more recently, historical data) with standard first-person combat gameplay¹¹.

Documentary videogames have met with their share of controversy, often running against the presumption that games are both frivolous and for children, and as such the very treatment of serious subject matter within the game form is a disrespectful and ethically suspect endeavor. Games that have met with particularly harsh criticism include *9-11 Survivor*, a prototype using the *Unreal* engine, created by Jeff Cole, Mike Caloud and John Brennon as part of an alternative videogame design class¹² (Mirapaul par. 4). Although a non-commercial student experiment,¹³ news of the game unleashed a torrent of criticism surrounding the tasteless nature

¹¹ Use of a familiar gameplay engine “re-skinned” to various non-fiction scenarios allows the company to rapidly put out game episodes based on current events.

¹² Taught by artist Brody Condon at the University of California, San Diego. Condon had the following to say on the response to the project; “It wasn’t the fact they made a visual product dealing with 9/11 that was the problem, it was the ambiguous nature in which they presented it, misunderstandings about the non-commercial nature of the piece, and their focus on the most troubling section of that event for many people - individuals jumping from the towers. The fact it was wrapped in an FPS game, which is a genre with a long history of irresponsibly simulating violence, certainly didn’t help” (Clarke 89).

¹³ A limited demo was briefly released online. For the most part, the “game” was represented through a design document, concept art, prototype screenshots, and conjecture.

of simulating Twin Tower deaths soon after the World Trade Center attacks. In defense of the project, the team argued their goal was not to court controversy in the wake of the tragedy, but to reclaim and reinterpret the traumatic event in a medium they felt was their own. Numbed to the repeated televised images of 9/11 (including video of planes striking the World Trade Center towers that seemed to play on loop), their hope was to regain immediacy and agency via an immersive, interactive re-envisioning of the events from the perspective of the victims (Mirapaul par. 4).

Other games have met with a similar response. In 2005, Syrian developer Afkar Games released the game *Under Siege*, creating scenarios drawn from UN accounts and eyewitness reports during the second Intifada. Although the game was decried as propaganda in the Western media, game creator Radwan Kasmiya has argued he intended to create a game that would capture the attention of Middle Eastern gamers the same way Western commercial games did, and at the same time engage players with the issues behind their political conflict (Ramos).

In 2007, the controversial documentary videogame *Super Columbine Massacre RPG!* was pulled unilaterally from its spot as a finalist in the *Slamdance* festival's "Guerrilla GameMaker Competition" by *Slamdance* president Peter Baxter, prompting the protest withdrawal of most of the remaining game finalists. Creator Danny Ledonne used a simple freeware game engine to translate the Columbine school shooting into retro-style gameplay, combined with cutscenes exploring the

shooters' dialog surrounding the shooting, and a somewhat surreal afterward consisting of a final battle in hell. Far from being a violent power fantasy, however, the game incorporates a number of contextualizing details and even some underexposed documentation from the event. While flawed in conception, the game does incorporate some primary source material in an attempt to make a documentary claim. More recently, the game *Six Days in Fallujah* (Atomic Games) was dropped from its publisher Konami following a backlash from war veterans and advocacy groups¹⁴.

Since the initial crop of artist experiments with documentary games, and in light of the controversy such games attract, new documentary game works appear few and far between. An encouraging recent attempt is Peter Brinson's latest effort (with co-creator Kurosh ValaNejad) *The Cat and the Coup*. In the game, you play the cat of Dr. Mohammed Mossadegh, the first democratically elected Prime Minister of Iran, during a 1953 CIA engineered coup. As the cat, players attempt to indirectly guide Mossadegh back through the events preceding the coup. Take Action Games (Susana Ruiz and Ashley York) is currently in production on a hybrid documentary/game project called *In the Balance*, which explores the American prison and criminal justice system through the experience of six Kentucky youth sentenced to life in prison for murder. In the work, gameplay is intertwined with

¹⁴ At the time of writing, *Six Days in Fallujah* was yet to find a publisher.

context-aware segments of the documentary film, to create a mixed reality effect that allows the audience to simultaneously explore both documentary modes.

01.3 Theorizing documentary games

Joost Raessens writes one of the earliest articles on documentary games, with a primary focus on adapting the documentary theory work of Micheal Renov. Raessens defends games' documentary status against three main arguments: that they cannot objectively present reality or depart from their innate ficticity, that they are ontologically dissimilar with respect to indexicality, and that they deviate from stable, linear histories by virtue of being interactive. In addressing the first point, Raessens argues that most "subjective" deviation from reality found in documentary videogames falls within the boundaries of "creative treatment" of actuality, and as such can be accommodated within a Griersonian documentary definition. Against the second concern, Raessens suggests documentary theory has moved away from primary or exclusive focus on the indexicality of the documentary image; and towards the viewer's role in the reception of the work. Documentaries are received as such because they present a "documentarizing lecture" rather than a fictive one (Raessens 220). According to Raessens, documentary games such as *JFK Reloaded* are warranted by material on their websites and in creator's interviews, explicitly marking them as documentary. In other words, they self-identify. Finally, in relation to the third objection, Raessens note poststructuralist historiography problematizes notions of historical objectivity and authority in any event—away from dominant

(and linear) unified narratives. Poststructuralist documentary practice has moved away from objective historical reality while still presenting more than just subjective impressions (221), and it is in this grey space Raessens suggests we can conceptualize documentary games.

Tracy Fullerton launches her examination of documentary videogames by noting documentary quality is not inherent in recording media such as film or video, but is a result of the socially negotiated believability of a work, and a phenomenological artifact of our understanding of how it came to be (4-5). This suggests documentary is media independent, insofar as a medium is capable of maintaining these qualities. Fullerton's paper examines documentary quality across several well known works. Her research attempts to broaden the definition of documentary (a common approach for game theorists examining documentary games), and examines the role of simulations and evidentiary status¹⁵. Fullerton also hints upon a phenomenological reality, suggesting war veterans felt a truth in *Medal of Honor: Rising Sun* akin to documentary. Still, we can ask whether such a claim would meet a standard of documentary that would separate it from a particularly powerful fictional rendering (similar responses were documented with regard to the film *Saving Private Ryan*, yet even the Omaha beach scene is not read as documentary). This does, however, reveal a powerful role for documentary in

¹⁵ Evidentiary status shares some similarities with indexicality, but indexicality differs in two key ways: it contains the evidence to its own argument (via the circumstances of its existence), and it provides an anchoring function.

relation to the positioning of "viewership" in an internal manner. Fullerton's description of the play experience of *JFK Reloaded* is one example of the potential for engagement with this construct, which I address in later chapters.

Ian Bogost has also written substantively on documentary games, in both his 2007 book *Persuasive Games* and (to a lesser extent) *Newsgaming*. His work specifically focuses on the related area of game journalism or newsgames, and as such, documentary games are situated as an extension of these practices. Bogost has suggested coupling procedural rules and directed commentary works to support critical engagement with these games, and that such a strategy can reveal the processes and systems that drive our world. In *Persuasive Games*, Bogost traces the role of procedural rhetoric—the use of processual or procedural structures (particularly in computational media) as argumentation—in documentary games. Using procedural rhetoric, games make (causal) claims via the logic of their processes. While procedural rhetoric is a powerful tool to use in creating such games, and a valuable lens in their analysis, there is nothing about procedural rhetoric per se that makes a work more or less documentary. However, like Fullerton's subjective viewing position, the concept of procedural rhetoric contributes significantly to understanding the expressive framing videogames create by virtue of their rules and mechanics. Bogost also provides analytic readings of several documentary games, and has served as a key defender of self-identified documentary games such as Ledonne's *Super Columbine Massacre RPG!*

Bogost and I co-wrote an earlier examination of the documentary game concept (Bogost and Poremba 2007), which was based on Bill Nichols documentary modes. In this work, we manage to propose a coherent definition for documentary games, albeit one that is contingent on shifting our understanding of what it means to be a documentary. This, I have come to appreciate, is a failed strategy, as it is nearly impossible to overhaul the concept of documentary from the outside. At least, in doing so, you necessarily exclude oneself from the very definitions, institutions, and associations that make calling games "documentary" valuable in the first place. As I have previously argued, recent calls for re-envisioning documentary from documentary theorists and creators still reference a core and often presumed reality of a recording medium (in either film, video or audio), and documentary games often cannot rely on these material presumptions. As such, it is a mistake to rely on some contemporary documentary theoretical work to hitch a definition of documentary videogames on a reconceptualization of documentary itself, even if the documentary form is deeply embedded in its own materiality.

Previous writing examines existing works and identifies their use of non-fiction content, and broadly notes moments of evident documentary quality, without situating these moments within a broader framework for understanding what makes a game documentary, and what strategies documentary game creators adopt in order to reinforce this quality. That is not to say that without such a framework documentary quality in games does not exist. Much of the existing work in both the

production and analysis of these games taps in to an intuitive notion of achieving the right documentary feeling— a moment of recognition, or Wittgensteinian "family resemblance."

By shifting the notion of documentary away from the inherent properties of recording technology, objectivity, and authority, and by framing it as a matter of social negotiation (or perhaps education), we are able to avoid many of the sticking points that seem like barriers to these games being perceived as documentary. Yet there is a difference between being able to make an arguable claim, and being able to make a robust claim that will be socially recognized as true. As such, documentary videogame research cannot ignore the prominent role of concepts such as indexicality (and actuality) in defining documentary; nor the importance of documentary framing.

01.4 Methodology

General outline

This study takes a practice-based research approach in which a series of design experiments test key areas of an applied critical framework for the design and analysis of documentary videogames. This is framed in relation to specific theoretical perspectives relating to their understanding as documentary, reinforced by relevant case studies in the genre.

In the first stage of research, an initial speculative framework was constructed from the analysis of three exploratory documentary game case studies.

These case studies use both data collected through media and research accounts, and the gameplay analysis of select works. The resulting framework provides the basis for a series of design experiments: occurring within the larger context of a documentary game prototype, yet focused on exploring specific aspects of the design framework. These small-scale design tests, in conjunction with a brief reflection on the creation process, accompany the case studies, and support the iterative design of both the framework and the game prototype. The research outcomes include both a final critical documentary game framework, and a body of design experiments created in relation to said framework.

Justification of practice based research

Research is traditionally conceived as a search for explicit, original knowledge (expressed in abstract theories), produced through an objective and methodical process, which can be generalized and tested (Marshall and Newton par. 5). In practice, researchers often (whether explicitly or intuitively) encounter issues with this conceptualization: that it exposes only certain kinds of problems and validates only certain types of solutions, and that it ignores the social, historical, and cultural contexts that situate research. Specifically, researcher-practitioners in interactive arts have argued their research concerns are particularly complex, uncertain, unstable, and unique, and that their research outcomes are commonly unpredictable, subjective, and emergent. How could interactive arts research,

particularly when practice-based, negotiate legitimacy within the rigid mold of "the scientific method"?

Reviewing the literature, it becomes clear that an overly positivist and uniform view of research is a bit of a straw man. Unique "models" of method and rigor, and different means of dealing with issues of practice, justification, separation, and interpretation, can be found in research across disciplines¹⁶. Henk Borgdorff notes methods and techniques are often determined within the course of research, and that standards are commonly defined within the research domain itself ("Debate" 8). Carole Gray and Julian Malkins observe that when it comes to method, research needs simply to be understood by others (co-sensible), and there needs to be general agreement on it (consensual), according to shared standards. For Gray and Malkins, evaluating research quality is a discursive task (130).

In Ron Wakkary's observations on interaction design, he notes an emphasis on "situated participation, non-rational design strategies, in situ design and a re-orientation in focus from tasks to experience"(65). Taking this as a jump-off point, it is possible to set as a guideline the following characteristics of interactive arts research:

- It is necessarily grounded in art, technoscience, and, given the nature of interactivity, human interpretation, behaviour and understanding;

¹⁶ For example, mathematic and philosophical research can rely on the internal consistency of their logic, where engineering and education research is commonly intertwined with practice. Knorr-Cetina further notes differences in research culture even within the sciences, such as differing research cultures and practices in physics and biology.

- It is interdisciplinary, and commonly collaborative (involves more than one person, often with differing skill sets), and
- It must deal with matters of complexity: wicked (Rittel and Webber) or ill-structured problems (Simon), and second-order design issues (design of the conditions of experience).

Note these elements are intertwined¹⁷, and present a number of secondary implications. Given the intermingling of technical, expressive, experiential, and interpretive concerns, practice plays a prominent role in interactive arts research (often as a means of managing complexity). As a result of interdisciplinarity and in the interest of collaboration, interactive arts research is pluralist, needing to accommodate a variety of approaches, with perhaps no one dominant model. Complexity not only affects initial design, but also the need to accommodate positively ambiguous (i.e. unknown or loosely defined) outcomes.

Action case method

The approach taken in *Real/Unreal* is an extension of an *action case study*, as detailed by Braa and Vidgen, and adapted by Yen, Woolley and Hsieh. For Braa and Vidgen, the action case study supports the building of theory within the context of practice, through intervention experiments that both test hypotheses, manage design complexity (thus the emphasis on small-scale, focused design experiments), and affect desirable change. It attempts to capture both the depth of understanding in context supported by the interpretivist case study (Walsham), and the need for

¹⁷ For example, one might say interdisciplinary is needed to address the range of knowledge implicated in interactive arts research; or that research into human participation is complex as a matter of course.

(and perhaps inevitability of) intervention from Action Research approaches (Braa and Vidgen 530).

Reflective practice as a supporting method

Reflective practice, as a formal method, emerges from Donald Schön's influential design text *The Reflective Practitioner*. While this approach maintains shades of hermeneutics, it is primarily focused on the making-visible of tacit knowing-in-action, within a critical realist (or even relativist) ontology. Schön describes two kinds of designer-centred reflective practices: reflection-in-action (attentiveness to the actual decisions, theories and influences of one's design practices, in situ)(68); and reflection-on-action (retrospectively examining design practices—perhaps drawing particular practices into a design toolbox for future practice)(123). While reflective practice is primarily descriptive, researchers such as Wakkary have also questioned what it might look like as a proscriptive or embedded strategy (75). Questions and concerns still arise over the ontological status of what is made visible, and how this is normalized—resulting in meanings shoehorned into standard tropes and expectations. So, for example, critics such as Anna Pakes prefer a focus on what the artist-researcher actually does as opposed to the cleverness with which s/he theoretically frames or reflectively characterizes that doing (par. 5). However Henk Borgdorff notes that while discursive expressions such as research “reflections” are not equal to artistic or design “reasoning,” they nonetheless can suggest or allude to such reasoning, or can be a post hoc

reconstruction of the research process (“Uneasy Relationship” 94). This provides valuable conceptual scaffolding; externalizing “meaning making” to facilitate the kinds of knowledge sharing and collaborative research that support the interactive arts.

Adapting action case methods to practice-based arts research

Small-scale design interventions can enter the pool of known approaches quickly, and to some extent can mitigate the risk that an innovative design solution gets lost within the totality of a finished work (*JFK Reloaded*, for example, can be taken as a cautionary tale of some good documentary game ideas lost within the controversy surrounding the game itself). The creation of new works also provides the opportunity to move beyond the known methods of the case studies.

Relationship between design experiments and case studies

There are numerous ways the design experiments provide equal value to the case studies in meeting the research goals of this study. For example, the *indexicality* design experiment can:

- highlight technical constraints (for example, the fixed and intrusive nature of motion capture technology);
- allow us to think through implementation (which may reveal gaps or flaws in the concept);
- intervene in the field;
- speak to the use-value of the framework, and

- serve as a visualization of the theory, revealing additional connections, issues, or constraints.

01.5 Practice overview

Overview of the Grime container project

Although it is not a formal part of this dissertation, the design sketches for *Real/Unreal* operate within the context of an ongoing documentary videogame project on the work of reverse graffiti artist Moose (Paul Curtis), except where indicated. This game, *Grime*, is currently in development for the iOS platform (see Appendices B and C for more details).

Outline of the design experiments

The design sketches I will be exploring are in relation to each of three strategies for reinforcing claims to “actuality”:

1. *Indexical claims*: ways in which understandings of indexicality can extend into videogames. The simple answer is through incorporating documents commonly seen as indexical (audio, photography, video); a more interesting answer is looking at computational-native indexicality (like sensor data).
2. *Phenomenological shift*: techniques that trigger the viewing of “non-real” media *as* real. For example, the juxtaposition of indexical and

non-indexical media, in order to shift perception of the non-indexical.

3. *Performative inquiry*: enactment strategies that look to construct an embedded or situated viewing position (as opposed to objective observer construct).

Theme	Possible Approaches	Examples
Indexicality	<ul style="list-style-type: none"> ○ Data-driven visualized elements (integration of live data) ○ Integration of recorded media ○ Crafting a case for an alternative indexical stature (such as evidentiary value) 	<ul style="list-style-type: none"> ○ Using a rate of transformation captured from documentary locations ○ Documentary audio integrated into a scene or scenario ○ Hybrid animation integrating video or photography
Phenomenological Shift	<ul style="list-style-type: none"> ○ Juxtaposition between distinct image types ○ Audio/visual juxtaposition ○ Creating “indexical bleed” 	<ul style="list-style-type: none"> ○ “Melting in” of hybrid animation ○ Co-presence of animated and recorded media elements ○ Voice over ○ Rotoscoping ○ Motion or performance capture

Performative Inquiry and the Sublime	<ul style="list-style-type: none"> ○ Embedded perspective ○ Enacting changing or problematizing meaning ○ Foregrounding of game as a space apart 	<ul style="list-style-type: none"> ○ Using gestural elements to support a link between player and subject performance ○ Draw attention to the game-as-game
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Figure 1: Design Experiment; Initial Approaches and Examples

Evaluation criteria for practice

The design sketches for *Real/Unreal* iteratively inform the documentary videogame framework, and vice-versa. Their success as practice-based research is periodically evaluated through formal reflection, in light of their use-value in validating and testing the potential of the framework. Although they serve a secondary function of intervening in the design space¹⁸ (in keeping with an Action Case methodology), it is not my intent to attempt to measure their design impact. Indeed, such an outcome would require a longitudinal study beyond the scope of this research.

¹⁸ At the time of writing, these design sketches were presented online via a design blog at <http://shinyspinning.com/docgames/>.

02 Documentary Videogames, Real and True

Documentary videogames create an intersection of epistemic cultures¹⁹ between game production and documentary media creation (particularly filmmaking). In other words, the ways in which each group of practitioners understands the nature of their practice, the meaning of key terms such as “reality” and “interaction,” and the goals, standards and ethics of production, can be quite different; complicating collaboration and knowledge exchange across these domains. This chapter examines some of the challenges in creating documentary videogames, including difficulties in establishing indexicality (for digital media as a whole and games in particular), and the opportunities and considerations for documentary expression within the game form. It argues videogames complicate the indexical bond, which in turn problematizes arguments for actuality by virtue of their predominantly dematerialized space. Furthermore, neither simulation nor enactment emerge sufficient, in and of themselves, to remediate games’ claims to the representation of the actual. However, it will set the grounds for situating the following three chapters, which address approaches to documentary videogames that speak to these challenges.

Documentary media, including but not exclusive to motion pictures, consists of two key elements. The first is what we might call the “document.” Documentary

¹⁹ Knorr-Cetina proposes the term *epistemic culture* to describe the context in which meaning is created and understood through fields bound by a particular set of values, affinities, and historical reference points (1-9).

specializes in particular types of documents—those that can be deemed indexical (i.e. that maintain a contiguity between referent and sign) to a specific, almost exclusively material, referent. Shadows, footprints, bullet holes, weathervanes, and of course, film and audio recordings can all be considered indexical²⁰. However, an indexical document alone does not constitute a documentary. A documentary also involves a way of framing documents, which gives us an indication of what the documents are intended to mean. Even in cases where documents are being presented as “objectively” as possible, the manner in which the documents are presented emerges as an expressive frame as long as a coherent work can be identified and tied (however loosely) to the hand of a creator.

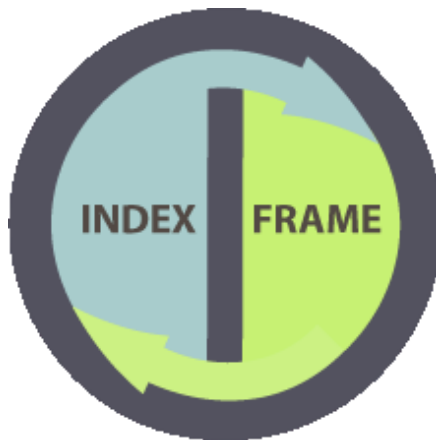


Figure 2: This study positions documentary games as the interrelation of an indexical claim and expressive framing.

²⁰ Of course, these are all slightly different things: a weathervane points to an ongoing physical phenomenon, a clock points to an ongoing conceptual phenomenon, a footprint indicates the physical touch of a past object, etc.

To some extent, these two interrelated components in documentary media emerge from Grierson's definition: indexicality refers to the specific bond with the real that forms the basis for documentary actuality, and expressive framing is a more pragmatic interpretation of creative treatment, which attempts to identify what this component is doing (as opposed to trying to prefigure what it is). Indexicality (like reality) is a concept subject to a number of disciplinary interpretations, which is why it is important to unpack how it specifically relates to documentary actuality. Within documentary, indexicality bears a truth claim, but not *just* a truth claim—one that serves a specific set of functions embedded in our understanding of documentary. It is one of the clearest ways documentary film can make a claim to actuality—indeed, one might say all documentary is in itself contingent on the indexical nature of recording technologies, and in a sense is even *about* this relationship²¹. Expressive framing tells us what we are looking at, or in the case of videogames, suggests a way of interpreting and understanding documents through enaction. While such a framing occurs in any form of interpretation (often as rationalization), the sort of framing most relevant to the crafting of actuality, and by extension this study, is explicitly designed—an intentionality which impacts both creation and reception. The expressive framing in

²¹ As opposed to fiction film, which through a “suspension of disbelief” strives to deny its indexicality. Although you are watching real, specific people, places and things, you are asked to focus not on their actuality, but on the storyworld being simulated.

documentary may take on a variety of styles depending on the documentary type²². While indexicality seems to involve a strong ideal of transparency, expressive framing only adopts transparency as a stylistic choice.

Neither indexicality nor expressive framing can exclusively confer documentary status to a media form. Rosen cites Grierson's statement that "representational indexicality in itself never results in a strong form of knowledge, and hence is only a *precondition* for documentary," ("Now and Then" 76, italics mine). Without expressive framing, we are left with just documents²³. Without indexicality, we are left with a non-fiction work that lacks the material grounding to be considered documentary. However these concepts are also not mutually exclusive. For example, a degree of framing may be involved in creating indexicality; and the very presence of indexical materials impacts interpretation and argument. The expressive framing found in documentary also maintains a self-awareness of the indexical claims presented by its documents (the framing is there in the service of the indexical content and vice versa) — even if it attempts to problematize them. In other words, documentary presents a *relationship* between indexicality and expressive framing.

²² Nichols names several, including expository, observational, performative, poetic, participatory and reflexive approaches (*Representing Reality*).

²³ Or alternately, a live media event, which Philip Rosen argues is configured differently from documentary ("Old and New" 231).

The indexical document serves several purposes in supporting actuality within the documentary: 1) it provides an anchoring in the material world (Peirce would say it directs attention to the referent “by blind compulsion” (“Index”) in a way that renders the sign transparent), 2) it provides warranting through a causal link between the material world and its representation; and finally 3) indexical documents are used in documentary works intentionally for these qualities (as opposed to simply their reality effects, or because of ease of production).

The expressive framing of a documentary videogame is the meaning wrapper, or interpretive guidance, surrounding the indexical documents. Like film, games can communicate both through their represented elements (their content), and their formal elements (their structure). Games, however, are more likely to have, as an expressive imperative, structured enaction. In other words, games are more likely to communicate through what you *do* (as outlined through the game’s goals and mechanics), than through audio and visual content, or even narrative²⁴.

Interactivity is a fundamental character of games, and one of the primary ways in which it shapes our understanding of other elements within the game. Specifically, games present explicit interactivity—what Eric Zimmerman describes as “participation with designed choices and procedures” (158). This differs from other modes of interactivity that might be found in traditional documentary, such as cognitive or interpretive interaction with the documentary (e.g. listening to two

²⁴ This of course is a generalization, as different game genres place different weight on action, narrative, and aesthetics.

perspectives and deciding who to believe), or meta-interactivity/ social participation with the documentary (e.g. participating in a community discussion surrounding a documentary screening).

With explicit interactivity in mind, it is important to consider the impact of framing content in an interactive form. Indeed, a red herring that emerges in discussions of interactive documentary is the presumption that if documented subjects have a linear timeline and/or fixed outcome, they are incompatible with interaction. Raessens in a sense validates this argument, by suggesting it is linear accounts of history that are the issue. However, figuring out how to negotiate a fixed series of events is a game design issue that has nothing to do with documentary per se (many fiction games have a more or less fixed outcome, that are slowly revealed through play), and is more a matter of the game design itself. As a point of comparison we can look at how a documentary maker may use a narrative structure to guide you through real people, places etc. The story itself is something the creator has crafted (although some might say “discovered”) from the material available, in most cases to suggest a particular reading of the documentary subject²⁵. Interaction within a videogame is much the same. A documentary gamemaker might identify goals, rules and game mechanics (specific means of interaction within a game) relating to their documentary subject. While in many cases these structural elements simply provide an organizational structure, ideally, a game’s formal

²⁵ And because, let’s face it, it makes the material more compelling.

structure supports particular interpretations and experiences of its content. As in the case of documentary narrative, while interaction can be evaluated based on its intrusion and artifice, it does not need to meet the same standard of correlation or grounding required for indexicality²⁶.

It is difficult to escape expressive framing as generally speaking, everything becomes interpretable by virtue of the documentary being a designed work. In the broadest scenarios, the work might be completely open²⁷. However there are several reasons gamemakers would want to be particularly attentive to the ways in which the expressive framing of their work impacts documentary quality, interpretation, and efficacy. For example, poor expressive framing may result in a work with unintended and unwanted interpretative outcomes that emerge from the gameplay. This could be as simple as a game design that presents facile “solutions” to a complex or emotionally charged social scenario it is trying to document. A lack of apparent expressive framing may result in unassigned documents (including pure simulations). An overly instrumental (as opposed to expressive) frame may suggest genres other than documentary, such as training and teaching games.

²⁶ We could question the way in which actions and statements are being framed: but our objection would not be that this framing was not *real* (it is clearly not), but that it was not *true*.

²⁷ Although this risks creating an environment of Dadaist futility— i.e. when everything can mean anything, everything means nothing; as such, incentives for production and interpretation start disappearing.

Game form and artifice

One of the secondary concerns about documentary games has less to do with lacking sufficient indexicality (and/or the things they are treating as indexical would not be perceived as such within documentary epistemology), and more that expressing framing within the game form is overly intrusive, or even distractingly artificial. This would not be without precedent—we tend not to think of songs as being documentary (although a song could be considered non-fiction), even though recorded audio, like film, can be seen as indexical by virtue of production. One reason for this is that the way in which audio is constrained within the form we call a song, makes it awkward to use recorded audio indexically (indexical audio often does not have the flexibility that would facilitate integration into a song), and to treat it as such (even when audio is sampled, it is not necessarily used indexically). The conventions of the song form provides a level of artifice and excess (chorus, rhythm) that makes it difficult to create and identify documentary works.

We may want to consider whether certain configurations of the game form presents an unacceptable level of stylization, and why the artifice of a game structure may be more or less invasive than, say, a narrative form²⁸. This could involve identifying game structures that are perhaps more compatible with documentary storytelling. For example, Brody Condon suggested the invasiveness of the typical first-person shooter game construct had an impact on the documentary

²⁸ This being said, the form a work takes need not be mutually exclusive (games can host narrative, narratives can host songs etc.), and can exist in any environment that can support the form.

quality of *Waco Resurrection* (Clarke 91-92), but was open to the potential for other structures within games. Henry Jenkins discusses a variety of techniques for integrating elements of story (in this case, non-fiction) within games: narrative enactments (structuring stories spatially or leading players through a series of micronarratives), embedded narratives (creating spaces rich with narrative detail); and emergent narratives (narratives flowing from interaction with the gameworld)(121-129). But we need not think of documentary, and by extension documentary videogames, as even necessarily narrative. For example, beat and pattern matching (forms of rhythmic gameplay) can be seen as a design structure specifically intended to create play surrounding a linear, indexical media element (a recorded song).

02.1 The indexicality gap

In Peircean semiotics, an index is one of three types of signs (the others being symbols and icons). The index bears a causal relation to the world—it indicates the necessary presence of the object that makes it. Indexicality has two common configurations: pure indication or *deixis* (pointing to “that there”), and a more causal understanding of seeing through an image to the referent in the world to which it is bound. It can also be conceived both technically— as a literal, physical link between object and image; and broadly—as compelling evidence for the existence of a referent. In documentary film, an understanding of a necessary co-presence between a recording device and the object proves the past existence of said object,

and offers it to our current observation. This is often presented as a physical link created by the light bouncing off the profilmic²⁹ object, yielding the trace of the recorded image. The complication (or even subversion) of this relationship is one of the challenges in conceiving any non-film based documentary, including documentary videogames.

Even as contemporary blockbuster videogames strive for photorealism through advanced technological means, it is easy to believe that the fantastical images depicted on the screen have become irrevocably detached from their indexical counterparts. However, indexicality plays an important role in anchoring media experience to the world, and is thus an important element of believability, realism, and in the case of documentary media, the representation of the real (Boudreau and Poremba). So the difficulty inherent in presenting indexical material within a videogame creates a significant challenge to envisioning documentary within the medium and form.

As noted in the introduction, Joost Raessens submits documentary theory has moved away from a primary focus on indexicality of the documentary image, and towards viewers' role in interpreting the material. As attractive as it is to believe videogames might yet skirt issues of indexicality, Raessens quick dismissal of the role of the index in contemporary documentary warrants closer examination. While there may be an opportunity to make a break from theorizing documentary in terms

²⁹ Etienne Souriau defines profilmic as the reality in front of the camera (in contrast to afilmic, which is what exists independent of film capture)(8).

of indexicality (perhaps following documentary theorist Brian Winston, who makes just such a proposition (*Claiming* 254)) in order to create a space for documentary videogames, there is also a danger of not having sufficient evidentiary backing for the documentary claims made within a game, and/or not having a means of anchoring the game within the actual world.

While Raessens addresses the first point by noting the reference materials that often occur on websites accompanying documentary videogames (although I would challenge external warranting on purely poetic grounds), the second point is a significant challenge for games in particular, which, as explicit designed micro-worlds, are already sufficiently distanced from the actual world. According to Dai Vaughn, the index affords the viewer a route to penetrate to the actuality (122). Doane describes the index (rather poetically) as haunted by its object (134). Nichols describes the identification of real-world specificity as an indexical anchor, meaning the image no longer serves as an unspecified likeness, but an object from historical reality. However, Nichols does admit this anchoring isn't irrefutable, and can be mimicked (*Representing Reality* 161). Rosen presents the index as providing an attentional locus in the world as well, "around which spectators can organize understandings of preexisting reality" ("Document and Documentary" 86). So even if evidentiary status can be established, the anchoring function of the index remains an open issue.

Indexicality and the problem of the digital

Traditional notions of indexicality in creative visual mediums such as photography and cinema often insinuate a direct physical relationship between the physical object and the re-presented image, free of human intervention, following a particular interpretation of Peirce read through André Bazin. Digitization has problematized the notion of a direct link between an exterior reality and a recorded image: prompting Lev Manovich's oft-cited claim that all film is now best understood (non-indexically) as a form of painting (295). George Legrady has argued that a digital "photograph" is actually a simulation based on captured data simply designed to look like the product of a traditional indexical camera. In fact, that data could look like anything (a visualization, a number set etc.)³⁰ ("Old and New" 308). A number of documentary theorists (including Nichols, Winston, and Vaughn) have expressed concern over the "death of indexicality," and its presumed catastrophic effect on documentary as currently conceived. This is the primary line of discourse underpinning what Raessens identifies as the softening of indexical conceptualization in documentary.

However, Hélio Godoy and Laura U. Marks reject the suggestion that the digital involves some sort of dematerialization. Marks observes that the rhetoric surrounding the death of indexicality in the digital image "assumes a concurrent loss of materiality of the image. As a result it is assumed that digital images are

³⁰ Why we would not accept that these forms retain indexicality is something Legrady does not address.

fundamentally immaterial, and that for example to enter cyberspace or to use VR is to enter a realm of pure ideas and leave the ‘meat’ of the material body behind” (par. 6). Godoy makes an argument (using sampling theory) that the process of analog sampling using photochemicals takes the same shape as electronic sensing, in that on a micro level, a chemical marker is either *on* or *off* (112). On one level, dematerialization of the digital is logically impossible, as numbers simply aren’t *things* in that way: there is no dematerialization in the digitization process except when we describe it. In other words, this entire line of debate confuses language with material reality. Both Godoy and Marks concede a distinction in the way digital images are stored—in a mathematical matrix disconnected from the organizing spatial structure of a wave—but suggest such a stopping point is largely arbitrary (Godoy in particular problematizes whether this constitutes a loss of contact.) A digital process still relies on the (probably) material electron; and even the (colour)³¹ wavelength in an analog process is virtualized and reinstated.

My point here is not to make a technical argument for digital indexicality—but rather to stress the level of technical granularity obscured by the catchphrase “zeros and ones.” Ironically, the more technically oriented arguments for a unique analog indexicality are, the less convincing the distinction becomes as a description of how we create and understand documentary. It is improbable that the faith accorded to indexicality is contingent on the storage of light wavelengths in the

³¹ Note that in this strict technical argument, a black and white film is ALSO not indexical, as it does not preserve a colour wavelength—instead, it measures and preserves light intensities (Marks).

spatial position in which they were observed, and that such wavelengths are materially tied to their source. Furthermore, strict technical definitions end up excluding things that are clearly understood as documentary (we don't revoke documentary status for films that are in black and white, shown on television, or projected from a digital projector). Mary Ann Doane links the revival of the perceived importance of a photochemical base to indexicality as motivated by the desire to guarantee a privileged relationship to "the real, to referentiality, and to materiality" (132). Yet in striving to find an objective standard for determining indexicality, theorists have created a distinction between analog and digital technologies with questionable ground in Peirce (although one might want to argue the perception of "touch" is relevant in Peirce's conception) or in any wider cultural conception of the indexical value of digital recording and projecting technologies.

As Vaughn observes, a loss of the "real" in documentary due to digital recording has yet to seep down to the level of public perception and practice (189)—and I would argue, like other postmodern conceptions like distributed agency, may yet find great difficulty in doing so. Phillip Rosen comments if pure data truly meant the obliteration of referential origins, the data would lack informational value in the complex scenarios in which it is used (such as it does, for example, in surveillance), which is clearly not the case ("Old and New" 307). In fact, the very purpose of the sensor is to provide data of sufficient indexical quality. Rosen argues documentary indexicality is not about a perceived physical link at all, but

causality— and as such, what is “real” either holds up, or it collapses into fiction and becomes a non-issue (“Document” 86). In other words, indexicality is not technically but socially defined, and as such, how we understand it is subject to re-evaluation based on our relative commitment to an indexical ideal. Rosen concludes:

The difficulties the digital presents to judgments of faithful witness reside on the technology and how it is understood by receivers. A post photographic spectator is technologically versed and media wise. In the digital age he or she will approach any image with claims to the truth of some original event with some caution or wariness and/or playfulness. (“Old and New” 337)

According to Paul Ward, the argument over the indexical nature of documentary representation has moved from the ontological (false in nature) to the epistemological (is it manipulated or not? do you agree or disagree?), with no real impact on our ability to create and observe documentary (*Margins* 26). I would argue that the ontological view is in fact not useful, nor an accurate depiction of practice, and that an epistemic view of indexicality, grounded in the traditions of documentary, gives us some room in which to negotiate documentary games. If indexicality does play an essential role in documentary (as I believe it does), the easiest route may be to understand indexical relations differently, rather than to re-define documentary (or abandon it as a tenable form).

Still, while a move towards reconceptualizing indexicality is promising, it is important to consider that most documentary theorists are in fact trying to shift *focus* away from an always-present filmic indexicality, not remove it all together,

and they still may benefit from the evidentiary value, grounding, and discursive focus indexicality provides. Documentary videogames, by virtue of their digital medium, have a very different problem, in that they have little indexicality to downplay, and as such face a difficult challenge in having to craft many of the indexical affordances recording technologies have by default. While turning away from indexicality is an attractive option for documentary games, it leaves open the question of what separates documentary from non-fiction, and what grounds the game in the “real world.” In short—it leaves games vulnerable to the question of what makes them documentary.

Edges of indexicality

Indexicality is itself not a binary quality, and so there is an inevitable blurring around representations that fail to correspond to what we might call an indexical ideal. Indexical status is frequently extended onto representations that “must do” in the absence of automatically, photo-chemically, or electronically recorded indices (ideally where human subjectivity can be obscured and handed over to a machine) (Moran 255), although such representations are subject to increased scrutiny. The representations that fall within this grey area may be useful to documentary forms, like games, that do not intend to rely on indexicality bound to film, video or photography.

These quasi-indexical forms are commonly used for documenting the unseen but not unreal (Moran 260), although to what extent may be bounded by Renov’s

mandate to exceed the figural. Moran suggests where an object looks enough like an indexical object or acts enough like a referent, indexical status may be extended—again, we make do with what is available, according to best fit with an indexical template. So indexical status may bleed into representations that maintain a level of instrumental detachment, or a model with attributes we can argue are causal, or images that are themselves bound to indexical images. One familiar example of indexical bleed is the testimonial—even though testimonial interviews (or “talking heads”) are, strictly speaking, only indexical to the interview situation itself, they are causally driven by the events being recalled. As such, they are often used in much the same way you would use an indexical image to represent an actual event, commonly in scenarios where direct filmic evidence of an event is unavailable. The result is less of a link to world, and more of an extended index or *indexical chain*—a set of links contingent on a set of causalities that bring together the representation and the world.

Nichols uses the term *oblique index* to describe something that acts as an extension of what cannot be shown directly. He cites a range of fairly diverse examples, including the unconscious³², medical visualization (for example, a pulse rate image, EKG, etc.) and what he describes as social indices (bullet holes, stab wounds, scenes of mass destruction) (*Representing Reality* 237). Nichols uses

³² Representing the unconscious indexically presents a number of ontological and epistemological issues too numerous to mention here. I can't even think of a documentary that attempts this without extensive alternative warranting, such as you might find in an autobiography.

oblique here as a qualifier, differentiated from the “real” index, even though I would argue several of his examples do in fact have legitimacy under Peirce’s configuration. Images of destruction, wounds and bullet holes may indeed be indexical, but *not* to social issues, as Nichols is implying. This extends the relationship with the referent into metonymy (or perhaps synecdoche)—in other words, it is figural rather than indexical. Medical visualizations manage to encapsulate many of the ideals of documentary indexicality, including the non-human mediation of instruments, and strike a similarity to the Peircean weathervane (itself a visualization). Perhaps most importantly, the visualization provided by, say, a heart rate monitor, demands a tremendous amount of faith in its indexicality, as this instrument needs to be read, in the medical scenarios in which it is used, as an individual’s heart beat (until there is some reason to believe otherwise).

Another indexical grey area is sound. Michael Renov notes how acoustic indexicality is often called upon to underpin the creative interpretation or visualization of the authentic soundtrack (Ward, *Margins* 98), particularly in the case of audio interviews. Indexical audio provides a core of actuality in everything from live action reenactment to subjective animated visualization. However sound, as a captured record that again indicates the necessary co-presence of recording device and sound object, has as much of a valid indexical claim as film, it does not seem to bear our faith in quite the same way—presenting more ambiguity, and what

Ward describes as “instability” (*Margins* 98). In our day-to-day experience, we are familiar with the ease in which sound objects appear to detach from their referents, and are poorer at determining what we are listening to, compared to what we are looking at (and indeed, what we are looking at can easily override our interpretation of what we are listening to, as is the case with foley). Audio recording tends to take on a supporting role in building documentary actuality, often re-emerging in cases where audio “must do,” either because of a lack of film/video documents (whether intentional or unintentional), or because of the nature of the form itself. As such, acoustic indexicality features prominently in documentary animation, and could play a large role in documentary videogames.

Crafting indexicality in digital media

Given this broad overview of the indexical landscape, there are a few promising avenues for finding the indexical within digital media, and by extension, the videogame. Rosen reminds us that digital indexicality is not a zero-sum game: “digital information and images can have indexical origins, the digital often appropriates or conveys indexical images, and it is common for the digital image to retain compositional forms associated with indexicality — not in opposition but in overlap” (“Old and New” 314). In current documentary games, indexical integration typically relies on the integration of recorded media; such as audio (for example, music by David Koresh appears in c-level’s documentary game *Waco Resurrection*),

or photographs (which appear in games such as *Brothers in Arms: Road to Hill 30*, and *Global Conflicts: Palestine*).

However integration of traditional indexical media creates some aesthetic and interpretive concerns. For example, combining indexical materials such as photographs and animation can disrupt visual composition, and to some extent dictate the aesthetic. It can make it difficult to determine how to “read” the composite images, as they simultaneously present multiple reality planes. Photographs, to borrow from Roland Barthes, “fill the sight by force,” (91) with a very specific image³³, where animation creates more space for projection and interpretation. As such, a sudden change in viewing orientation can be jarring (although juxtapositions are often created for just such an effect.) Aesthetic mismatch between animated and photographic materials (such as variations in colour saturation) is complicated by the perception that the recorded image cannot be adjusted or otherwise “tampered” without impacting its indexical worth.

As noted in previous discussion over medical images such as the EKG, visualizations have the potential for indexicality, depending on the source of their “data” and how it is represented. Mitchell Whitelaw describes the relationship between data and its visualization in almost identical terms as we have seen used to describe documentary indexicality:

³³ Note this is separate from what the image means.

(W)e can begin with a notion of data from empirical science, as a set of measurements extracted from the flux of the real. In themselves, such measurements are abstract, blank, meaningless. Only when organized and contextualized by an observer does this data yield information, a message, or meaning. (par. 5)

Whitelaw further comments on the length of the indexical chain in many visualization, which can extend through the data source, data harvesting, analysis, visualization and interface; while still maintaining “a strangely naïve sense of unmediated presentation” (par. 9). However he suggests two representational strategies: one, the indexical paradigm, in which the data is treated as and referenced for its indexicality; and the second, generative, which uses the data as a launching point for new realities (par. 12). To recall an earlier example, we can see from Harris’ *The Whale Hunt* how the jagged line we typically associate with heart rate creates a visual representation based on data sampled (by a non-living agent) off a real-world referent, and in turn serves as a surrogate for the physical effects of adrenaline. However it would also have been possible to take the heart rate data and use it in a way that did not reference its indexicality (for example, using it to generate a drum line in a music composition); or alternately to generate the “data” through a more interpretively invasive method (perhaps by asking Harris to rate his level of arousal on an hourly basis). In other words, the specific context and configuration of the visualization will impact its indexical quality.

This blurring between indexical and “manufactured” (particularly animated) images is also prominent in discussions surrounding rotoscoping and, more

recently, motion capture. As Pierre Hébert has observed, the practice of creating animation off of a live object encompasses a number of techniques (41), but is commonly identified with the form popularized by Max Fleischer in 1917, in which filmic images are traced to create animated frames. Fleischer's work included capturing, on film, the live performance of a Polynesian dancer, and using her movement as the basis for an “authentic” dance performance by the animated character Betty Boop. This creates what Joanna Bouldin calls “a reality effect bound to corporeality” (50). Paul Ward notes that this technique is popular in government industry training (an interesting parallel to computer simulations)— its use meant “a film of schematic clarity could be made” (Crafton, qtd. in Ward, “Animated Realities” par. 14). In other words, rotoscoping provided the sense of instrumentality: “a shift in modality, intended as a shift to sober discourse” (Ward, “Animated Realities” par. 15). It changes the reception of the image from *cartoon* to ontologically distinct *rotoscoped animation* (Ward, “Animated Realities” par. 15). Ironically, the effect can appear *too* real, and Bouldin notes: “the connection between real and animated body alters the ontology and shifts our phenomenological understanding of the animated image” (50). In other words, the effect creates ambiguity in how to read the image: as (artificial) animation, or (real) film. The trace of the real in rotoscoping has been widely discussed, particularly in

relation to this (typically involuntary) shift³⁴, and will be discussed in more depth in Chapter 5.

While rotoscoping binds an animation to an indexical (primarily filmic) image, motion capture³⁵ shortens the indexical chain even further. Alberto Menache defines motion capture as: "the process of recording a live motion event and translating it into usable mathematical terms by tracking a number of key points in space over time and combining them to obtain a single three-dimension representation of the performance" (1). Unlike rotoscoping, the image produced by motion capture is not a reproduction of an indexical image, but an instantiation of a captured performance (for Bouldin, it is significant that the technique is called motion *capture* (51)). There are a number of different ways of capturing motion, all of which have indexical value: cameras digitizing different views of the performance which are then analysed to produce coordinates based on various markers, electromagnetic fields or ultrasound to track a group of sensors, mechanical systems using potentiometers to measure motion. As with rotoscoping, in some cases of non-fiction animation the motion capture data is in fact too specific, binding the motion to a no-longer-present corporeality that might not translate well onto a given animated character.

³⁴ As Hébert observes, the result challenges how we in fact define animation (43).

³⁵ Although some texts distinguish between motion capture (any translation of motion data) and "performance capture" (the specific digitization of a physical performance), for the purpose of this research and to avoid confusion, I use the broader term motion capture to refer to both.

While motion capture is currently used in both film and games primarily to enhance realism, there is potential for these technologies in the service of actuality. Since documentary uses indexicality to accomplish two things—create an anchor in the material world (point), and to testify to the existence of a thing by establishing a causal link between a material object and its representation—we should not think of something like motion capture as having an innate documentary quality outside of the conditions of its use. It is only where it is used to fulfill the above considerations that we might want to argue for indexical value, and in the context of some manner of non-fiction argument, documentary quality.

Likewise, we should not think of something like simulation as being innately indexical or non-indexical outside of specific contexts. Simulations can be defined in a number of different ways, from the method of imitating a process through an analogous situation or structure, to “a machine for producing speculative or conditional representations” (Uricchio 333). Where some simulations bear a defensible indexical relationship to a specific referent, others serve a more rhetorical or even affective function as expressive frames. In the first case, simulations may draw upon the potential for computational machines, like cameras and other instruments before them, to provide a sense of detachment from human interpretation that plays into judgments of indexicality. In the case of the later, we might consider how the rules underpinning simulated game spaces both generate and stabilize meaning—similar to what documentary theorists (for example in

Nichols or Trinh T. Minh-ha) see as the role of documentary in contextualizing, or controlling, documents.

Indexicality and expressive framing as pre-conditions for documentary videogames

The question of indexicality remains an open one for digital games to address: whether this is by incorporating recorded media (as is common with animated documentary), by crafting a case for an alternative indexical stature (such as evidentiary value), or by finding alternate means of legitimation. What is important to remember is that an indexical link can be presumed in filmic documentary, but (as with actuality) it must be crafted within documentary games.

Of course, videogames are not a medium themselves; the medium of videogames is more accurately described as computational multimedia (a game is a form that can be found in a variety of media), which can contain digitized indexical media within it. Following Rosen, it might be useful to examine hybrid forms in documentary games such as indexical animation: animation that incorporates traditional indexical material such as video and photographs. Hybrid forms are already gaining prominence in documentary animation—for example, the works of Calgary animation house Anlända that combines video with animation, or the 3D animation/recorded audio found in Oscar-winning short documentary *Ryan*. On the technical front, 3D camera technology is also emerging that interpolates spatial information to render full 3D “photographs,” rather than current flat 2D.

While many of the elements we may be tempted to claim as indexical in videogames instead emerge as expressive framing, it is important not to value one over the other. Both indexicality and expressive framing are preconditions in the crafting of actuality and the creation of recognizable documentary works.

03 Games and the Real

Real people aren't machines that can be fiddled with once you understand their mechanism. (Andrew Stern)³⁶.

Interestingly enough, while popular perception tends to present games as being markedly unreal (the expression “just a game” is telling), within games discourse arguments regularly emerge for the reality of games in two key areas—the reality of the rules and procedures that structure games, and the reality of actions performed by game players. For example, Hanna Sommerseth claims reality is located at the site of the player's embodied perception, concluding “(t)he world on the screen in front of me is imaginary, yet my actions within it are real (767). James Paul Gee has argued games lead us through real thought processes (although this is ostensibly conflating models of decision making with material reality (261)). Jesper Juul (1) and Espen Aarseth (par. 9) have argued games are at a minimum “half-real”—in that the actions performed in them are real, even as they occur in fictive spaces. The following section examines both rules and action in turn, and suggest that in most cases the claims to “reality” made in each don't have enough commonality to a (specific, material) documentary actuality. This is not to say that rules and actions don't play an essential role in the expressive framing of documentary games. Understanding the role of rules and actions in everyday life, and in games (in relation to both indexicality and expressive framing), is a key element in creating compelling arguments for actuality.

³⁶ “Transparency” n. pag.

03.1 The tenuous actuality of rules

We tend to use the term rule in a general sense in relation to the ordering of procedures. Perhaps as a result, the idea that the world, and the actions and events that occur within it, operate according to some rule set (albeit an obscure one) is pervasive. On a daily basis we are confronted with rules: rules of conduct, parking, dating, child rearing, diet, banking, political action, rules of engagement. Experts in the natural and social sciences, in economics and business, even in art and design, regularly propose new rules governing every activity from the formation of black holes, to the proper annual timeframe in which to wear white. Is it not fair to say real, representable rules (procedures and processes) underpin our physical and social world, and that these rules maintain an actuality on par with documentary representations? Could we allow videogames to claim indexicality for either rules or the actions they instantiate, addressing the indexical gap?

One of the problems with discussing a broad topic like “rules” is the variable ways in which we use and understand the term, and the promiscuity with which we tend to transcode the concept between physical, social, and digital contexts. Two primary claims emerge relating to the actuality of rules: 1) whether rules can, or do, dictate behaviours and actions, such that these “real” behaviors can be re-instantiated given the correct rule set or model, and 2) whether rules govern or drive the material and/or social world, and as such are real. In other words, whether

rules might instantiate actual behaviors, and/ or whether rules may in and of themselves be considered actual.

Apart from a popularly held notion that rules somehow drive or dictate behaviour, rule following is deeply situated in practice and interpretation, within the context of social convention. What is commonly seen as rule following generally proceeds unproblematically out of everyday action, against a background of shared meaning, from which an accountable defense of said action can be (but need not be, as a matter of course) produced. This is not to say rule following can't be intentional (games are often designed for just this), but this does call into question some of the assumptions we're willing to make between game rules and the social world (of which games are a constituent).

Wittgenstein challenges the notion that rule following involves the decoding of process dictated by a given rule. He argues, as any course of action can be made to accord with a rule, no course of action can really be said to be determined by a rule (84). This is not simply a matter of "creative interpretation" or subversive reading. Wittgenstein insists there is a way of grasping a rule that is not an interpretation, per se, but exhibits what it means to "obey" or "go against" the rule in actual cases (201). Perhaps most importantly, he shows the logical impossibility of rules determining their own interpretation and proscription, by asking by which rules we determine the application of a given rule...and in turn, by which rules do we determine these rules. If we continued this line of thought, we'd find ourselves

in perpetual regress. But the point is not to create some kind of unworkable paradox with regard to rules. Since people *do* use rules without any apparent trauma, this regress cannot actually be a problem. In everyday practice, we reach some level at which the application of the rule is simply evident, given the practical demands of the situation.

As such, obeying a rule is a public practice (Wittgenstein 202). Why public? Obeying a rule privately simply makes no sense— otherwise thinking you were obeying it would be the same as obeying it (and it is not). As Peter Winch notes, following a rule is logically inseparable from the notion of making a mistake: if there is a way to do it correctly, there is a way to do it wrong (32). Wittgenstein observes we can generally read right from wrong rule following off the behaviour of participants: “There are characteristic signs of it in the players' behaviour. Think of the behaviour characteristic of correcting a slip of the tongue. It would be possible to recognize that someone was doing so even without knowing his language” (54). Despite the wording, this is not a behaviourist interpretation. What Wittgenstein is suggesting is that the error is socially performed (“I realize I did it wrong”), or else socially corrected (“That’ s not how you do it”). He goes on to state, "To obey a rule, to make a report, to give an order, to play a game of chess, are *customs*" (199).

Sociologist Peter Winch broadens this argument to question the role of what we term a rule in describing social process. He notes that social rules are

fundamentally different than the way we apply the concept in natural science: that these rules do not demonstrate immutable natural laws, rather they fall within the domain of meaning and are therefore, fundamentally, philosophical (xvi).

Furthermore, following a rule only makes sense in the context in which the question arises (28)— otherwise, the issue of what counts as “the same” correct outcomes cannot be determined. There is a certain inherent reflexive component build into the concept of a rule that ties into its relationship with social meaning making. Rule following is different than mere response to stimuli, or habitually continuing: the possibility of reflection is essential (Winch 63), even if such reflection is not an integral part of rule following. For something to be considered a rule, it, in principle, has to be discoverable (Winch 30). However, it is important to note that following a rule does not equal a person's ability to formulate it (we commonly follow rules we can't articulate), but to recognize it as correctly applied in new cases (Sharrock and Button 200). It is not just a matter of doing something the same way, but determining what counts as the same way (outside any initial examples— unless the rule specifies only these count) (Winch 58-59).

Ethnomethodologist Harold Garfinkel furthers this argument, focusing on the role of rules in holding what we do to logical account. According to Garfinkel, rules are commonly used as tools of meaning making within situated social contexts. We take for granted that members of our social group (or society, or game) at the outset "know" the contexts in which they are operating and what constitutes logical rule

following (this doesn't mean they know what the rule outcome always is— just that they know the sort of thing they should be looking for). We use this background knowledge to defend our procedures, actions, interpretations etc., in terms of rational adequacy “for all practical purposes” (Garfinkel 8). In this way, we shift attention and assign relevance, as we determine what interpretation of rules provides *the right way to see*, given that there is always (assumed) some language-game at play (Garfinkel 13, 20). Meaning and value are not assigned, nor embedded in the rule, but managed; with a common sense understanding used to normalize whatever actual actions end up being. This often involves re-reading to see what was *really* the case all along (“Oh, that’ s what I was doing!”)(Garfinkel 74).

What complicates this process is the generalized reading of rules off behaviour. As Winch notes, a series of actions brought into accord with a formula is not the same as a formula being applied (29). Wittgenstein acknowledges an observer can say that a game is “according to such-and-such rules because an observer can read these rules off from the practice of the game— like a natural law governing the play...Are you subsequently discovering it to bring your behaviour in line, without having "followed" it? (do you look it up in order to proceed, or give it in reply)?" (82). While rules and procedures are invoked to construct order and hold actions to account (and in fact this is an important part of how we use rules to create meaning), it does not follow that the action followed a process all along (Suchman 74).

This is not to deny or undermine the conscious and intentional practice of constructing and following rules as aids to procedural instantiation. Common sense and personal experience tell us we do make attempts to direct activity and instantiate outcomes through the observance of rules. Herbert Dreyfus, for example, does not deny in many contexts people store and use data according to rules (for example, in playing games), or run through rule-based scenarios in their imagination. What he objects to, however, is the assumption that this is something we *necessarily* (perhaps unconsciously³⁷) do, arguing that it is because we do know what it is to do these things, we also know we are *not* doing this most of the time (Dreyfus 265). A key difference in viewing this use of rules is that such rules *guide*, rather than dictate, practice (Winch 52-53). Rules that intimate provide a guideline or structure from which, ideally, to instantiate a process— as Wittgenstein notes, they are "...the last arbiter of where I am to go..." (230), but not a determinate one. They gain momentum and recognition of being a "rule" based on the force of collected application. However they are subject to a determination of what counts as "the same" (i.e. what follows the pattern) in a given context. In this way, the "meaning" of the rule is sedimented out of these actions/interactions.

Of course, where one knows the rule someone is following (and that they are in fact following a rule), it is in many cases possible to predict what he/she will do³⁸

³⁷ Dreyfus suggests the idea of unconscious formulation is empirically groundless and unnecessary given a Wittgensteinian approach (265).

³⁸ With nothing to say they must do what we predict.

(Winch 59). The more interesting and complex part of this question (and the more pertinent one in terms of game design) is how plans, rules, instructions, etc. *work* in multiple ways as such orienting devices, created and used in practice (Suchman 183). As we have seen, a rule is never just an orienting device, but is wrapped up in “labours through which is it produced and made reflexively accountable to ongoing activity” (Suchman 187). In the case of a digital game, the way a game constructs any given rule reflects in the way it codes (if it does) this significance. The rules may stand as orienting devices for playful experiences³⁹, but nonetheless within the context of reflexive accountability and local interactions.

As such, it is contentious to consider any rule that involves human interpretation as an ontologically separate actuality. But, perhaps unintuitively, it is equally problematic to rely on the transcodability of rules into the digital medium. Computers create simulations out of certain types of rules— algorithms. Both Dreyfus and Jesper Juul agree that to be an algorithm is to have no access to the human world and systems of meaning. As Dreyfus notes, a computer has to see input as conforming to the rules, or arbitrary: humans have other options— recognizing something as being unusual, but making meaning of it in terms of lived experience (199), or simply re- interpreting the rule so as to bring it in line with the data (as in Garfinkel). Juul (citing Donald Knuth) suggests many of the things we loosely call algorithmic, such as cookbook recipes, in fact are not specific enough to

³⁹ And indeed, orienting rules are a key part of a game designer’s toolbox.

qualify as an algorithm. Some of the important features they lack include finiteness, definiteness, input, output, and effectiveness (that in principle a procedure or process can be done exactly and in a finite length of time) (62). For something to be an algorithm, it has to be usable without an understanding of the domain, or restricted to a rigidly defined domain (such as a game). As such, what can qualify as an algorithm— and therefore what can be a rule in a digital game— hinges on a *decontextualization*: “an algorithm can work *because* it requires no understanding of the domain and because it only reacts to very selected aspects of the world— the state of the system, the well defined inputs, but generally *not* the weather, the color of the computer case, the personality of the computer operators, or the current political climate” (Juul 63). For Dreyfus, the programmer is tasked with converting meaningful⁴⁰ (practical) information to meaningless (discrete) information the computer needs in order to operate (166). This difference in how information exists in a social and in a computing sense impacts the way rules in digital games can actually be manifest. Dreyfus argues micro-worlds, like games, “are not related like isolable physical systems to larger systems they compose; rather they are local elaborations of a whole which they presuppose...Since, however, micro-worlds are not worlds, there is no way they can be combined and extended to the world of everyday life” (14). In other words, it is incorrect to suggest game rules (and the experiences they may intimate) are simply reduced slivers of the real.

⁴⁰ I find it more productive to consider “meaningful” here used as being part of a human meaning system, rather than as a value judgment.

Ian Bogost suggests rules reveal what logics motivate the human actors making meaning (*Persuasive* 8), despite their de-situated (or, more accurately, re-situated) contexts. He presents a critique of Max Weber's pronouncement that mechanization overemphasizes rationalism by arguing machines are simply better at expressing the logics found within all systems. However, what Weber questions is the assumption logics are objects that govern these processes, rather than ordering devices brought to bear upon them in the creation of meaning. The issue is that mechanization naturalizes and makes transparent rational formalism— Bogost's argument is actually a good example of this: "When we do things, we do them according to some logic, and that logic constitutes a *process* in the general sense of the word" (64, italics mine). However, to use process, in this general sense, can be misleading given the types of process we are translating between – the invisible, informal, recursive processes described by Suchman, Garfinkel and Winch, to the specific computational processes described by Knuth and Dreyfus.

Bear in mind, this is not as much of an issue when we examine certain types of rules—for example, rules describing physical and chemical processes. What we may describe as “rules” in this case are largely detached from human interpretation (the Earth orbits the Sun regardless of how you chose to understand or explain that process), and as such, are better suited for formal representation. Juul reminds us that games maintain a stubborn resistance to complex human themes such as love, ambition and other social interactions, because these are not easily (or, perhaps not

at all) formalizable in rules. As such, the "complex" events in the game are only presented in the fictional world, or happen as a result of the player's simple actions (at least in the context of single player games). For Juul, this *technical* fact necessarily ties in to the types of representational content and themes we can find in games (189). In both Juul (189) and Bogost (*Persuasive 7*), modeling the more complex, human-centered world computationally, comes off as merely an issue of scale and complexity. However, it is more likely a problem of epistemology and ontology stemming from the properties of rules.

While this can be viewed as the reification of underlying structure and rational logic⁴¹, it can also be seen as one of the very pleasures of games. As Erving Goffman notes, to be at ease in a situation is to be properly subject to rules, entranced by the meanings they generate and stabilize (81). Jean Baudrillard suggests the allure of games lies in the way they make visible the artifice of rules, and allow us to voluntarily submit to them (132). From a design perspective, rules allow games to create stable, logically coherent interactive experiences, with clear goals and means of engagement. As McKenzie Wark laments, "the world is made of imperfect games" (022). However Winch reminds us, rationality does *not* come from without, from "intellectual functions independent of human activity" (to which it can nonetheless be applied)(54). It does not represent a natural force underwriting human meaning. Michael T. Black offers a compelling challenge: "How (can we) use

⁴¹ Of course, the reification of rational logic is by no means something unique to this debate.

simulation to evoke and challenge: not only the rules embedded in our psyches by our inherited culture but even the basic models that generate our presumption that there must be such rules" (47-48). This requires a shift away from viewing such structures as actualities, and foregrounding the framing that they create.

As Bogost observes, procedurality can be read in both computational and non-computational structures⁴². He goes on to note simulations, built on game rules: "present biased perspectives on the function of systems and situations in the material world," suggesting in doing so, they operate rhetorically (*Persuasive* 173). As Antonio Gramsci states, "in visualizing the logics that make up a worldview, one may reveal ideological distortions or the state of such situations" (qtd. in Bogost, *Persuasive* 73). We can see in Garfinkel, too, the rhetorical nature of rule interpretation, even in everyday contexts:

New examples can be argued as an instance of the order whether or not it actually represent the order, possibly independently of the order, and potentially without the coder having detected the 'true' order (if there can be said to be one). The account may be argued to consist of a socially invented, persuasive and proper way of rationalizing, produced via 'scientific procedures.' (23)

Once one can "see the system in the content," one can maintain this system integrity (even while accommodating new instances). By presenting a given system (even embracing the artifice of said system), games suggest a defensible, rhetorical, way of seeing.

⁴² This does not mandate that it exist prior.

We could further argue that some realms of human life are indeed designed to begin with — in acting out a bureaucracy, we are already enacting an artificial system. Wark, however, argues "(g)ames are not representations of this world. They are more like allegories of a world made over as gamespace. They encode the abstract principles upon which decisions about the realness of this or that world are now decided." (020). He cites Benjamin in noting, "(i)n the allegorical mode, any person, any object, any relationship, can mean absolutely anything else. With this possibility a destructive but just verdict can be passed on the profane world" it is characterized as a world in which the detail is of no great importance" (029). Wark calls the interplay between the algorithm and the larger culture an *allegorithm*: "(a)ppearances within the game double an algorithm which in turn simulates an unknown algorithm which produces appearances outside the game" (067). To paraphrase Baudrillard—it is more real, because the real is more artificial (the map has become the territory). This is significant in documentary, because if the documentary bond is necessarily one that exceeds analogy, it is only a culture made over into the allegorithm that can be documented by the game. This might be why this model seems to have a stronger claim for actuality in documentary videogames like *Escape from Woomera* that attempt to evoke experiences of bureaucratic systems.

03. 2 Games and “real” action

In addition to the question of whether rules themselves form an actuality, a rhetoric of the reality of play or action may also occur within digital games. Particularly in the realm of educational, serious and social issue games it is not uncommon to hear the implication that games about real-world (as opposed to fantastic) subjects engage players in real actions⁴³. Can rules reconstitute actual actions and/or behaviors? Can game rules even generate “indexical” embodied experiences?

Salen and Zimmerman (123)⁴⁴ note game rules are explicitly designed to limit (alternately framed in Goffman as facilitate [33] and Juul as afford [58]) player action. It is through this quality games emerge as designed experiences, with game rules serving as world building tools (not just in a spatial sense, but what Goffman conceives as worlds of meaning [27]). As Johan Huizinga notes, forms such as rites and games produce an effect not shown figuratively, but reproduced. Where representation is a question of figuratively reshaping an action, play is an effect reproduced in the action (Huizinga 14-15). Lucy Suchman reiterates that rules, plans, accounts are actions we have made an object of— a representation of actions. However, the actual action of play is also a moment of situated activity (Suchman 71). While there is an imaginative form of the expressive act within the diegesis of

⁴³ Of course in these instrumental contexts, this is a politically important claim to make.

⁴⁴ With the caveat that their analysis is artificially divorced from the experience of gameplay (Salen and Zimmerman 120).

the game, there is also a physical form of the same act (Galloway 25). This is often used to suggest that the actions re-created through game rules are in fact *real*, or at very least, partially real.

Alexander Galloway argues play is a symbolic action for larger issues in culture— the expression of structure, and indeed, (citing Clifford Geertz) "a powerful rendering of life" (16). In the natural sciences, such a reinstatement of action is fairly straightforward: some physical force is doing something, and the rules of this phenomenon describe and recreate the pattern. However, as Dreyfus is quick to point out, the argument that human performance might be explainable and formalizable in a way reproducible by machines, is epistemologically flawed. Explanatory rules or accounts do not mean (conscious or unconscious) intentionality. A telling example is that of the bicycle rider, who: "is certainly not following (rules of physics) consciously, and there is no reason to suppose he is following it unconsciously. Yet this formalization enables us to express or understand his competence, that is, what he can accomplish. It is however, in no way an explanation of his performance" (Dreyfus 190). Just as we can express the orbits of the planets with equations, with no expectation or requirement that planets are aware of and/or following rules, rules can explain and formalize without being determinate. Suchman believes it is important to understand the rules themselves for what kind of resource they are (representations or abstractions over action); suggestive what their relationship to unrepresented actions might be (193). In

other words, whether rules are expressive or (causally) indexical largely depends on the contexts in which they are situated.

In *The Shape of Actions*, Collins and Kusch distinguish between several types of action: ranging from the largely instinctual to the deeply interpretive. Computers have difficulty replicating both ends of the scale, being neither embodied nor a member of a human system of meaning. So even in the case of bureaucratic systems, the presence of human interpretive agents (deciding if you require form A or form B... a process Suchman identifies as largely rationalized in situ) means that the enactions in such a system are still dependent on embodied, contextual factors that are not ported wholesale into the game experience. As follows, the actions that occur within them are not the anchored actualities of documentary.

Simon Penny has argued that if we acknowledge that flight simulators and military tactical trainers are effective at training, we cannot deny the reality of action in other games. However, Penny's argument drifts between analogy and actuality. Penny suggests games are a system of bodily training, but "analogous to real-world action" (73). He further suggests that in embodying action, we learn in a precognitive fashion, citing skill transfer in military simulations as an example (74-75). However Penny does not fully explore the implications of context of his example actions⁴⁵. Moreover, Penny discounts reflective stance, and the ability of

⁴⁵ Some of the questions we might ask include: What sorts of skills are we talking about here? What about the player's orientation to the material? What work goes in to making military action more gamelike? Why are kinaesthetic enactments more literal? What about actors? (I'm not a doctor, I just play one on TV).

the player to construct meaning of their actions— argues this double-coding is having it both ways (84). However it is not necessarily having it both ways to suggest the same actions have different levels of reality in different contexts, as even our interpretation of reality is contextual.

In the enacting of these rule-based actions, can we argue games are the equivalent of "image instruments" (i.e. things that allow you to *really* do⁴⁶)(Manovich 167-168)? On a basic level, almost all games present deixis between the game player and their avatar⁴⁷. This basic "I move, it moves" indexicality can be instrumental in the crafting of presence, and in some instances, immersion. As Doane notes, such deixis is "reduced to its own singularity, pure indication, brute fact, assurance of existence" (135). However, in relation to documentary, deixis alone isn't terribly useful— as a live index of player activity, it is yet to be contextualized to the level of document⁴⁸. As a re-instantiation of a presumed "profilmic" (perhaps pro-gamic) action, the *sameness* of action is called into question. To what extent can we say a re-performed action is the *same* (and as such, causally indexical to a particular performative construct) as a prior action?

⁴⁶ The concept of *image instrument* might be described in terms of using a map. A map is of course a representation of a location, but it is also an instrument that takes said location and renders it in a format usable for an activity such as finding or determining distance. We do not tend to differentiate the instrumental uses of the representation in relation to their actuality—the distance between point A and point B on a map is the "real distance" irrespective of map use. Although maps tend to be iconic (bearing semblance) than indexical (causally linked), they are treated as indexical in the primary context in which they are used.

⁴⁷ The term avatar describes any in-game representation of the player (cursors, player characters, etc.)

⁴⁸ Presuming the eventual documentary framing of player activity is desired.

Collins and Kusch suggest two kinds of order are apparent in action: orderly behavior (for which there can be an observable science), and orderly action (which requires participant's comprehension of it). Ordinary social life is full of order, but it is what they term ordered *polymorphic* action, mutually understood through common enculturation (as opposed to *mimeomorphic* actions, which can be understood through external observation). In the case of polymorphic action, only those versed in the relevant culture can see sameness properly— in the case of mimeomorphic actions, the meaning of the action may also be observable to nonenculturated observers (such as computers)(28-29). It would then seem challenging to use digital games in the case of reconstituting or instantiating polymorphic action—the implication being such action would necessarily need to be tied to player-to-player rule interpretation. If we accept that action is contextually embedded, the necessary temporal dislocation between documentary and its subject in and of itself suggests a challenge to sameness.

Before we go further, we should tease out the distinction between real as *not-imaginary*, and real as *not artificial*. While the action performed in games is most certainly not imaginary, even as it occurs in fictive worlds, it is also action that occurs in an explicitly designed environment. It is therefore not real, in that it is artificial. This distinction is implicated in the construction of meaning, since our actions, designed to be enacted, are distinct from actions we might view as causal or mundane. They take on qualities of intentionality and purpose not present in what

we might call natural or embedded actions. While Salen and Zimmerman suggest, "there is a special kind of lucidity and intelligibility about games...in ordinary life it is rare to inhabit a context with such a high degree of artificial clarity"(123), the truth is perhaps the opposite. It is everyday life that maintains a matter-of-course quality that games cannot purely capture without "creative treatment."

Perhaps the question of the "reality" of rules and enacted experiences within games isn't the right sort of question at all. By abandoning the notion that the rule structures and actions they instantiate are in of themselves "real" or indexical, we could refocus on their role in expressive framing: specifically in the ways they encourage performative inquiry (discussed further in Chapter 6). In this way, the binary "real or non-real", becomes irrelevant—we would instead evaluate rules in relation to their efficacy in enhancing our understanding of the actual in relation to lived experience (i.e. true, or not true).

Exploring specific cases

In the following chapters, I discuss different strategies for crafting actuality within documentary games, which approach some of the inherent challenges (and opportunities) brought about by the digital medium and game form. I will do so through a focused analysis of specific games—not exemplars per se, but games that raise interesting questions and/or pose interesting solutions to these issues. Specifically, I examine indexical integration within the game *JFK Reloaded*, shifting phenomenological stance in the series *Brothers in Arms*, and enactment as inquiry in

Escape from Woomera, and in relation to my own work. This is not intended to be an exhaustive approach to documentary expression in games— rather, it is to identify interesting configurations of the index/framing dynamic within the context of specific works. I then further explore these themes through the creation process of one or more design sketches that play off of questions or opportunities emerging from the chapter. The sketch outcomes are also not intended as exemplars, but through their creation, I am able to consider, through practice, emerging issues and questions relating to the chapter theme, game analysis, and in many cases my framework for documentary games itself.

04 Examining Indexicality in *JFK Reloaded*⁴⁹

I would love to see computer, faced with the problems of probabilities of the assassination taking place the way it did, with all these strange incidents which to place before and are continuing to take place after the assassination. (Penn Jones)⁵⁰

DALLAS, TEXAS

12:30 pm, November 22, 1963.

The Texas School Book Depository, sixth floor.

The weather is fine.

You have a rifle. (*JFK Reloaded*)

Often the most well known documentary videogames are the most controversial. *JFK Reloaded*—a game based on the assassination of American president John F. Kennedy—is one of the better known examples. When it rose to public attention in 2004, the game added fuel to a growing outcry over violence and inappropriate content in videogames. It was explicitly condemned by politicians in the US, including the Kennedy family⁵¹—and even used to signify the moral vacuum of digital games in an episode of the television series *Law and Order*⁵². *JFKR* has always fallen back in defense on its “documentary” status—specifically, that the core simulation at the heart of the gameplay, and supporting game elements such as

⁴⁹ An earlier version of this chapter was published as Poremba, Cindy. “JFK Reloaded: Documentary Framing and the Simulated Document,” *Loading...* 3.4 (2009). Used with permission.

⁵⁰ *Rush to Judgment* (1967). Cited in Bruzzi (19).

⁵¹ Reuters. An additional admonition was sent to Traffic Games by US senator Frank Lautenberg (Galloway, McAlpine, Harris 329).

⁵² *Law and Order: SVU* “Raw” Season 7 Episode 6 (Originally aired 1 November 2005)

vantage points, are based meticulously on Warren Commission data⁵³. Shortly after the game's release, Traffic's managing director Kurt Ewig (himself a former documentary filmmaker) stated, "We believe that this is the first wave of these kinds of games looking at real-life events using interactive technology." The game has been unavailable since 2005, the former website for a time hosting the obituary: "Documentary history was made here 22nd November 2004. Long live the JFK Legacy. "

In the game, players finds themselves positioned on the 6th floor of the Texas School Book Depository. The president's motorcade enters the first-person view on the top left, and proceeds along the plaza. The player is given no initial instructions beyond the few paragraphs of scene-setting text quoted in the introduction to this chapter. Using the right mouse button will create a viewpoint similar to looking through the sight of a rifle— yet by default, the player takes aim from a distance view of the action, with their cursor. The player is able to fire as many (or as few) shots as they wish, at whatever they wish, within the set timeframe of the event. After the set time has passed, the scene ends, and the player is presented with a score, and reviewing options.

⁵³ A simulation based on motion geometry from the Zapruder film was also produced by David Meyers, to favorable reception, winning multiple awards (Schott and Yeatman 85).

The player's goal is to instantiate the assassination⁵⁴ (as Schott and Yeatman describe, to "achieve consistency with the actions of a lone assassin" (82)), with their success measured against the historical record –specifically, the Warren Commission report. *JFKR* provides an interesting case in the use of simulations both as indexical documents and as expressive frames in documentary videogames; particularly in cases involving complex and/or physical processes. The game also provides a vivid illustration of some of the issues discussed in the previous chapter, specifically in relation to what can and cannot be simulated within a digital game, and the limitations of simulation in understanding aspects of the historical world. I will argue a defensible indexical relation in *JFKR* lies between the game and the documents—not the assassination experience itself. As such, the game's primary strength as a documentary work is in re-engaging the archive, rather than simulating history.

04.1 Simulations as index and expressive frame

JFKR technically consists of two simulations: a physics simulation based on forensic data, and an event recreation containing the shooter, JFK, etc. Tracy Fullerton suggests simulation carries evidentiary weight, enough perhaps to establish indexical status. Both Fullerton (5) and Mark J. P. Wolf (284) have noted

⁵⁴ This is not the first work to recreate the JFK assassination, nor one to face accusations of poor taste. Ant Farm and T.R. Uthco's *The Eternal Frame* (1975) presented "an examination of the role that the media plays in the creation of (post) modern historical myths." The work presented a live re-creation of the assassination, using performers in drag (Himmelsbach 53).

forensic simulations, used in legal proceedings, have gone from being seen as suspect and prejudicial, to being legally admissible as substantive evidence, providing a “probative illustration of actual events” (Fullerton 5). This suggests a shift in the way these judicial simulations are understood, as judges and juries have become more familiar with them (and particularly as procedural literacy has increased). While simulations are almost always presented within judicial proceedings as demonstrative evidence or argumentation (in other words, the simulation is not in itself evidence, but an extension of expert testimony [Menache 36]), Wolf notes judges must now remind jurors, swayed by faith in the mathematical/scientific authority of these models, of their constructed nature. He stresses the need to recognize a) that a point of view comes from the programs, theories, and assumptions controlling the simulation, and b) its extraction (lack of situatedness) from any given event (Wolf 285). Fullerton goes on to posit that in the future we may embrace simulations that model aspects of history behaviorally so as to constitute evidence (Fullerton 6), as opposed to argumentation.

However, as discussed in the previous chapter, some things are more “real” when simulated than others, and that simulations have more value in some contexts over others. For example, the ballistics simulation in *JFK Reloaded* can be highly accurate, presuming the accuracy of the core data—laws of physics are easy to formalize mathematically, and such laws affect human experience so consistently they can be desituated in most cases, without having to reconsider whether or not

they will work in the same way. Semi-formal human systems (economics, bureaucracies), are less predictable—it is possible to define some elements and ideal conditions fairly easily, but because they involve human interpretation of rules (again, whether a person decides whether to fill out form A or B), they cannot be entirely formalized. A game designer might model the ideal security procedures used to protect a president, but they can only guess how those procedures will be interpreted and instantiated in practice. Social systems⁵⁵ are messy— often completely embedded, relying in large part on contextual meaning making and situated action. Arguably, anything that involves human interpretation is fluid, and not entirely simulable.

Actualizing algorithms

Braxton Soderman suggests viewing indexicality in terms of the algorithm instead of trying to extend a tenuous (conceptual) indexical link to possible events in the world. He is particularly critical of Wolf’s proposition for simulations as “subjunctive documentary,” arguing such a conception confuses the index with icons (only bearing a behavioral or conceptual resemblance to the world)⁵⁶. Soderman suggests assigning indexicality to algorithms would provide a route for examining the ideological influence of algorithms, leaving us more inclined and prepared to

⁵⁵ Into which you could include mental processes, as arguably the way we make even private meaning is socially defined.

⁵⁶ Although to clarify Wolf’s position, he is not proposing an alternate standard for documentary, but describing an existing phenomenon and our “documentary-like” response to it.

analyze/deconstruct the particular work of computer programs (161)(in other words, abandoning the proposition of seeing through to the world). Tracy Fullerton echoes this position, and perhaps brings it closer to Wolf's, when she reminds us simulations cannot be understood solely through output (21), as they inevitably point us back to the algorithm.

Computational rules, or algorithms, may be considered hybrid forms. As presented in the previous chapter, the algorithm stands somewhat distinct as a quasi-object consisting of a fixed formal structure, and user interpretation. Such rules are partially situated,⁵⁷ and contextualized within the designed environments of the computer. However, this places algorithms in an unstable position. Peirce explicitly states mathematical models such as found in geometry are not indexical; yet does allow for the representation of abstract concepts, such as time being indexically represented by the hands of a clock. If one is compelled by force to the referent in the case of algorithmic representation, one would not be ground in the material world, but in a virtuality that we may in fact treat as an actuality. In other words, the hours in a day, and *JFKR's* gunshot physics, are both things we reference as actual objects in particular material situations in which they are embedded.

The ballistics algorithm from *JFK Reloaded* can be argued indexical on the basis of the physical properties of the documented material evidence from which it was constructed. As such, its indexicality can be formulated in one of two ways. It

⁵⁷ The player is in fact in two situations: one willfully ignored.

can be seen as an indexical chain: linking the original event, through to the material evidence it left behind, to the documentation and measurement of said material, to Traffic's algorithm—each one set in causal relation to each other. Since it is a physics simulation, it can be reasonably disentangled from the situation (contingent on the accuracy of the evidence), and does not rely on interpretation. Yet, it is not in and of itself meaningful outside of interpretation: for example, players can (and did) say it did not include alternate models such as the infamous grassy knoll⁵⁸. Still, this is a rather extended chain, even if the links stand solid. Another way to view the indexical relations is to place the indexical bond directly between the algorithm, and the documented evidence directly. In this construct, the algorithm compels our attention towards the Warren Commission evidence, and makes it visible through its instantiations. This is a compelling interpretation when taken together with other game elements such as the reconstructed vantage points, which also reference Warren Commission documents.

Framing the situation

An understanding of the use and complexity of simulations should come into play in any analysis of the larger situational reconstruction in *JFKR* (the event simulation comprised of the assassination experience, of which the ballistics simulation is one part). For example, Ian Bogost draws attention to the performative

⁵⁸ An expansion pack was actually released by Traffic a number of months later, in order to address (and refute) this as an alternate theory.

nature of assassination itself, noting how it provides insight into the spectacular quality of assassination. He suggests that, as the game allows for the discovery of alternative scenarios and strategies (Bogost specifically cites one point early on, that by taking out the driver the player can get a clear shot of Kennedy when the security detail scrambles), players can make inferences about Oswald's decision-making process in taking the shots that he did, and conclude that the shock value of the chosen shots is significant in this assassination (*Persuasive* 133). This observation maintains a problematic tie to actuality, given the indexical value of this sort of simulation, and the presumed value of straying beyond the experience it defines (the shooting of JFK). Assumptions about alternative strategies may make sense within the microworld governed by game physics and AI, without holding true for the original, embedded situation. As mentioned earlier, the security procedures followed by Kennedy's staff, and the behaviour of Kennedy himself, are not only not modeled, but in fact not possible to model in this way. One can state with confidence what they did do, but not what they might have done. This is not a problem if game designers and players are exploring a range of possibilities, but becomes so if they are using this information to make conclusions—treating these simulation outcomes as bearing a causal, indexical relationship to the data drawn from the historical record. In this case, the nature of the human interpretation implicit in this event makes for a very weak claim for indexicality, however conceived. Nonetheless,

as a form of argumentation, we may be able to tie this simulation not to indexicality, but to a performative inquiry prompted by the game's expressive frame.

Although Oswald's shots can be detailed in equations, Oswald certainly didn't need to follow those equations in order to shoot Kennedy. As discussed in the previous chapter, it is possible to model information that has great descriptive value (it happened that way in the past), but poor predictive value (having little bearing on how something might happen in the future). The "truth value" of a simulation can vary depending both on the nature of the thing being simulated, one's interpretation of what that simulation means, and what claims are being made through the use of the simulation. As such, one must be critically aware and cautious of claims that games and simulations document real events.

04.2 Use of analog indexicality

JFK Reloaded does in fact integrate at least one piece of traditional indexical media. Following the player's attempt at re-enacting the assassination, the game overlays audio from the Air Force One transmissions occurring during the JFK assassination. This audio is not addressed directly in any way—it simply provides an "authentic" post-assassination backdrop during a series of stark screens presenting an analysis of the shots taken by the player evaluated against the historical record. As such, the audio occupies almost an iconic role in setting game atmosphere, and perhaps even serving as a symbol of "the real."

The game presents other ideas for interface design integrating primary (and traditionally indexical) documents. Although the original material isn't shown (like it is in a game like *Brothers in Arms: Road to Hill 30*), viewing positions such as "Watching JFK's Limo from (Mary) Muchmore's 1st location" are built from these related documents and images in the Warren Commission files. As such, players can engage these documents to get a better view of their outcome, and potentially use them as success cues. In fact, Fullerton does this exact thing: "What it really means is negotiating my own personal memory of something I have seen hundreds of times in the past: the home movie footage shot by Abraham Zapruder. I know *when* to shoot, and *what* I should hit with each shot, primarily because I have seen the event happen so many times in clips from this footage" (20). Schott and Yeatman further note: "The simulation firstly re-frames the actions of the player against the Zapruder film, this time replaying the events of the player's action within the simulation. When the player's shots are fired too early or late, the impact and familiarity of the original Zapruder film on our psyche is quite clearly underlined" (87). This might suggest where *JFKR* really succeeds is in engaging players with documents (such as the Zapruder document), rather than in the assassination itself.

04.3 Challenges in game design

To some extent, a game like *JFK Reloaded* illustrates the challenges of the second-order design⁵⁹ that are present in all games: you can't stop players from resisting such a documentary experience, "fooling around," playing with the physics and ignoring the context, and otherwise using the game "disrespectfully." As Schott and Yeatman point out, the design of *JFKR* accommodates paidea pleasures, "allowing the player to substitute the tools of play intended for mission based games, activities ordered under a system of rules, with paidea, activities that have no objective usefulness beyond the pleasure that the player extracts from the action" (85). However, the game design does suggest a real intention to frame its core documents in an accurate and justifiable way. Take for example the scoring system: the target for first shot is the ground; there is a ballistic "fudge factor" of 1.25 seconds; there is no accuracy bonus awarded (as bullet was never found), and there is no ricochet point. Upgrade 1.02 contains accuracy corrections to the data model that corrects minor errors in the way this first shot was implemented in the ballistics simulation. These design and upgrade decisions would indicate a commitment to historical fidelity over a more generic gameplay. The original site even nods to transparency, inviting players into the details of how the simulation works (Schott and Yeatman 90).

⁵⁹ The design of the conditions of experience, rather than the direct design of experience itself.

The most common rebuttal against the design intent seems to come from the \$10 000 reward Traffic offered at game launch to the player who got closest to instantiating the historical record (i.e. performing the assassination as it had occurred). This interpretation of intent tends to ignore the nature of the algorithm at the core of the JFKR experience. One of the keys to supporting Traffic's position on the accuracy of the Warren Commission report is a broad base of instantiations that in turn testify to the fidelity of their ballistics algorithm. Fullerton and Soderman note it is only over several passes through the algorithm that we can see indexicality in its output.

The indexicality of recording media boasts a reliance on a non-human (and thus a perceived non-subjective) mechanical process, and a traditional framing of the cinematic apparatus as a scientific instrument (Winston, "Scientific Inscription" 38). Brian Winston notes early efforts to bolster the scientific status of the camera-instrument continues to condition reception today—cultivating the view that the camera never lies, and that it produces analogues of nature, similar to other scientific instruments⁶⁰ (like the thermometer, scale, etc.). The ballistics simulation at the heart of a documentary videogame like *JFK Reloaded* has a lot in common, in this sense, with the recorded document—continuing the desire of disentanglement of human intervention from historical authenticity. Here computational simulation

⁶⁰ Like the thermometer, we don't have to know quite how it works (in terms of the scientific principles guaranteeing its "truth"), we just have to read the instrument, and understand the data ("Scientific Inscription" 40-42).

provides the ideal “instrumentality of a nonliving agent” (Moran 258), which in documentary film is provided by the camera. But more significantly, the apparent removal of human intervention creates a kind of causal indexicality—an event necessarily resulting from the simulated processes being presented.

When players “see through to the world” in *JFK Reloaded*, what do they see? The indexical value of the simulations in *JFK Reloaded* is not the real life event at all, but the Warren Commission (and related) documents to which there is that strong indexical link exceeding analogy. Isn't *JFK Reloaded* really a documentary about this data set and the controversies surrounding it (the ballistics information, the camera viewpoints, our reliance on an iconic relationship between the game representation and cultural knowledge of the event)? And if so, why not understand the “Oswald” role as the equivalent of a forensic investigator,⁶¹ as opposed to a role-play character? Galloway, McAlpine, and Harris reach a similar conclusion in their analysis of the work, observing the media backlash in particular downplays a reading of the game focused on “more investigative, exploratory methods of interaction” (329). Chill of psychopathic detachment – or chill of the scientific detachment society demands to make sense of events?⁶² If *JFKR* is indexical at all,

⁶¹ These kinds of CSI recreations aren't commonly perceived as “sick” or “tasteless”—they are simply part of the process of trying to understand the event based on the evidence.

⁶² One could suggest the off-colour jokes that often come into play in forensic work are not a signal of dehumanization, but a release that re-establishes humanity. The joke serves this function because it always conversely reminds us this is not a joke that should be told.

referring to the world, it is to the documents it is more compellingly tied, not the world beyond them. It is an argumentative frame for, and a testament to the reality of, the documents central to the game's production.

This analysis is not intended to skirt public concerns about games like *JFK Reloaded*. The game has ethical implications for documentary game design as a whole, particularly if it is considered in the context of the decoupling of representation and action, and player accounts of insensitivity to the larger meaning of game actions. Still, using a game structure as a meaning-building, expressive frame proves an interesting way of dealing with a relatively fixed historic outcome, but a multi-form truth. The game fails to make a strong documentary claim as an assassin simulator, but succeeds as an engagement with forensic documents (in other words, its mode is more indexical than performative). While these are arguably some of the most well-traveled forensic documents in human history, this doesn't mean similar techniques can't succeed in engaging lesser known archives. The JFK assassination itself is transitioning past emotional impact (as it fades from direct personal memory), and now largely focuses on technics of conspiracy theory and the rhetoric of a "who done it" mystery narrative: from "where were you" to "who do you believe?" It is in this cultural milieu that *JFKR* finds its place.

Games such as *JFK Reloaded* are easy to dismiss, but when critics and gamemakers do, they fail to look at lessons of these games. One important observation that can be taken from *JFKR* is the disjuncture between the mechanics

and the emotions of an event. Clearly, the mathematical, clinical re-enactment of such a deeply emotional event has caused a great deal of public concern. The irony here is that people *do* pour over the technical details of the assassination in search for truth, healing, and rationality. In a way, a documentary game such as *JFK Reloaded* is a poetic fit to, and perhaps an inadvertent critique of, this mindset.

While there exists a fear that the formalism of computing inherent to digital games (and by extension to documentary games) reinforces a logical, rationalist way of viewing the “real” world, as is apparent in *JFK Reloaded*, there is reason to be optimistic. In film documentary, which faces the challenge of depicting internality and other things non-visible, this restriction ends up being a rich realm for creative exploration. As Errol Morris is fond of noting, there is no such thing as a “veritas lens” providing a magical truthful picture in film documentary. Likewise, there is no “veritas engine” driving truth in digital games. A closer, critical reading of *JFKR* can foreground the way formal structures can be used to frame certain kinds of actuality, and in the end, can also be used to critique such structures and worldviews. What is key to the documentary game is this framing. The formal structure of the game can serve as a means of commentary and meaning making for its constitutive documents: an experience of those digital documents best conveyed in a procedural, interactive form.

04.4 Indexical design sketches

This series of design sketches explores ways in which understandings of indexicality might extend into videogames. One of the easiest ways to address the digital indexicality gap is by taking advantage of computational multimedia's ability to incorporate documents commonly seen as indexical (such as audio, photography, and video). The challenge with this approach is both to maintain a coherent and unified flow and aesthetic through the gameworld, and to a lesser extent manage file size issues that may impact hardware performance. While it is also compelling to consider computational-native indexicality (like data capture and incorporation), this presented a challenge in relation to the project timeline, resources, and intervention with the documentary subject. The challenge here was to explore ways of naturalizing captured data, on both the side of production and gameplay.

These sketches further address the design choices for incorporating indexical materials (used as such) into digital games. Some of the initial questions that occurred with this design experiment included:

- How can we integrate data “time” without interrupting game flow?
- How do we capture and process data, with an eye to maintaining a sense of transparency and limiting intervention?
- How might non-fiction spatial storytelling facilitate the integration of indexical documents?
- How do you make transparent exactly what this data *is*, in keeping with an ethical imperative to document truthfully?

Sketches: Integrating Media

These sketches experiment with ways of integrating traditionally captured data (specifically photography, video and audio) into a game environment, while exploring different aesthetic relationships between the materials.

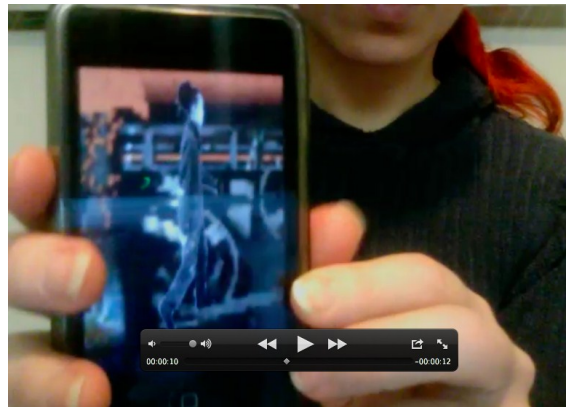


Figure 3: Initial experiment in creating a photographic interactive environment in a 3D engine.

Having seen, what I considered to be, the failure of some documentary videogames to manage the interpretive disjuncture created in combining materials that prompt different viewing positions, and having observed attempts to manage this in games like *JFK Reloaded* (this I discuss further in Chapter 4), I came in to these experiments with some expectation of having to find a workable balance between captured and created materials. Nonetheless, I was still surprised to encounter issues such as the difficulty in distinguishing indexical and realistic 3D rendered materials (this initially occurred in the “becoming real” sketches documented in Chapter 5). This became particularly problematic in instances where

the recognition of certain material as indexical was an important part of the documentary game experience.



Figure 4: Initial collaged environment design (with photo).



Figure 5: Photos presented for discovery under the introductory grime layer. The first two images are used poetically to recall moments of grimewriting experience. The last one is from Moose's practice. The images have been altered in saturation and colour balance to better blend with the 3D modeled grime surface.

In attempt to subvert the illusion of a fully rendered 3D environment (my specific concern in this case would be that by “realistically” modeling the documentary site, I would be inadvertently implying that the visual reconstruction itself contributed to documentary quality, which was not the case in this particular scenario), I initially made several attempts to foreground the constructedness of the game space. While working to create a harmonious integration of indexical material, I began to think about the parameters of “tampering” with indexical images, as many photos and audio segments brought in required extensive editing in order to mesh with the overall environment, and with the interaction itself. This was true for both photographic images (that often required significant cropping and colour correction in order to blend aesthetically with other materials); and audio clips, which lost context when edited down to smaller, more flexible, clips.



Figure 6: Interview integrated directly into the "narrative space" of the game environment (rather than presenting media in a window).

Indeed, as indexical audio tends to be long and not terribly mutable, the drastic alteration of the audio interview (see Device_Demo.mov 0.00 -0.35 on DVD) within my creation process let me to consider issues with audio documentary as a form (this observation is presented in the theoretical discussion earlier in this chapter). However the reworking of materials also opened certain creative doors—in the case of audio, presenting the opportunity for emergent layering between sound clips.

The examples found under the “Becoming Real” sketches (Chapter 5) may also be incorporated into this sketch theme.

Sketches: Playing with Data

While previous sketches incorporated traditional (or even analog) indexical material, the goal of this series of sketches was to explore digitally-native indexicality. However, this presented significant technical and conceptual challenges. Making a proposition for motion capture indexicality is relatively easy—but the specialized expertise and technical setup involved, and the intrusive nature of the technology (whether it be camera based, or using on-body sensors), creates a significant barrier to using this strategy in documentary game creation. At present, digital indexicality would appear to lack both technical support and, interestingly, creator transparency.

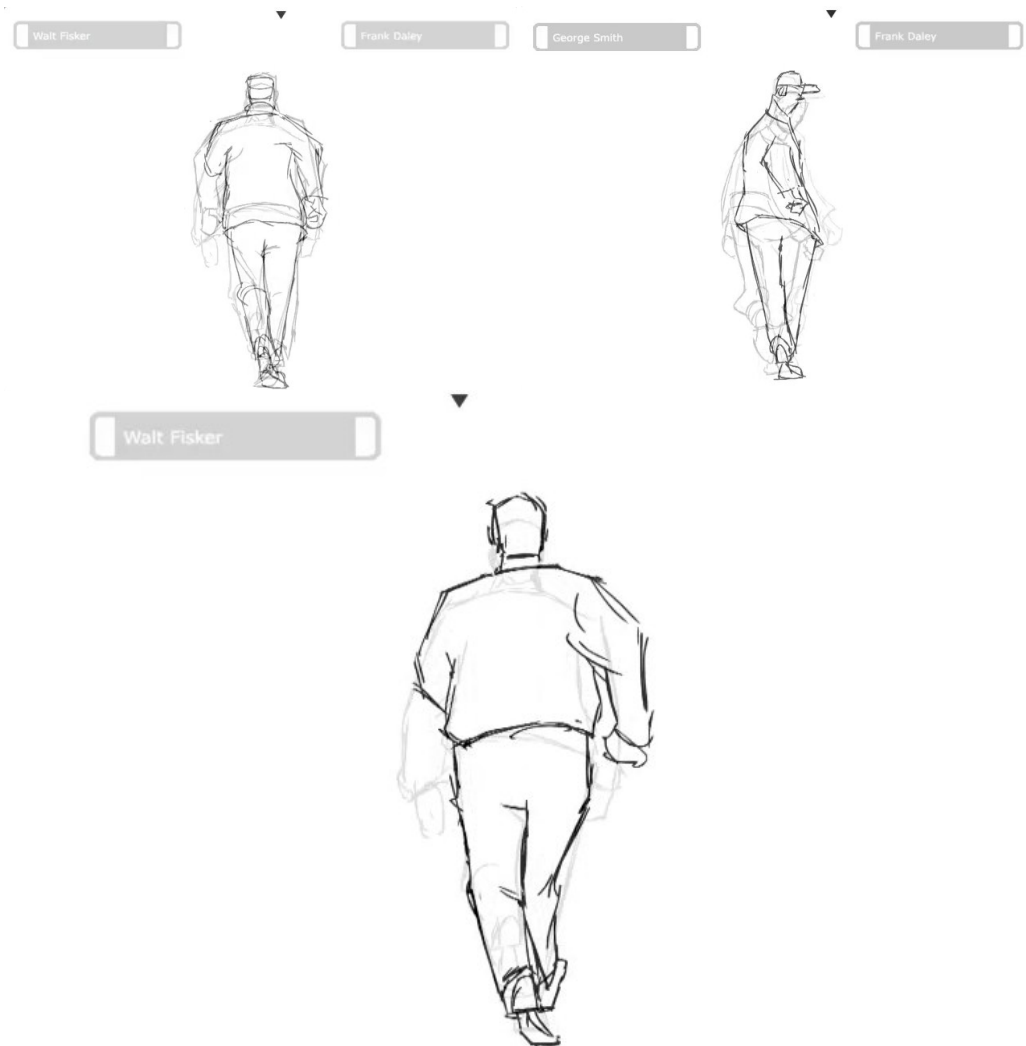


Figure 7: Alternate character subjectivities for data representation. Motion video available at <http://vimeo.com/25639859> (password docgames) and on the companion DVD.

While motion capture was not a practical option to explore, I did examine other areas of data capture and integration within the context of the design sketches. Here, two early conceptual sketches are presented. In the first, a character design adapts according to a data set—who the player is currently playing varies depending on in-game decisions they have made, and states they have brought about (for example, surviving to a certain point). This is a variant on a visualization that destabilizes the association with avatar and

performance, highlighting the “third space” rather than suggesting an immersive ideal⁶³. This sketch was a thought experiment in creating “visualizations” that work within an interactive narrative (without seeming too much like “data”). The sketch, as currently conceived, involves a rapid change in data, which would require a very specialized data set. A more likely scenario that could incorporate this concept is an evolution over time—although this could in turn create issues in maintaining dual states over an extended period (i.e. how long could you play two overlaid characters?). The construction of data also becomes evident on the production size, as much data analysis needs to occur to assign “states.”

With the second sketch—a “regriming” scenario in which a clean wall would gradually become dirty according to a data set drawn from pollution monitoring—I again found myself confronting the role of the indexical transparency ideal (in terms of documents) on the side of production. As Whitelaw has also observed in relation to visualization, the process from data to visualization is obscured to the audience, but readily apparent as a design process to the creator.

⁶³ Note: this sketch is at the stage of concept drawing (not integrated with any particular data set).

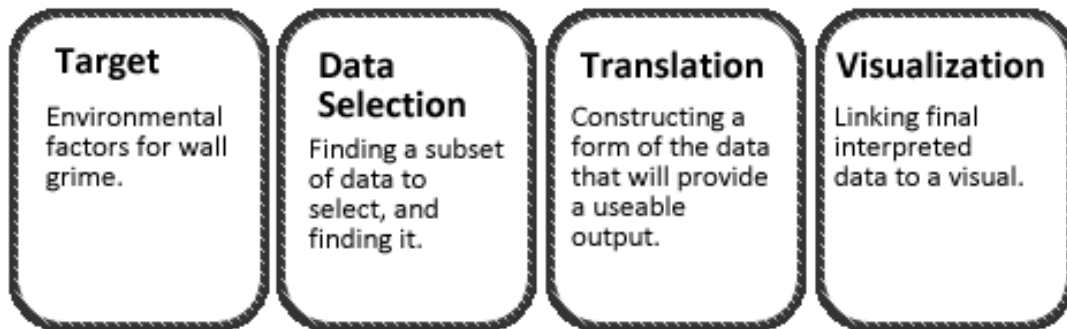


Figure 8: Processing data during the visualization process.



Figure 9: Street view: various stages of the "regriming" process, over time.



Figure 10: Environmental (air quality) data reinterpreted as a "regriming" process. The link manifests as more argumentative than indexical.

While the sketch, initially intended as a means of incorporating captured data and thus reinforcing indexicality, was ostensibly a failure (given my goal was to present a digital indexicality without the apparent intervention of a human interpretive agent), the tension between what I had thought I could do, and the dissatisfaction with having to engage in such a clear crafting process, is a significant outcome that warrants further exploration.

05 Phenomenological Shift in *Brothers in Arms*

Many of the tidbits you unlock offer genuine “wow” moments where you realise just how close the game you just played was to the real thing. (Ramsay)

Even given the reconstruction of witness vantage points, *JFK Reloaded* never quite manages to reorient the players viewing stance to the extent accomplished by the commercial game series *Brothers in Arms*⁶⁴. Yet the *Brothers in Arms* series of games do not present themselves as documentary. Instead the aim of developer Gearbox is to create as authentic an experience as possible. In other words, their goal is to produce a high level of *realism*, without having to argue things within the game are *actual*⁶⁵. This is an approach we can observe in other games that make heavy use of indexical material in the service of realism: including some sports games and music performance games such as the *Rock Band* and *Guitar Hero* series. These games are still interesting to look at in relation to self-identified documentary videogames, because while in some cases, gamemakers could present a defensible documentary claim, their material and presentation is not used in the service of documentary.

The *Brothers in Arms* series follows the true story of the 101st Airborne Division (502nd Parachute Infantry Regiment), from their initial drop behind

⁶⁴ The *Brothers in Arms* series originates with *Road to Hill 30*, and has been followed up with two sequels, *Earned in Blood*, and *Hell's Highway*. This research focuses primarily on *Road to Hill 30*, and the 2008 Wii port *Double Time*, which is comprised of both *Road to Hill 30* and *Earned in Blood*.

⁶⁵ While they might present both indexicality, and an expressive frame contextualizing this material, they do not use either resource as a basis for a claim to actuality.

German Lines on D-Day, to the later stages of WWII. In the game, players take the role of fictional character Sergeant Matt Baker, the reluctant squad leader of the regiment. *Brothers in Arms* presents a slower, more team-focused style of gameplay than many of its “run and gun” counterparts—in order for players to succeed at the various game objectives, they must use their (AI controlled) team to strategically “Find, Fix, Flank, and Finish” the enemy. Losing members of the team (before their time) seriously compromises mission objectives, which is a strong disincentive. However, upon losing a member of the core squad or failing at an objective (the two are often intimately linked), players are given the option to “correct” the narrative and revive the lost character(s). As the game reminds us, *war isn't fair, but video games should be.*

Brothers in Arms presents a meticulous 3D spatial reconstruction of World War II Europe, based on perhaps the most extensive research undertaking ever to feature in a digital game production. Gearbox programmer Corrinne Yu describes using British spy plane footage taken every three hours as a basis for one scenario design in *Hell's Highway*. Yu states wherever historical photos and footage were available, the production team felt obliged to recreate them within the game (“Operation Market Garden”). The spatial environment is not the only thing the game attempts to recreate. Producer Randy Pitchford reveals all non-player characters (NPCs) at the rank of lieutenant and higher are based upon an actual historical figure (such as Lt. Col. Robert G. Cole [March 19, 1915 – September 18,

1944], and Lt. General Robert F. "Bob" Sink [April 3, 1905 - December 13, 1965]). While NPCs at a lower rank are still based on someone (lead character Matt Baker has been described as an amalgam of several WWII servicemen), their name and personality, and various identifying details, have been changed ("Roll Call").

Like *JFK Reloaded*, *Brothers in Arms* does not present indexical material directly within its *playable* gameworld (i.e. the environment in which the primary gameplay occurs)⁶⁶. Unlike *JFK Reloaded*, it not only references historical documents, it introduces them within the game⁶⁷ in the form of unlockable reward extras. These extras including an impressive array of documents: images of original reports, letters, maps and photographs from the specific WWII scenarios being played, but also "making of" documentation of the development team's research and creation process. There are a couple of interesting ways this ties back to the gameplay experience. When you engage in play in *Brothers in Arms: Road to Hill 30*, the world you are placed in is exquisitely rendered— but this is no different than any number of games (shooter and otherwise) that take place during wartime, or even WWII explicitly. Indeed, there are countless gritty tactical shooters out there, and although the *Brothers in Arms* series has a distinctively slower-paced and team-centric style of play, there is nothing obvious in the gameplay itself that would necessarily yield the player to see through the gameworld to the actual world

⁶⁶ As noted in Chapter 4, *JFK Reloaded* does include audio recordings, but it is incorporated into the non-playable evaluation (score) section of the game, not the primary gameplay.

⁶⁷ Brian Rejack describes these extras as existing "both inside and outside the game" (416).

(excluding, of course, specific personal relationships to the game or its contents—for example, if a veteran was playing a battle in which he had taken part, or perhaps if a player was firing a weapon they had used on a firing range). The game at this point can be seen as highly authentic and richly rendered, without slipping from its status as a historical fiction.

Where things get complicated is in the juxtaposition between the archival documents in the reward screens, and the player's re-encounter with the gameworld— whether through the play of future scenarios, or in reflecting on past gameplay. A phenomenological shift is created, in which material that was unproblematically not real, has begun to take on an aura of actuality. The map that was fully designed and rendered now becomes archival surrogate— an animated means of traversing an indexical document. The AI behavior that was previously ignored becomes a re-enactment of an actual after-action report.

If when we are talking about indexicality we are more interested in a feeling or quality of actuality, than an independently verifiable guarantor of reality, then perhaps it is more valuable to consider our orientation towards the material we deem indexical, rather than an innate material indexical bond between an object and its representation. Paul Ward describes this as a shift in modality, to sober discourse, prompting documentary audiences into a way of viewing “as real” (“Animated Realities” par.15). Ward suggests if we respond to material in a way that recognizes its direct relationship to actuality, we can have a legitimate

"documentary response" to otherwise non-indexical material, such as animated documentaries or dramatized reconstructions (*Margins* 30). These materials may not fit formal definitions of indexicality, but we respond to them with the faith afforded to indexical documents (specifically, letting them ground us in the material world). Ward suggests a peculiar dialectic is set up between knowing that, for example, an animated film is about a real person, and juxtaposing or warranting the non-indexical animation with indexical material, such as voice recording (*Margins* 91).

Noel Carroll presents a theory of indexing⁶⁸, in which documentary material calls for certain modes of reception (cited in Plantigna, 20). According to Carl Plantigna, indexing is a social phenomenon, and to a degree is independent of personal uses of a text (20). So while a text could mean more than one thing given a person's viewing perspective, works that we call documentary tend to be socially agreed-upon (or debated), not contingent on each individual's interpretation. In other words, you will not expect to find the classic police procedural *Bullitt* in the documentary section of the video store simply because one recognizes a street in San Francisco where you used to live, or because you choose to use it as a document of a Steve McQueen performance. Still, while a shift in viewing orientation does not define a work (whether film or game) as documentary, it can play a valuable role in reinforcing documentary quality in conjunction with other indicators. Furthermore,

⁶⁸ Here meaning "labeling"—not to be confused with index in the semiotic sense.

such a shift is not exclusively a logical-rational process based on our prior knowledge, and/or the way in which the material is presented. In techniques such as re-photography, rotoscoping and motion capture, un-articulable qualities of real appear to bleed off of the indexical, and re-orient our response to non-indexical materials. Independent of whether the shift is brought about logically or viscerally, the response is the same: although what we are viewing does not retain indexical correspondence, knowledge of the indexical material underpinning the viewing experience triggers viewing “as if” real. Focus shifts from whether the material fits a defensible argument for indexicality, and towards its power to create an indexical effect.

Documentary animation has already taught us much about the power of juxtaposition to create a bleed-through between indexical and designed (animated) materials. In Anlända's *The Real Place*, an audio interview with playwright John Murrell is combined with hybrid animation work that integrates indexical images from photos and video, with 3D animation. In Ari Folman's *Waltz with Bashir*, (a 2008 animated film documenting Folman's traumatic experience in the 1982 Lebanon War) a live-action scene is strategically placed at the end of the film to create a shock shift in retrospective stance in relation to the film's actuality — what you have seen is real⁶⁹. This effect can even run both ways: documentation of the

⁶⁹ This is not entirely unproblematic, as Bella Honess Roe observes: “The conclusion of the film with the live action archive footage suggests narrative resolution ... The question remains, however, as to whether the inclusion of live action material negates, aesthetically, what came before” (109).

character model from the videogame *Prince of Persia*, in a sense creates the perception of a kind of reverse-effect. Instead of the *Prince of Persia*'s nameless protagonist compelling us to “see through” to creator Jordan Mechner's younger brother David (amazingly detailed in a blog set to correspond to the original 1985 development journal [Mechner]), the opposite occurs— players familiar with the game protagonist's distinct movement style can “see” the game's character in the quality of David Mechner's movements.

05.1 As-real: the phenomenological shift

Vivian Sobchack has written extensively about the way in which we are oriented towards a representation shifts according to both context and our always changing relationship to the image. Joanna Bouldin describes such a reconfiguring of the image as a *phenomenological shift* (53).

Sobchack's work refocuses what a documentary image is (in an ontological sense) to what such images come to mean based on the audience's viewing orientation (*Carnal Thoughts* 272). This is not to say documentary is wholly relative or internal to the spectator, simply that it is mutable. As we negotiate where an image “belongs” in terms of its ontological and interpretive (and conventional) status, there are cues the “right” interpretation, but these rules are not determinate of the viewer's interpretive strategy or the resultant reading. Notes Sobchack: “it is this embodied knowledge and ethical care, not some objective stylistic change in the image or in [the film's] narratological structure, that charge the image (and are

charged by it), to momentarily rupture the autonomous coherence and unity [of an otherwise fiction film]" (*Carnal Thoughts* 273). Sobchack refers, as an example, to her own personal experience of seeing the on-screen killing of a rabbit in Jean Renoir's *La Règle du Jeu*. Realizing the image depicts the killing of an actual rabbit shifts the non-fiction status of the image— for Sobchack, that violence becomes an emblem of the real (qtd. in Jordan 17). A further implication this viewing shift creates is a "documentary space suddenly charged with existential and ethical investment" (Sobchack, *Carnal Thoughts* 270). If what we are seeing is no longer "realistic," but "real," then we take on the responsibility by virtue of our co-presence on a shared existential plane⁷⁰.

The shift in understanding in relation to the image Sobchack is speaking of is not designed—simply one emerging from the intersection of the indexical materials and viewer experience. But media creators do intentionally prompt such shifts. One example would be in the use of reality-transfer techniques such as rotoscoping and motion capture. According to Bouldin, the rotoscope transfers reality from real to animated body. Bouldin frames this in terms similar to what we have seen in discussions of indexicality; "not only an imitation but an instance of contact" (51). She describes such juxtaposition as "animation haunted by the real" (52). An indexical image (in the case of rotoscoping) sits tethered to the animation, creating what Bouldin identifies as a thrill of authenticity (note this could apply to images

⁷⁰ An interesting question thus emerges in relation to documentary videogames: do these games, too, implicate us ethically? And if not, have we failed to successfully create a shift?

deemed both real and realistic). More importantly, the animation in turn anchors the meaning of the clip in the real, asking us not to project the image into the world simulated by the animation, but in the real world (Bouldin 52).

In Chapter 2, I argued techniques such as rotoscoping and data capture (including motion capture) can make defensible indexical claims, either by virtue of extended indexical chains, or due to the perception they are captured off the world by virtue of non-living agents. But even if we were to cast indexical claims aside, the ability for reality-transfer techniques (particularly ones that affect a more mutable animation) to trigger such a shift makes it a powerful tool for documentary videogames. According to Erik Marshall, tools such as rotoscoping target a “pre-rational affective register, inviting the viewer to feel as well as perceive the onscreen images” (309). Even without knowing the image origin (and this is significant, as Sobchack suggests, because it speaks to this not solely being a logical or argumentative process, but an affective one), a shift in response to the rotoscoped animation occurs— we suddenly see the real person in the image, whether it is an anonymous Polynesian dancer, or *A Scanner Darkly*'s Robert Downey Jr. The image is not just an artful illustration of someone— it IS that person (if only ephemerally).

The phenomenological shift that can emerge from rotoscoping can also be observed in motion capture animation. Alberto Menache describes his experience in a series of motion capture tests, where his production team was trying to find out if

motion capture from a human gymnast could perform an ape-like motion in a convincing way (versus motion capture data from an actual chimpanzee). Although both looked convincing as a live performance, when mapped on to a character, it was only the chimpanzee data that looked “right” — the chimp with the human data simply looked like a human in a chimp suit (63-64). Animator Richard Chuang further describes some of the perceptual issues that motion capture creates:

(T)he mass and weight of the performer almost never look good when applied to a character of different proportions" ... "the most important thing you get out of motion capture are the weight shifts and the subtleties and that balancing act of the human body. If the proportions change, you throw all that out the door, so you might as well animate it. (Menache 40)

Again, this is a good indicator of the perceptual quality invoked in the motion capture relationship. Humans are incredibly adept at sussing out minute changes in human appearance and movement, much of which occurs on a pre-cognitive level. When this perceptual information is off, it can serve to dissolve the indexical bond— but when it is right, we can recognize the actual in the animation, in ways that aren’t readily articulable. We see the real in the animation.

Composite video and photo forms also work by juxtaposing indexical and non-indexical images to shift viewing mode towards documentary. Bella Honess Roe notes the use of indexical/non-indexical image juxtaposition in the History Television documentary series *Life after People* (2008 –2010) to create reality effects:

By juxtaposing the faked indexical-looking computer animated images of the future with indexical images of contemporary examples, *Life After People* is making claims for the epistemological validity of its digital images. The impact of the digital imagery relies on it looking realistic, which in turn encourages us to believe that this could really happen. (70)

Related photographic examples include photographer Sergey Larenkov's compelling computational rephotography (or rephotographic compositing) of WWII photos juxtaposed with modern day images, Mark Klett and Byron Wolfe's *Rock formations on the road to Lee's Ferry, AZ*, or the project *Looking into the Past* by Jason E. Powell⁷¹. Each of the above projects involve the creation of photographic composites juxtaposing different time periods—evoking a reorientation towards our perception of the historical photo. While in these cases all the material integrated is already indexical, the sense of actuality is heightened through juxtaposition.

Obviously, our prior knowledge of what we are seeing, including how it has been framed, bears some influence on our understanding and expectations. Yet such a shift can occur without external warranting— whether or not we know if the image is "real" or constructed (either using traditional versus digital methods). External warranting provides a foothold that may allow the player to see the image in a documentary manner: it is not determinate. This is a way in which indexicality and shift may work in tandem – it is in the recognition of the indexical that we can

⁷¹ Note these are all composite rephotography projects—the body of general rephotography work is much broader.

extend and transfer it onto the non-indexical while simultaneously anchoring in the material real.

Familiar faces: juxtaposition and shift in Brothers in Arms

It is interesting to compare *Brothers in Arms*' approach with another popular WWII videogame series *Call of Duty*. Like *Brothers in Arms*, *Call of Duty* also seeks to situate the player in the midst of WWII by incorporating archival sound and image. According to Jaimie Baron, in *Call of Duty*, the presence of indexical material "produces a sense that the 'real' has suddenly exceeded the 'realism' of the rest of the game as the user is confronted with images of actual bodies, living, dying, and dead, rather than just simulations thereof" (304). However, Baron also notes that in *Call of Duty*, archival documents are perhaps not used indexically (indexicality not being a property of an image, but a relationship it maintains with a referent). In the context of use, these images represent a non-specific place and time, a generalized view of war. Their presence is intended to set the scene, as it were, and to situate the player historically, but not to trigger a shift. Baron notes:

Within the cut-scenes, the archival footage is heavily edited and sutured within a sequence of animated graphics. The game uses the World War II footage only as brief, jarring signifiers of 'reality' whose meaning is limited as much as possible by the images and sounds around it. ... Indeed, the indexical archival images of explosions, executions, ruins, and so on sutured into an iconic space, move by so quickly that it is barely possible to ascribe to them a meaning except in a general form, a sense of 'World War II' or a sudden, truncated emotional response: horror, anger, or pride. (306)

In other words, like the Air Force One audio in *JFK Reloaded*, the images serve to iconically represent certain phases of the war, more than indexically to connect us with to specific people and events.

In *Brothers in Arms* we see a rather different approach. The game is full of documentation, including images of the developers visiting the European locations in which the game events took place, testing weapons and recreating battle training, and gathering motion data – again, all presented in-game (albeit as an unlockable reward material). In fact, to flip the interface around would be to create something very much like a traditional documentary, with the game play segments serving to visualize the indexical core⁷².

Although several chapters unlock image sets containing both game images and modern day or archival photographs of the same location, one of the rewards for completing the mission objectives at D+1 (one day after the D-Day drop) is a series of composited images evoking a kind of rephotography, that serve as an unlockable reward⁷³. Brian Rejack describes such an instance of shift in relation to one particular scenario within the game—the death of Sgt. Baker’s long time friend George Risner after a German rocket attack disables his tank. The scene concludes with a visibly upset Baker, standing alongside the destroyed tank with the bloody

⁷² Interestingly, game footage from *BiA* was used to visualize voice-over and veteran accounts in the History Channel documentary series "Brothers in Arms" (initial air date December 18, 2005)(Antal), although sadly none of the team’s research adventures appear to have made the cut.

⁷³ As Brian Rejack describes it, "(t)he structure of this movement (playing in ignorance and being rewarded with knowledge) mirrors ... that of reenactment" (416).

body of his friend slumped over the turret. Rejack comments on how the reading of the scene shifts in relation to the composite images, aerial photos, hand-drawn and official maps, and after-action report unlocked after D+1 (“Dead Man’s Corner”) and the following chapter, D+2 (“The Crack of Dawn”):

While this scene is meant to develop pathos in its own regard (the main character of the story has just witnessed the death of his best friend), it establishes a different relationship to sympathy once we realize that the scene carefully reenacts an actual event...(P)erhaps the most striking samples are two composite images comprised of archival photographs and gameplay screenshots. The first features a photograph taken on D+4 of two soldiers inspecting the hulk of the destroyed Stuart tank. The right side of the image shows the right half of the photograph, while the left half is made up of a screenshot from the game. Inset in the upper-left corner of the image is the entire photograph, so the viewer can compare it with the digital replication of it from the game. After viewing this image, one can replay that particular chapter and essentially reenact the photograph. (416-417)⁷⁴

Rejack notes this image flags this particular scene as a historical one, and serves to further elicit sympathy for Baker’s loss.

Rejack also encounters a phenomenological shift triggered from aerial photos overlaid with locations of game combat, noting as with the image juxtapositions, the setup creates a different conception of the game’s space (419). However one of the richest juxtapositions of documents surrounds the chapter “Purple Heart Lane” (Highway N13 outside Carentan, France) on D-Day +4. After playing through the

⁷⁴ Note that while the actual photo Rejack mentions was taken on D+4, in *Brothers in Arms* the composite photo is unlocked following the destruction of the tank on D+1 (thus the discrepancy in dates).

mission objectives, players unlock (among other materials) a series of four documents: a hand-drawn sketch of Purple Heart Lane created by a soldier and found in the American national archives, the same perspective as seen from today (taken on Gearbox's research trip to France), a screen capture (again from the same perspective) of how the causeway looks in-game, and finally, a rare colour photo of the lane taken in Fall, 1944. Each document prompts its own unique interpretive position and maintains a different configuration in relation to indexicality—taken together, they create the perception of a fluctuating, multiform actuality.

Baron suggests that the separation of indexical and non-indexical materials that commonly occurs in games might be due to the interpretive disjunction they evoke, which serves to disrupt game immersion. According to Baron, “the archival footage simultaneously ‘authenticates’ the game's historical status through the production of the archive effect and the ‘charge of the real’ and undermines the user's immersion in the narrative world of the game” (305). The design sketches for phenomenological shift suggest, to me, that this is less an issue of immersion, and more of aesthetic disjuncture. The combination of indexical and non-indexical (or ambiguously indexical) representations (including sound and gesture) sends mixed signals as to the preferred viewing stance in relation to the representation. While this ambiguity can work to our advantage in terms of triggering a phenomenological shift that extends an indexical orientation onto other representations, it can also create interpretive confusion, and disrupt the creation of a harmonious existential

plane. As in the example of *Waltz with Bashir*, such a disruption can be used to create powerful experiential effects, but sometimes at the expense of a harmonious, clearly defined, and interpretively consistent storyworld.

05.2 Design sketches for phenomenological shift

The phenomenological shift design sketches explore techniques that trigger the viewing of non-indexical media “as-if” real: for example, through the juxtaposition of indexical and non-indexical media, in order to shift perception of the non-indexical. The initial design goals of these sketches were to explore creating a hybrid animated game environment integrating indexical and non-indexical materials, if not through motion capture (which again was both technically and logistically out of reach), then through hybrid video (rotoscoping), with audio narration. The focus here is not on indexical materials (although indexical materials are of course implicated), but to reframe the player’s understanding of non-indexical materials as-if real. Some of the initial questions that occurred with this design experiment included:

- On a technical level, how do you manage equipment-intensive motion capture strategies and/or the time-intensive process of rotoscoping with the now expected “lightness” of documentary technology?
- How much indexical media is necessary to transform the “artificial” media?
- How does integrating player-controlled navigation and interaction affect media positioning within a game environment?

Sketches: Becoming Real

I am interested in the poetic implications of images and gestures, “becoming real,” through gameplay. The first sketch shown here was an experiment in integrating 2D photography into hybrid 3D animated environments suitable for gaming. This work was created for, and incorporated into, a trailer for a National Film Board funding pitch. The original photo (not shown) appears in *Dwell* magazine.



Figure 11: Video of the transition can be viewed at <http://vimeo.com/5352070> (password docgames) and on the companion DVD.

The image juxtaposition created here required several iterations, because it was not evident the photographic image was an actual photo. The animator and I created several versions while deciding whether or not the “real” image should snap in, fade in, etc., so as to best create the juxtaposition effect. Using a published image

was contentious, as the image can only be cited if external, and use permission for the original image was unavailable, preventing true integration between indexical and non-indexical elements of the sketch. The juxtaposition creates a more powerful shift—just knowing it is based on an image series is not enough to trigger the same effect. Additionally, without the original image, the sketch is missing a document, Without the photographic image, the value as a recreation is only held through external warranting (although this sketch might still be viewed expressively as a spatial simulation, playing off its affective impact).

The next sketch built upon some of the insight found through the preview sketch. As a success cue, a completed image is replaced by the “real” photograph of the same design on the wall.



Figure 12: Early version: fade-to-real, incorporating text, a camera icon, and a button linking to a clearer version of the photo set.



Figure 13: Final version. Create three "mutant mickeys" and a photo appears of the actual design. More information can be accessed (if desired) via the game inventory.

This sketch built off several of the observations from the previous sketch, and tried to incorporate clearer distinguishing cues between photographic and non-photographic elements. Some of the cues I had played with included photo borders, camera icons and descriptive labels. The tradeoff appears to be a cluttering of the interface—one nice thing about the stripped down final version is that it leaves open the opportunity for an “ah-ha” moment when players realize the relationship between the image and the stencil drawings, which in turn could prompt a phenomenological shift.

Sketch: Rotoscoping

This sketch features a sprite animation constructed from a rotoscoped video lecture given by my lead documentary character (Moose) in Australia (*AgIdeas*, 2010).



Figure 14: Stills from rotoscoped Moose interview, tunnel. Original source: AgIdeas (used with permission).

With the more technically complex process of motion capture off the table, I wanted to explore the (time consuming, but relatively unobtrusive) process of rotoscoping. This had a number of practical implications to the *Grime* container project: it allowed us to salvage and integrate a relatively poor quality (but interesting) piece of video, and it allowed us to incorporate motion documentation seamlessly into the game environment without having to use a square video frame (a technical necessity on the iOS platform). The overall idea, within the game, is for Moose to serve as a companion rather than lead character, providing context for the gameplay (this mirrors Moose's role as facilitator/enabler in various grime writing workshops). As such, bringing the rotoscoped character of Moose in to offer

comments and advice worked well with the game concept. One of the interesting issues emerging during production of this sketch surrounded the boundary of indexicality: in short, how little information could I present, and still convey indexicality? The judgment criteria emerged as strongly contextual (and in this case, in part perceptual). By maintaining the rotoscoped outline, I had greater flexibility in incorporating the interview into the gameworld, while still preserving enough qualitative information to preserve the sense we were seeing a recorded interview.



Figure 15: Rotoscope in context.

The final experiment was mocking up the rotoscoped image onto the 3D character model—something I might experiment with further. Although Randy Pitchford is careful to note in *Brothers in Arms* the character team is, “not just

painting faces on a model” (“Roll Call”), the use of rotoscoping in this scenario attempts to go beyond semblance to extend the indexicality of the original video image onto an animated form.



Figure 16: Integrated character test, 3D + 2D rotoscoping.

06 *Escape from Woomera*: Performative Inquiry and the Sublime

What happens when our expressive technologies also become perceptive technologies— expressing and extending us in ways we never thought possible, radically transforming not merely our comprehension of the world, but also our apprehension of ourselves? (Sobchack *Carnal Thoughts* 135)

In the documentary game *Escape from Woomera*, players search for the means to escape deportation while being detained at Australia's Woomera Immigration Reception and Processing Centre (1999-2003), a facility that was subject to protests and accusations of human rights violations. The game world itself is re-constructed in a modified version of the story-driven first-person shooter *Half-Life*, based on photographs, first-person and official accounts, and maps the EFW Collective was able to acquire despite a media blackout surrounding the remote facility. The research informing the game also includes primary research conducted at related facilities, such as the Baxter detention centre (EFW Collective⁷⁵). Unlike *Half-Life*, primary gameplay does not involve any combat. The game is instead structured like a classic adventure game—playing as detainee Mustafa (RAR-124), players must query non-player characters (NPCs) in the facility in order to build a correct chain of dialog and action (primarily through retrieval and exchange tasks) that will advance Mustafa's narrative towards freedom or deportation. For example, by discussing plans for escape with the character Amir, Mustafa learns he is the leader of a planned escape, and that he requires a pair of pliers. By speaking to other

⁷⁵ Later identified as Julian Oliver, Katherine Neil and Kate Wild.

characters, players discover they can find a pair of pliers in the kitchen, if they can get on the work list, etc. As with many narrative adventure games, progress can at times seem oblique and circular: NPCs direct you towards other NPCs to which you can speak, send you on various errands in return for information (that may or may not be useful, depending on the order in which the information is retrieved), or turn down your requests. Many recount their own experiences, despair, and desire for freedom. All the while, an indicator in the top left corner quantifies Mustafa's slowly draining hope—bottoming out at the moment of capture and/or deportation.

Developer Julian Oliver states: "Games are an ideal medium to engage with this kind of content, better than a documentary could ever be, because to play is to become a subject of the content" (Swalwell par. 12). In other words, games construct player subjects: in *EFW's Woomera*, you are not an objective observer, but an embedded participant. But what does it mean to be such a participant, specifically an enactor, within a designed experience such as a videogame? What might this gameplay tell us about being a detainee in Woomera?

Well, the primary emerging from the gameplay is actually a sense of frustration. The player's sense of agency is undermined as it becomes increasingly suggestive that success (at least in any given playthrough) is perhaps futile, as only a specific and correctly ordered chain of events will even offer the possibility for escape. If this were a typical adventure game, we might object that the game is not providing enough support to scaffold player success, or we might blame our own

lack of familiarity with the genre. But because this *is* billed as a documentary game, we are prompted to push further. Notes Oliver: “So much of gameplay, particularly in adventure based games, is about ‘how do I get from here to the next part?’ ‘How do I move from this situation to experience something else?’ ‘How do I get out?’ That’s the frustration that is logically embedded within so much gameplay, and is actually logically embedded within this real situation,” (Swalwell par. 13). The performative outcome, the frustration, comments on the documented experience itself...even making a claim for its inherent game-like nature.

Woomera is a challenging game to evaluate, given that the work never advanced beyond the stage of single-level prototype (even if the player is successful the level ends as Mustafa succeeds in acquiring the pliers Amir had requested). As such, any reading of the game brings with it a degree of speculation as to how the final experience may unfold. According to developer Kate Wild, the original plan for later levels was indeed to include escape scenarios paralleling actual refugee escapes: “We will be keeping it as close to real life inspiration as possible because people have escaped, of course, using classic methods reminiscent of ‘The Wooden Horse,’ or ‘The Great Escape’ in terms of their ingenuity” (Swalwell par.10). On the game’s website, the EFW Collective states their design intent was to, “steer away from a value-loaded, clear-cut set of outcomes representing ‘winning’ or ‘losing’.” Instead, (we) aim to set up a simulated environment where players are empowered to explore the possibilities, to be confronted with dilemmas: ‘What would I do in this

situation? What might happen if I do that? How would that make me feel?” (Escape from Woomera Collective). However, at least in the prototype version of *Escape from Woomera*, this sense of exploration, choice, and empathy are restricted. Strangely—this is a compelling feature of the work. In fact, in enacting what seems to be an absurd game, player frustration and confusion is what vivifies the experience, moreso than a sense of presence in the game’s drab environment, or the (somewhat heavy-handed) NPC stories. Woomera succeeds less by immersing players in a physical space, or revealing truths about the logic of Woomera and detainee strategy, and more in crafting insight into the enacted subjectivity of *Woomera* refugees, read through the player’s embodied gameplay experience.

06.1 Really there?: longing for transparency

The desire for transparency is present in both documentary and videogames. In documentary, it is most apparent in the rhetoric of witnessing — the conflation of camera and viewer presence that lets the viewer observe, *really see*, the documentary subject. This becomes politically important in the case of social issue documentary, as it implies the viewer is implicated in the profilmic action, which in turn suggests an ethical responsibility to respond.

This is not simply a lack of media literacy (in most cases). This transparent viewing construct has been defended on the grounds of the camera reinvoking the act of perception. In other words, the film re-presents the image to the perceiving viewer, in the same manner as if they had been co-present with the depicted event.

While it is tempting to view this sort of “direct access” as a documentary ideal, the construct is problematic for a number of reasons. In Chapter 3, I critiqued this proposition on the basis of whether it makes sense to say such a disembodied and decontextualized surrogate perception is the *same* as non-mediated perception, creating a challenge to its indexical value. Garnett Buchardt argues that even if we accept a surrogate perception construct, the only thing we can say is true about the documentary image is that *something occurred* (438). In other words, perception is irrelevant without context; specifically the material embodiment in which we construct meaning. As such, Buchardt also charges transparency is ethically suspect, and, following Brecht and Boal, promotes an acknowledgment of the constructed frame as more ethical.

Realistically, in few cases do we truly conflate having “been there” with having viewed something in a documentary. Even if indexicality has effaced the camera as interface, most people do maintain a distinction between things seen in-person and via mediated representations, depending on context (“You *actually* saw that?” “No, but I saw it in a documentary”), suggesting a difference is both recognized and relevant. As Bruzzi notes, documentary viewers are aware of the tensions between viewing the actual and the construct of documentary— in fact, she suggests this tension is part of the pleasure of documentary (9). While we watch documentary to see “the real,” we simultaneously are aware of the fact documentary

is a created thing, a designed thing that presents the real necessarily through a human intermediary.

This distinction remains whether we're watching a film, or enacting within a simulated environment. As noted in Chapter 3, action within games is not imaginary, but it is certainly artificial. Although immersion is commonly discussed in relation to games, Katie Salen and Eric Zimmerman suggest the idea that the end-game (so to speak) of videogame progress is a play experience completely indistinguishable from the real world is an immersion fallacy that discounts our ongoing awareness (if not necessarily at the forefront of our mind at all times) that we are playing a game (451). Salen and Zimmerman stress the need to acknowledge the double-coded nature of games, which allow us to immerse ourselves deeply in play, while simultaneously maintaining such activities as being part of a game. They suggest that it is in fact this play between transparency and design that make games such rich and multilayered experience (452-453). In other words, for the game world to disappear, and for a player to "really become" a character, or "really experience" a virtual space, is a misrepresentation of the complexity of the game-player relationship, akin to the suggestion documentary audiences are "really seeing."

According to performance theorist Richard Schechner, performance consciousness is always subjunctive— awareness of contingency, alternative paths (6). We can say that game players have value in a situated perspective without having to frame it as indexical, by viewing it as part of the documentary's expressive

framing. Situated interaction is one of the more compelling opportunities presented by videogames, but it often comes paired with an unproven value proposition that situating perspective provides more agency and/or insight through active participation, as opposed to “passive” viewing. Situated interaction can actually encompass a variety of game structures, including implication within a (rational) system, performative inquiry, and immersion (transparency).

I would argue that in the context of documentary videogames, situated interaction is at its most promising, and perhaps most defensible, in relation to the idea of a documentary third space evoking both the historical actual and the embodied insight of the participant. Performative inquiry within such a situated perspective can be particularly valuable as a means in which to reflexively encounter documentary subjects, and is distinct from the kinds of imaginative role-play commonly considered with regard to videogames. In a sense, performative inquiry encompasses the double-coded nature of the game experience suggested by Salen and Zimmerman, in that it seeks insight through both the performance and the performance construct (often in an iterative fashion).

Of course, how much one is situated, and how and what performance entails, depends very much on the sort of game one is playing. As both Galloway (37) and Newman (par. 1) have identified, even within the same game (which may involve moments of passive viewing, configuration, action, reflection etc.), players are implicated in a variety ways. Enaction can also be seen as a different mode of

engagement with media (one that can be theorized in different ways in terms of effect/affect). Like indexicality, situated interaction can provide an anchoring/bond function that seems to ground the experience in the material world (through the body)— but unlike indexicality, it does not provide evidentiary value. In other words, we are not arguing for indexical “sameness” (not the “same” frustration we have simply reinstated), but for a vivication of the documents anchoring the documentary experience.

06.2 Re-creation and enaction

One of the other techniques common in self-identified documentary videogames is re-creation (event) simulation⁷⁶, similar to *Escape from Woomera*, *Brothers in Arms: Road to Hill 30*, and the event simulation (as opposed to ballistics algorithm) in *JFK Reloaded*. These re-creations, which frame the documentary experience surrounding the work’s documents, can be viewed in two broad categories: spatial and procedural simulations. Re-created environments using a spatial simulation, such as modeling real spaces within a game engine (as we saw in Chapter 1 with works such as *Gone GITMO* and *Block H*), are commonly used to situate a player spatially within an environment. Although this is a potentially interesting and modestly expanding area for documentary theory to address, such re-creations do not necessarily involve or require gameplay. Procedural simulations

⁷⁶ Simulation designed to represent interactive environments, as opposed to abstractions etc.

(specifically re-creations) implicate the player in re-performing or reenacting. The later can be further explored in the context of theoretical work on reenactment drawn from film documentary, anthropology and the performing arts.

While there are issues involved in an interactive simulation not present in a filmic recreation (which usually serves to visually re-embody an event rather than re-perform it), some of the discourse surrounding the ontological status and role of reenactment might inform how we come to understand enacting within documentary videogames. When it comes to reenactment, Nichols again stresses the distinction between indexical documents and our encounters with them. He refers to reenactment as a "vivication" of documents, but suggests this is an inherently artificial conceit⁷⁷: "Facts remain facts, their verification possible, but the iterative effort of going through the motions of reenacting them imbues such facts with the lived stuff of immediate and situated experience" ("Fantasmic Subject" 80). Nichols is clear that such vivification does not constitute an indexical bond, claiming "reenactment lines anchored, indexically, to the present distinct from the past it represents...the camera records of those we see on screen with indexical fidelity, but these figures are also ghosts or simulacra of others who have already acted out their parts" (Ward, *Margins* 52). Such enactments fulfill a persuasive and affective function, not an evidentiary one. For Nichols, "(v)ivification is neither evidence nor explanation. It is, though, a form of interpretation, an inflection that resurrects the

⁷⁷ Given the actual is only an ideal, ostensibly even for Nichols, I am unsure as to why this is particularly problematic.

past to reanimate it with the force of a desire" (Nichols, "Fantasmic" 88). In other words, it is a product of the expressive framing of a documentary work.

This is not to suggest that it does not have a valuable role to play in crafting documentary actuality. Beyond simply reanimating documentary material, vivification may also help fill inevitable gaps in understanding indexical documents:

(It) is also because the text locates on the person of its subjects, as it were, tensions, conflicts, contradictions, and paradoxes of historical moment, making them real, as though for the first time, because they are rendered with the specificity they've never had before. There is only to fear...where this impression of reality becomes credited entirely to the text... the represented instance clearly existed before the camera. But may not exist apart or presentation is the meaning, value, and affective experience of the situation or event in the subjectivity of others. History awaits us outside the text, but aspects of magnitude may be discovered within. (*Representing Reality* 236)

As Nichols notes, "What is needed beyond (a documentary's indexical core) is the vivification of existential paradox, lived contradiction itself, as tensions and conflicts that exist between the text and its world, to give form to its context and also informed the text in ways that can be apprehended" (*Representing Reality* 241).

Peggy Phelan also notes the value of reenactment, suggesting that while reenactments may be warranted by historical documents and artifacts, "the body remains the vehicle that can carry the past into the present, that can give the past presence" (181). Both Sabine Himmelsback ("Playback" 112) and Jennifer Allen (qtd. in Cook "Simulated Realities" 136) describe the body of the re-enactor as a medium for reproducing the past: Himmelsback goes on to offer it is the body that in

fact provides “a guarantor of authenticity” in terms of lived experience (112). As Richard Scheschner proposes, the reenactment is a form of “physically re/membering (= putting back together what time had dis/membered)” (48). Reenactment fills in the lived space outside of evidence and argument, restoring experience left uncategorized within logic or system— which Nichols links to Roland Barthes third or obtuse meaning (*Representing Reality* 234). Nichols suggests this is not spectacle, not facts and forces, but experiential awareness of difference knotted into contradiction by social construction of reality (*Representing Reality* 235).

Vanessa Agnew also describes reenactment as a “body-based discourse in which the past is reanimated through physical and psychological experience (330). However she goes on to problematize the construct, noting “body-based testimony tells us more about the present self than the collective past” (335). Peggy Phelan observes reenactment creates a dynamic in which “a unique body has been replaced by an endless series of bodies that are interchangeable with one another, across time and space”(179). This again speaks to “sameness,” reminding us that the original context and materiality of action are important, and are in danger of being effaced by reenactment. Nichols also critiques the ethics of reenactment; reminding us that going through the motions is its own pleasure. We submit to the psychic gratification of embodying actions within an artificial context (“Fantasmic Subject”

76). In other words, we cannot discount the role of *fun* in such performance (even in viewing such a performance), and how this pleasure impacts experience.

The ludic (re) enactor: re-creation as performative inquiry

Reenactments are often theorized in documentary more from the point of view of the observer of the documentary than on the "enactor" him/herself.

Discourse surrounding the documentary film *Battle of Orgreaves* is perhaps an exception. In the film, Mike Figgis had miners and police officers from an embattled mining town to reenact the divisive riots that had occurred in the town a decade earlier. The documentary chronicled both the reenactment, and how the reenactment process affected the reenactors, many of whom had at one point been the original participants in the historic event.

As such, the reenactment testimonials (also included within the film) become our surrogate interrogation of the profilmic event (Blackson 126). *Battle of Orgreaves* further used personal recollection rather than official and media accounts to re-inscribe/reencounter history (Blackson 127). Notes Robert Blackson, "contemporary reenactments and their means are slowly eroding the need for accountability to an original source and relying instead on the efficacy with which its performance, or the reproduction of that performance, can act as an emotional and interpretive link between the past and our imperfect present" (127). According to Blackson, reenactments hinge on the reenactor's ability to draw personal experience through a combination of lived experience and historical touchpoints:

“The degree to which performers empower themselves through layers of authenticity is secondary to their willingness to allow personal interpretation rather than verisimilitude to influence their actions...(the) shifting balance between personal involvement and the past continually shapes our regard for reenactment” (127).

While historical recreations— particularly of times and places with perceived educational value, such as pioneer villages—are common, Plimouth Plantation (MA, USA)(as described by Scheschner) warrants close examination. The village sets up its participant villagers in an *interpretive performance* in order to better simulate visitors' exchanges with the real historic participants. Village enactors are given a dossier containing a documentary biograph (what is known, current opinion and learned presumptions based on probability) and a personation biograph (dialog sample, friends names, character notes)(Schechner 84-86)— material with varying degrees of indexicality. Their role goes beyond actors, as they are asked to interpretively improvise in response to questions, based on what their (contemporary but enacted) personal experience tells them their character would do, say and think. In other words, they provide "first person interpretation" (Schechner 88). The entire experience is hypermediated (this is not an attempt at complete simulation— for example the "characters" do not live on-site, and clearly the presence of tourists is a discrepancy), and the answers provided by the enactors are not put forward as historical fact— however, the structuring of their role around

a performative inquiry designed to enrich the experience and understanding of character is one with parallels to documentary games.

Cultural anthropologist Victor Turner has used performative inquiry as a way of enriching understanding of anthropological ethnography. Turner and his wife Edith (with the help of Turner's students), established the practice of enacting, reflected upon, and iterating anthropological accounts. The primary goal behind enacting these processes—crafting, as it were, an “inside view,’ engendered in and through performance” (Turner 140)—was to reflexively find gaps in the logic of the anthropological account, and to apprehend details of it that are obscured by written accounts⁷⁸. This perspective brings Turner's concerns in line with Nichols, who notes: "What vivification involves is more closely aligned with a felt sense of contradiction, dilemma, or existential paradox" (*Representing Reality* 234).

Interestingly enough, through monitoring the successes and failures of this (re)performative approach, Turner established a preference for enacting mundane scenarios over highly structured rituals, citing the tendency for the otherness of ritual to cloud enacted understanding. Moreover, for Turner, rituals and myths "have their source and *raison d'être* in the ceaseless flow of social life" and as such are inextricable from their contexts (47-48). Turner's process was iterative: the performance itself was paired with a critique of the performance (i.e. the performance is not presumed to be actual)(Schechner 31). Turner's awareness and

⁷⁸ Although to recall Lucy Suchman, we can always devise a narrative that brings such practices to account.

caution surrounding the tendency of performance to lead to an othering or sensationalizing of experience is key. The enactments which supported insight are vivified through embodied encounters— not scenarios where we play pretend, but scenarios in which we maintain a reflective encounter that allows our experience to inform our understanding of another.

It is important to recognize that experiential or enacted knowledge need not be confined to the realm of affect. Ian Bogost notes, “all games entail some kind of subjective embodiment that transgresses the game itself” (*Unit Operations* 134), even if what we are enacting is not typically seen as a subjective experience. In other words, while it’s easy to think of performative inquiry in relation to personal subjectivity, it’s also important to consider other types of enactments, such as logical (even abstract) systems and processes. A ready example is how performative inquiry features in the forensic sciences as a means of verifying the embodied logic of the forensic account (this may involve both reconstructions and reenactments.) Bogost suggests understanding the encounter between the subjective experience of simulations and the rules and configurations on which they are based may help overcome a “simulation fever” that results from the tensions emerging between our attraction towards simulations and our distrust of them (*Unit Operations* 109). In other words, performative inquiry can act as a critical as well as an affective frame.

06.3 Documentary as sublime third space

Paula Rabinowitz suggests all documentary is a reconstruction, "a reenactment of another time or place for a different audience — a graphing of history...onto the present" (257). For Stella Bruzzi, history is "perpetually modified by its reenactment in the present" (32). Bruzzi suggests documentary viewing forms a "working reality" – a perpetual negotiation between the real event and its representation (7). This "working reality," neither in the past, nor fully engaged with the present, can be articulated as a type of third space.

Bill Nichols suggests such a third space construct is a means to distinguish the "place" of documentary experience from the place of the "actual" ("Fantasmic Subject" 80). Philip Rosen, returning to Ankersmit's notion of the historical sublime, frames this idea as a space of union between our situated contemporary understanding (in many ways contingent on our own embodiment) and a past, inaccessible reality. Rosen suggests contact between past object and present subject creates an alternate temporality that brings both into detached temporal now ("Now and Then" 34). This reflects our yearning for direct experience in documentary, despite the inevitability of decontextualization, aporia and politicization ("Now and Then" 35-36).

A sublime space apart, or third space, conception of documentary is a useful way to think about documentary without falling back into transparency fantasies, particularly in relation to enactment. Nichols evokes a third space "linking now and

then" in the case of repetitive and performative constructs such as reenactment ("Fantasmic Subject" 77). He uses the term "situated fantasmic" to describe the relationship between the enactments and the ideal of a singular historical actuality ("Fantasmic Subject" 80). Reenactments, according to Nichols, create the sense of a fold in time — a sense of breathing life into the lived experience of others. For him, this fold also incorporates the intention of the (filmmaker) and the emotional investment of the (viewer) ("Fantasmic Subject" 88).

Still if traditional documentary viewing can already be conceptualized as a sublime intersection between an inaccessible past and contemporary embodied audience, what does a game do differently? Games take what is a cognitive interaction construct in traditional documentary, and extends it into explicit interaction. They provide a compelling framework for enaction, that enables documentary experience to take place, in such a space apart. Raessens suggests that, in documentary games like *JFK Reloaded*, "players enact experiences of rupture that separated the past and present in a traumatic way. These experiences are paradoxical in a sublime way in the sense that they, as experiences that transcend the individual level, involve and unite both the loss and pain of the trauma and, at the same time, the satisfaction of overcoming these feelings in terms of precognitive historical insights" (22). The game presents a particular contact point between past and present moments.

Performed reenactments, what Schechner calls restored behaviour, can also be viewed as being part of a space apart; the sublime meeting of two points of subjectivity:

During performance, if everything goes right, the experience of synchronicity as the flow of ordinary time and the flow of performance time meet and eclipse each other. This eclipse is the "present moment," the synchronic ecstasy, the autotelic flow, of liminal stasis. Those who are masters at attaining and prolonging this balance are artist, shamans, conmen, acrobats. No one can keep it long. (113)

Schechner describes enacted experiences as transitional and characterized again by the same duality described by Salen and Zimmerman: "elements that are 'not me' become 'me' without losing their 'not me-ness'" (110).

There is no way to escape: return to Woomera

To say you are really experiencing the plight of Woomera's desperate detainees is a bit of a rhetorical overreach. It seems closer to say, in the spirit of a documentary third space, that the player experience in *Escape from Woomera* vivifies the documentary content (which is in this case recreated in a spatial and procedural simulation). In *EFW*, there is little direct contact with the historical, material world of the Woomera detainees. Although the game is constructed on the basis of primary and secondary research⁷⁹, there is little attempt within the game itself to bridge what we see in the game world to this research and documentation. As such, the game lacks the kind of material anchoring that indexicality provides,

⁷⁹ To a limited extent, this research is revealed via the game's website.

and does not prompt the kinds of phenomenological shifts found in *Brothers in Arms*. Given that several facilities were researched, at best Woomera is an amalgam of places and experiences. This starts to pull us closer to the systems-focused, generalized simulations of a game like *SimCity* or *Civilization* than the specific actualities of documentary.

Some of my own questions about *Escape from Woomera* as a performative inquiry centre on this difficulty in gauging the actuality of the represented context. Perhaps one underappreciated feature of the motion picture documentary is its ability to carry with it a degree of representational excess. Regardless of what the documentarian intended to capture, we find additional visual details, expressions, sub-audible comments – in other words, a richness of representation beyond the explicit intent of the documentary creator. In a game, we are seldom confronted with such excess revelations—in fact, knowing we are in an explicitly designed environment flags everything as intentional, if not meaningful. For me, a striking moment researching *EFW* was finally seeing physical images of the facility while watching video footage of riots at Woomera—in particular, the incongruous bright murals adorned the walls. This filmic Woomera contained information that was perhaps incidental to the gamemakers intentions (and given the logistics, including resource and technical concerns, involved in the production of videogame spaces, close attention often needs to be paid to the level of detail which is possible to produce), but which, for me, was an evocative detail bypassed by the game (Who

created these murals, and to what ends? How do they play against the experience of the detainees?). The reductionist nature of simulation is well known and unavoidable (as was discussed in Chapter 3), but for documentary — even if we discount simulation as a document— it carries additional significance in its potential to influence performative inquiry.

Several other aspects of working with the game engine also have unfortunate experiential consequences that threaten to override the design goals of the game. While the game’s explicit content speaks to the dehumanizing effects of being known as just a number (RAR-124), walking through the facility players repeatedly encounter “Detainee”—a generic character type which does not provide information and simply asks to be left alone. One soon learns that it is named characters that provide stories and information, and guards that provide access – but that the typical detainee simply fills out the space. This crafts a very instrumental perspective on the experiential space—then again, perhaps one that aligns with a clear and desperate goal such as escape. Dialog with characters is presented in multiple choice, typically including a dialog option in which the NPC shares a personal story (ostensibly based on an actual detainee experience, but this is not made clear either within the game or on the website), and a dialog option that advances the player’s current quest(s). However because the game is time-based (the “hope indicator” really serving as more of a clock), there is actually a disincentive to engaging with character stories, unless there is a clear instrumental

detail embedded within (e.g. the character needs a particular item). While the game's hope-based timer initially works on a metaphoric level (there is a sense of urgency not based on running out of time, but running out of hope), through gameplay this indicator serves to formalize the fluctuation of hope, rather than having it emerge experientially (which I would argue it does). This creates moments of disjuncture, where the player may finally feel agency in having laid out their escape scenario, only to have the game tell them they have lost all hope⁸⁰. These elements of the game frame are conspicuous enough that they pull attention away from the represented experience (out of the third space), and towards the game itself (our present experience as game players).

Moreover, instrumentalizing and/or formalizing affective aspects of the experience works to disrupt the function of the game as a performative inquiry (Manuel Sicart has suggested this in relation to ethical engagement (43), but it applies broadly). I am not ethically implicated in my own enacted experience, as the game will tell me whether or not I am feeling hope, despair, boredom, or whether I feel a longing for conversation or connection, and quantify this accordingly. *Woomera* becomes less about the embodied insight created by enacting the experience of detainees, and more about advancing through the adventure game.

⁸⁰ The unfortunate part about this game/experience mismatch is that there is actually a very real time constraint on the character—Mustafa is about to be deported—which is causally disconnected to hope (i.e. he's not being deported *because* he has lost hope).

To what extent does our experience of *Escape from Woomera* allow us to critically appraise our presumptions of the experience of refugees in Woomera? For Turner, the design of a performative inquiry was necessarily iterative, as we uncover not only a better understanding of the account, but presumptions and bias we have build into the enactment itself. In *Escape from Woomera*, we can iterate our performance, but not the model. In fact, Kate Wild had originally hoped to allow modifications to the game itself (Swalwell par. 14), before funding was cut off to expand the game beyond the prototype level. In its unfinished state, *Escape from Woomera* emerges underdeveloped as a documentary performative inquiry. Lacking a strong indexical bond that would ground the game in the real, the game's strongest claim to actuality rests on the frustration and futility evoked by enacting the various information and resource exchanges from within the facility. Through navigating official and de facto folk bureaucracies recreated from the research, the frame that emerges for players is that of a discouraging game—a telling, but underdeveloped, assessment of the Woomera experience.

06.4 Performative inquiry design sketches

The performative inquiry design sketches employ strategies that look to craft an embedded or internal viewing position (in contrast to an objective observer construct). They primarily use gestural interaction as a means to re-incorporate materiality into the interpretation process. Some of the initial questions for these sketches include:

- How do we evoke the feeling of grime writing?
- How can the documentary material surrounding this gesture change the way in which we better read what it means in context?

Sketches: Using touch to vivify content

These sketches use the touch interface on iOS platforms to create different experiential effects: to evoke both grime drawing on different surfaces, and power-washing. I decided to pick up the theme of performative inquiry on a much smaller scale than the “event” simulations present in many documentary videogames. Here, the touch itself is part of the “vivication” of the indexical documents. It is not meant to simulate the (rational) experience of grime writing, but rather, to connect a banal experience (cleaning and markmaking) to the practices depicted in the documentary. Being able to use “touch” (or in fact any tactile input) rather than “sight” is, in and of itself, a unique approach to documentary.



Figure 17: The introduction presents a more freeform, paidia style of interaction, to maintain focus on the touch gesture itself.

One issue that readily emerged with this sketch is that touch screens (at least the ones found on today's commercial devices) are really good at evoking certain touch experiences, but not others. The smoothness of the screen makes fog and steam drawing experiences readily accessible—but perhaps not the rougher surfaces that require intense cleaning. Originally, I wanted to explore the feel of scrubbing (and the images and perceptual qualities it evokes) on different surfaces. However the resistance needed for certain surfaces (e.g. concrete) are difficult to simulate, and I reached a point of diminishing return on effort. Had I been framing this in my own mind as an event simulation, I might have continued to push towards simulation fidelity in terms of surfaces, but in relation to the experiential qualities of cleaning, I felt I could work within the affordances of the device and still meet my design goals for this sketch. The conceptual framework and case studies gave me a

better way to think through the nature of this component, and to make design decisions accordingly.

Powerwashing is more of a functional gesture, intended to piggyback on the established grime trace gesture (i.e. this extends from the same action). Here, sound came to the forefront: the shock of the equipment volume more valuable than the accuracy of the sound. However work still needs to be done on visually representing the power (and thus control issues) of the equipment (possibly using initial particle effects on the spray). While there is some manner of spatial simulation involved with the sound (for example, the motor plays from behind; the spray in front), the goal is to suggest the experience, without explicitly “simulating” it.

The decontextualization created by both the game and the physical qualities of the device in some cases constrained my ability to represent gestural parameters, similar to *Brothers in Arms* (which again, lacks situated context surrounding the gesture performance). For example, at one point when I was trying to compensate for a lack of resistance and pressure on the interface, I varied the opacity of the drawing area in an attempt to simulate pressure. While somewhat effective (although the lack of resistance became more apparent) I found I didn't *want* to press down on the screen, lest I damage it—which drew unwanted attention to the device itself. Temperature also made it easier to represent certain gestures over others—the cool iOS screen seemed, by default, to evoke glass or metal (smooth, cool surfaces). Key experiential factors surrounding, say, the power washer, also had

to be tweaked for “best feel”—the sound shock of the power washer eventually dulls down, but an overly loud initial volume, while it creates the right initial effect, simply encouraged people to remove their headphones in initial testing.

I also used gesture to try to vivify some of the stencil documentation (again, I am thinking of this as enlivening them not as they were [an accurate recreation], but in a space apart). This, perhaps more than the free-hand drawing, created a tangible sense of satisfaction in seeing the profound impact these sharp designs made on the surrogate dirty wall.



Figure 18: Powerwashing on wall

While the stencils are traced off of the original wall designs, in future versions of the drawing interface I would like to emphasize an explicit linkage between images stenciled on the wall, and the stencils available in-game—again, in

an attempt to create some degree of indexical bleed between the photographic images and the stencils, and ideally, the phenomenological shift explored in Chapter 6.

07 Conclusion

Index, Shift, Perform: revisited

While the preceding three chapters explored particular configurations of the indexicality/framing dynamic that supports the crafting of actuality in documentary videogames in relation to specific documentary videogames, we can also see ways in which these themes resonate within our other game examples.

Tracy Fullerton and Ian Bogost also engage *JFK Reloaded* as a performative inquiry, and draw experiential conclusions accordingly. In *JFKR*, players are viewing not from an (artificial) objective position, but from an (artificial) subjective or embedded position. Perhaps as a result, Bogost and Fullerton both read the game as a simulation of Oswald—a mental state simulation. States Bogost: "Without a doubt, it is disquieting to take on the historical role of Lee Harvey Oswald, seeing through his eyes in the rifle sight. But such an experience offers new insights into the political context for the historical event itself." He notes the "chilling feeling of the assassin's psychopathy," and the precision and depersonalization of the action "*further emphasizing the simulation of the psychopath-assassin*" (*Persuasive* 133, italics mine). Fullerton approaches the game from a similar direction, noting how "deeply disturbing it is to play this particular role" (20). However, we might question the need to pretend you *are* the character to this end, as this goes beyond mere speculative role play connected to the documents, to an interiority that is given weak evidentiary backing, outside of videogame genre conventions. The game

proper does not in fact name the “Oswald” position at all, nor does it go to any length to establish character cues to this effect. The help page does state that you are “*taking the role of Lee Harvey Oswald*” (italics mine)—not that you *are* Lee Harvey Oswald⁸¹. An alternate reading could be that players are not “role-playing” Oswald at all, in the immersion-oriented roll play sense used by Bogost and Fullerton. Instead, by engaging the historical record, the game places the player in a performative inquiry role similar to that of a forensic investigator.

Brothers in Arms: Road to Hill 30 is an interesting example of both phenomenological shift and performative inquiry when considered as a multi-platform work. In particular, the series emerged on the Wii in (2008) as “Double Time,” incorporating much of the content of *Road to Hill 30* and its successor *Earned in Blood*. The promise of the Wii version lies in the potential for performance of the gestural commands — the silent hand motions that a squadron commander would use to communicate with his team. This is first interesting as a document of gesture— presuming that the Wii gestures maintained a documentary quality and historical fidelity. However, gameplay issues predominate. The accuracy of the gesture is necessarily compromised to ensure gameplay, and furthermore, is recognized under alternate criteria— not a judgment of sameness or differentiation, ground in experience, but the need to hit internal gestural points (velocity, direction, x/y position).

⁸¹ The help instructions further distance you from Oswald later in the passage, clearly separating the positions of “Lee Harvey Oswald” and “you.”

But perhaps the purpose of the gesture is not to be indexical, nor even a surrogate reality as experienced through phenomenological shift, but to be part of a performative inquiry. How does enacting the gesture contribute to a more embodied understanding of the wartime battlefield, in conjunction with the hybrid performance spaces presented in the *Brothers in Arms* series? In this case, I found that my attention was drawn more to having the computer correctly interpret my performance, than to what my performance might tell me about the time and place I was experiencing in *Brothers in Arms*. The disconnected embodiment also removed the context of such gestures—I can only presume they were used in actual battle to communicate silently, on a mass level, across mid-range distances. These conditions do not accompany my re-performed gesture, despite how immersed I may be in a scenario. There is no contrast to a shouted order, no risk of being “overheard.” In fact, there is little sense the German army is not an AI, perhaps one I should also be watching for verbal cues and gestures. Nor do I encounter any information that would create a phenomenological shift surrounding the gesture: information and/or documentation on the role of the gesture is absent from the in-game archive⁸².

Still, there are moments of promise. As I raise my arm to lob a grenade behind a low wall, my arm feels suddenly exposed (my player-character simultaneously rises to throw, momentarily exposing themselves to enemy fire). As such, I am not compelled to consider wartime sign language (indexical weight), but

⁸² The core game was adapted for the Wii by third-party developer Demiurge Studios, not original developer Gearbox.

my interpretation now considers corporeal space in a way the visual depiction alone did not do (expressive weight).

Real|Unreal: A Summary

Through the past six chapters, I have noted the changing cultural role of the videogame, part of which is driven by an increasing appreciation for the power of the game as an interactive form. I have examined how documentary, which crafts actuality through a relationship between indexical media and expressive framing, could be medium independent in so far as a medium maintained these qualities (acknowledging a bias towards the originary medium). I identify two key challenges: demonstrating indexicality in the digital medium, and leveraging the expressive potential of the game form, and offer suggestions to help games address some of these emerging issues within the epistemic culture of documentary.

I then used this framework to present an analysis of three documentary videogames that pick up interesting aspects of the indexical/expressive relationship: *JFK Reloaded*, which uses an algorithm as the indexical grounding in a re-engagement of a popular archive; games in the *Brothers in Arms* series (particularly *Road to Hill 30/Double Time*) which, by juxtaposing extensive archival and making-of documentation with third-person gameplay, create a phenomenological shift in which we view the later as-real; and *Escape from Woomera*, which enables an experience-centred performative inquiry within a re-created environment. In conjunction with these three analytic case studies, I also

present a practice-based case study (distributed through three thematic chapters) consisting of topical design sketches within the context of an original documentary videogame, with a goal of moving beyond known methods and exposing practical challenges of documentary game creation.

By interweaving framework, analysis and creation, the goal of this study has been to give documentary videogame creators the theoretical, analytic, creative and pragmatic support needed to further exploration of the genre. In doing so, I have developed a framework that in fact transcends this niche genre, and allows us to re-evaluate:

- opportunities for digital indexicality,
- phenomenal hybrids; and
- means of vivifying contact through enaction.

Vivian Sobchack observes:

Each technology [photographic, cinematic, electronic] not only differently mediates our figurations of bodily existence by also constitutes them...Each implicates us in different structures of material investment, and— because each has a particular affinity with different cultural functions, forms, and contents— each stimulates us through differing modes of presentation and representation to different aesthetic responses and ethical responsibilities. As our aesthetic forms and representations of "reality" become externally realized and then unsettled first by photography, then cinema, and now electronic media, our values and evaluative criteria of what counts in our lives are also unsettled and transformed. (*Carnal Thoughts* 136)

In the documentary videogame, enactment (mediated through computational media), vivifies indexical and surrogate indexical documents with embodied experience. This in turn provides an evocative object from which to think through the ways in which we see the real through such performative mediated forms. Moreover, they reveal aspects of our relationship with indexicality that transcend the genre, and can inform moments of documentary experience in videogames even when not framed in relation to their actuality.

07.1 Final reflections on design sketches for documentary videogames

One of the most challenging aspects of production on the seven design sketches in *Real/Unreal* was grappling with the issues emerging from the constructedness of the game production. While I had anticipated challenges in incorporating indexical materials into the videogame, I was not prepared for the particular issues involved in digital indexicality. I was somewhat heartened to see Whitelaw's comment echoing my own uneasiness with the sudden non-transparency of data I encountered in the process of design:

These works gather existing data...already, unproblematically, "out there." This reinforces the sense of collapsed indexicality; these data points have causes (authors) of their own that in some sense guarantee their connection to reality, or at least defer the question of that connection. Data's creation—in the sense of making a measurement, framing and abstracting something from the flux of the real—is left out. (par. 10)

It was easier to craft a sense of *viewing* transparency in relation to the sketches relating to digital indexicality (sketches that were later abandoned in relation to *Grime*), in part because computational media can maintain a similar detachment from human creation to many of the technologies employed in documentary: it presents the apparent (non) intervention of a non-human agent. Yet since the constructedness is readily apparent in the *production* process, I found the active crafting of indexicality and, ultimately, actuality, seemed to go against the spirit of letting the world speak for itself. I hadn't considered that the illusion of transparency worked on both ends, and found I longed for transparency on both the side of creation and production.

What can *Real/Unreal* contribute to a documentary videogame design toolbox? I hope to provide a starting point in terms of ways of naturalizing data within the videogame, without obscuring the indexical chain. The fade-to-real ("becoming") dynamic, I find, presents a potential way to contrast between playing a game and engaging in a documentary experience. Although I was careful not to treat my documentation as innately compelling, I was inspired by *Brothers in Arms* to use of epistophilia as part of the game's reward structure. In evaluating potential sources for a documentary videogame treatment, I found myself seeing not one game, but many potential games and dynamics emerging from a documentary subject: focusing on spatial simulation, telling a story ambiently (i.e. not linking the gameplay to an explicit systemic element of the story: but, not conflicting with it

either), finding enacted elements (including gestural enactments) that can reinforce a non-fiction narrative, and, of course, identifying systems or process implicated in the documentary subject.

The conceptual framework helped guide the design process throughout. The framework made visible, for me, reasons why I should *not* try to simulate the environment—I wasn't evoking spatiality, and the event simulation held little indexical value. So, for example, I didn't ask players to recreate the entire wall as a central game goal (although perhaps it could be one of several gameplay variations, outside of establishing documentary quality). Instead, I could shift focus on what I wanted to express about elements that had a stronger and/or more apparent indexical defense.

Still, in creating this work, it became obvious that videogames were working against the grain when it came to documentary (as a result of the many biases of the form). As such, it seems likely documentary games will take a niche role, barring a revolution in tools, processes and culture (both in relation to documentary and digital games). It is a complex and challenging process to make a videogame, and a risky and time consuming process to make a documentary; so one can be forgiven for an aversion to, not only combining the two, but taking on the burden of crafting actuality. Although this is a negative assessment, it is my hope that further research will be carried out on techniques and approaches that ease the incline towards documentary quality in videogames.

07.2 The future of documentary videogames

Documentary games test the boundaries of what we expect from videogames, and as such, the debates surrounding such works are significant. Arguments around the validity and value of these games impact the development of games as a whole, as they reveal popular attitudes towards videogames, have regulatory implications, and impact the perceived boundaries of ludic expression. This research is vital in ensuring informed opinion drives this dialog as the digital game matures, particularly with regard to the ethical implications of documentary games and the social impact of “playing” with reality. Games have tremendous potential to delight, inform and educate, and alternative games initiatives such as documentary games, even if limited in commercial potential, are essential in showcasing these strengths. If games are, as anticipated, to continue their development as a pervasive and influential form, we are foolish not to explore their full representational potential.

Through both the research-creation process itself, and the dissemination of this research in both documentary and digital game contexts, it has become clear that changes in technology, practice, and documentary institutions need to take place in order to support the creation of videogames that satisfy the conceptual, technical and ethical criteria outlined in *Real/Unreal*. In future research, it would be valuable to take a closer look at the underlying infrastructure of tools, processes and community necessary to facilitate the creation of original documentary works in the form of videogames.

The history of documentary production presents a number of examples in which technological innovations are implicated in a shift in practice—the most commonly cited example being the role of lightweight recording equipment in the rise of the observational documentary (Nichols, *Representing Reality* 33; Winston “Scientific Inscription” 43). Indeed, technology development continues to feed into the documentary narrative, including current concerns with the impact of digital production tools on documentary legitimacy. Still, while documentary technology plays a prominent role in the form, it is only in relation to the practices and community that surround it. Documentary videogames currently suffer from not only a critical lack of tools and technologies for production; but also appropriate models for practice, and peer and institutional support. Fortunately, many of the seeds for said technologies and practices already exist, but are currently put towards the design of fictional works within animation, digital games, and media arts. Future research should investigate the ways in which this knowledge might be adapted and transferred for use in documentary videogames.

While the most obvious use of games in documentary might be to comment on something’s inherent “gameness” (usually in the negative) the expressive potential of the form need not be limited to self-commentary⁸³. A variety of approaches have emerged in current documentary games: in terms of player performance (*Waco Resurrection*), participatory gamemaking (*Medieval Unreality*),

⁸³ Note this exists in traditional docs too, most of which are narrative. This also yields reflexive docs that are up front about having made a “story” out of their subject.

re-creation (*Block H*), autobiography ([*domestic*] – Mary Flanagan) and data-driven simulation (*JFK Reloaded*). Yet the genre of documentary games has stagnated after an initial crop of games, many of which (such as *Waco Resurrection*) are no longer considered documentary by their creators⁸⁴. This presents with an opportunity to step back and consider our future course. By explicitly designing this study as interventionist, *Real/Unreal* strives to influence future design and reinvigorate documentary game production and debate.

One question perhaps persists: are games appropriate for documentary? Games are designed experiences that, while set apart from everyday reality, maintain the power to create moments of connection with the actual. Both indexicality and expressive framing are pre-conditions of documentary that transcend medium and to some extent form. What is most interesting, however, is the way in which their interrelationship plays out in different contexts (videogames being one). The game suggests to us what the document means through a computationally-mediated experience it helps define.

In contemporary culture, the profusion (and perhaps diffusion) of indexical signs makes documentary (and other forms of framemaking) not less, but more pertinent. This is perhaps one of the contributing factors in a recent burst of activity surrounding documentary media making—from the boom in technology-assisted

⁸⁴ For example, Brody Condon has said that while *Waco Resurrection* was conceived as a “subjunctive documentary” and uses strategies from documentary practice, he does not consider the resulting work documentary (Clarke 91).

citizen journalism, to database documentary, to documentary animation and even “docu-tainment” such as reality TV. This expansion of the possibility space of documentary opens the door to experiments with documentary games. It also forces us to confront stereotypes about documentary, and to think seriously about the ethical implications of our practice. The novelty of new documentary forms does not negate the responsibilities inherent in representing real people, places, or things. Both a better understanding of documentary practice within the gamemaking community, and a better understanding of the ways in which games impact the documentary experience within the documentary community, are essential to the success of documentary videogames as a genre and creative practice.

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Appendix A: Documentary Videogame List

The following list was compiled from 2005-2010, and includes games that either self-identify as documentary, or have been referred to as documentary or documentary-like.

- In the Balance (Take Action Games)
- Six Days in Fallujah (Atomic Games)
- The Cat and the Coup (Brinson and ValaNajad)
- Block H (Denham)
- Medieval Unreality (Czegledy and Engeli)
- Escape from Woomera (EFW Collective)
- EyeWitness (Hong Kong Polytechnic Institute)
- JFK Reloaded (Traffic Games)
- Kuma\War (Kuma Reality Games)
- Under Siege (Tahta al-Ramad)(Afkar Games).
- Paris Riots (Michel Kast [Sylvain Gaillard]).
- Super Columbine Massacre RPG! (Ledonne)
- Waco Resurrection (c-level)
- [domestic] and [rootings](Flanagan)
- FF56! (Lauer Learning)
- Pax Warrior (23YYZ)
- 911 Survivor (Cole, Caloud and Brennon)
- Cast-offs from the Golden Age (Swalwell and Loyer)

- Docks Dispute (Gough-Brady)
- The Cassandra Syndrome (Lowik & Coptor)

Appendix B: Design Document (*Grime*)

Character:

Grime is a documentary videogame on the work of UK-based grime writer Paul Curtis, aka Moose. For the past 11 years, Moose has been creating designs in public space using everyday, environmentally friendly cleaning methods. In many ways, Moose is the ideal “reverse” graffiti artist—he is in his 40s, broad and jovial, and works primarily in broad daylight. His work, itself not illegal, draws attention to both the pollution that defaces our environment, and the general response to (non-sanctioned) public art.

Moose is not a playable character within the game. Instead, Moose takes the role of a supporting non-player character; assisting the primary character (who remains ambiguously defined and anonymous) in their grime writing challenges.

Gameworld components:

- 1) The game space consists of hybrid animation including an audio component, photography and rotoscope. The playable environment is currently conceived as a scrolling [but actually spherical] space that continually changes and evolves as the player/user progresses;
- 2) Grimescapes (staged access to shared/sharing of grime designs);
- 3) Inventory (for lack of a better word): essentially, all the admin screens (equipment, rewards, achievements, etc.).

Gameplay (descriptions):

Note: *The purpose of the very first ‘levels’ are to teach players how the basic gameplay works without having a formal set of instructions. They can also set up Moose as a character.*

Examples:

1: As Moose talks⁸⁵ about how he got into grime writing, a basic gameworld emerges piece by piece on the screen. Player must drag their finger across the screen from left to right to keep things progressing. (Goal: teach players they can draw on the screen by dragging)

2: [Example] Moose talks about watching the patterns created on walls of a Leeds tunnel by passing drunks. Player’s gesture evolves in to creating these marks (i.e.

⁸⁵ Note when I say “Moose talks,” I’m picturing using some of the documentary audio track and maybe rotoscoping some video, or having Moose appear in a monitor or on a poster (represented in the on-screen world, in other words), or even be a voice in the player’s mind.

their simple clean line is now the mark left by a drunk bar patron). First change in the game dynamic: player recreates the marks left on the tunnel by nudging patrons into the wall to copy the pattern.

3. [Example] Moose using just a stick to create a design on a street sign. Gameplay becomes two-stage: 1) find a useable object and 2) scrubbing a [simplified] pattern with it⁸⁶. The story snippet in this case would come *after* the solution, not before.

4. (2 stage) Choose stencils and powerwash (scrub over the stencil to create the image); this could be adapted to a multi-stage process where you have several stencils or techniques to create one design. A time constraint would add an additional challenge, and create a sense of urgency that mirrors atypical interventions in public space.

Other story/game possibilities⁸⁷:

Ongoing gameplay can be made up of a combination of performance (e.g. *recreating* a pattern) equipment (e.g. *wearing* hi-viz vest), strategy (e.g. *leave and return* to avoid detection) and dialog (e.g. *choosing* the right thing to say to the cops)

So, for example, play can be designed around:

- Particular patterns or combinations
- Being stealthy (or otherwise “getting away with it”)
- Poetics (mapping message to space)
- Emergence (finding your path as you design)
- Response (building on or subverting other work)
- Appropriation (using tools in unconventional ways)

Beyond the game: Grimescapes and real-world Intervention

Completing any game ‘level’ awards player/users a set of tools (equipment, skills) they can use to complete both upcoming ‘levels’ AND apply to various user-contributed Grimescapes⁸⁸.

⁸⁶ This would be similar to some of the brushwork challenges in the game *Okami*.

⁸⁷ Everything would be based on Moose’s designs and process.

⁸⁸ It would be easy enough to enable a cheat code to circumvent this – they do something similar with the game *Brothers in Arms: Road to Hill 30*. Officially, you have to complete a game mission at a certain level to “unlock” archival WW2 maps, audio, images, after-action reports etc. the development team used to build the level (in other words, you win access to it), but there is also a cheat code if you want to access it directly. The theory behind earning it, though, is that player/users who earn access to things tend to be more invested in them—since it’s their reward and all—and they have a deeper appreciation for the context behind it.

Scenario 1:

- 1) Player completes gameplay/story about creating designs using stencils;
- 2) Player is awarded “Stencil-Building” and is given access to a library of stenciling tools;
- 3) Player can use stencils in future game challenges AND/OR
- 4) Player can design and use stencils to envision designs in various Grimescapes;
- 5) Player can save and upload said designs to the community.

Scenario 2:

- 1) Player completes gameplay/story about creating a message that plays off a particular space (e.g. rising Thames obscuring/revealing a climate change message);
- 2) Player is awarded “Backgrounder” which allows them to see context related information on the game spaces (Who polluted it? Who is invested in this space? What happens here?);
- 3) Player is given access to (OR perhaps is allowed to add) Grimespace info;
- 4) Player has the ability to tag their design influence, (and perhaps link their design to other similar designs).

Community Mobilization

Player/Users accessing the Grimescapes are not only allowed to browse contributed designs (and perhaps at a certain level “respond” by reworking or making alternate suggestions to a design), they can propose Mobilizing in order to implement a design. This would allow them to use the information in the game/app to connect with other player/users for specific grimewriting interventions.

Game Inspirations

Graffiti Games:

Jet Set Radio/JSRF (skating and tagging),

Jet Grind Radio (DS)(pattern matching and skating),

Mark Ecko's Getting Up (fighting, loose narrative discovery, some design tracing)

Documentary Games:

JFKR (vantage points),

Brothers in Arms (RH30)(photo recreation and juxtaposition)

Gestural Games:

Okami (physical swoop [particularly for Wii]),

Elite Beat Agents (beat matching taps, drags, etc.)

Gestural Apps:

iSteam

iFog

Appendix C: Production Credits (*Grime*)

Game Design and Conception: Cindy Poremba

Starring: Paul Curtis (Moose)

Programming: Henk Boom

Programming: Stephen Ascher

3D Animation: Mohannad Al-Khalid

2D Animation: David Barlow-Krelina

Research: Heather Kelley

Sound effects: AudioSparx

Music: Alexander Boyes “Calm” (Creative Commons, used with permission)

Interview clips:

Jennifer Leonard. “Podcast: Paul ‘Moose’ Curtis” 13 Aug 07, *Worldchanging* (used with permission)

Moose (Paul Curtis). Lecture, *AgIdeas* 2010. Melbourne, Australia (used with permission)

Photos: Moose (Paul Curtis). Used with permission.