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\{ Explicating Interactivity \\
    in the Digital Documentary \}

// Hali Dardar
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Explicating Interactivity in the Digital Documentary

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SUMMARY

The literature review explicates forms of interactivity to analyze the emerging digital documentary field. Historically, documentary theory grows to accommodate the unique aspects of technical innovation. One unique aspect of digital New Media is the ability to interact. The explication describes interactivity for the emerging digital documentary form.

The study reviews interactivity's impact from the perspective of documentary scholars. The resulting considerations are viewed in current digital documentary projects. The resulting aspects of interactivity are studied through a cross-field review of interactivity applications in New Media.

The study explicates three forms of interactivity defined through interface science, user communication, and game narrative. The interactivity theory is applied in contemporary studies of telepresence, cultural communication, and non-linear narrative. The New Media studies are framed in documentary studies to comment on the aesthetics of reality, the documentary as an autobiography, and the subjective documentary essay.

The analysis suggests interactivity is a unique aspect of the digital documentary form. The use of interactivity creates a unique documentary experience in all three processes reviewed. Interactivity has shown the ability of digital to redesign the documentary form. This permutation of interactive technology shows emergent innovations in which could redefine reality, question communication, and fragment plot in documentary theory.
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INTRODUCTION

Digital documentaries apply New Media innovations to produce an innovative format of documentary expression. The result is a use of interactivity as an aesthetic in the expression.

BACKGROUND TO THE STUDY

Digital documentaries stretch limits of the cinematic documentary form by incorporating New Media communication and interface styles. Digital documentary projects, such as the Soldier Brother (2012), Bear 71 (2012), and @Sweden (2011) are similar to film documentaries in narrative rhetoric and focus on the portrayal of reality. However, these digital documentaries display narrative rhetoric and realism in a unique form. The digital documentary portrays originality in its non-linear, modular structure. The New Media structure strains the limits of cinematic theory, obliging us to consider New Media interactivity as a part of documentary aesthetic.

This study questions what is unique in the innovation of non-linear, modular digital documentary form. There is a historical relation between technical innovation and documentary theory (Beattie 2004). Aspects of the new technology reform expression. (Corner 2000) Similarly, the innovative use of interactivity in the digital form changes documentary practices. (Renov 2003). This change is also reflected in theory. This study argues innovation in the digital form will change documentary theory. The digital form will use interactivity in narrative aesthetic. This presumption is based on observing how the innovation of broadcast media and compact film equipment have changed documentary theory in the past (Barnouw 1993). New technology in film and
broadcast expanded the documentary use, which lead to increased subjectivity and a stricter analysis on the idea of actuality. This pattern can be seen to continue through New Media evolution. This evolution requires examining New Media elements in documentary studies (Nash 2012).

A unique quality of digital documentaries is the viewer’s ability to interact (Nash 2012). Interactive digital projects such as *Bear 71* (2012), *@Sweden* (2011), and *Soldier Brother* (2012) are modeled in a documentary style of projecting captured events as a narrative expression of actuality. Each of these projects use New Media towards the documentary goal of creative expression in the digital form is unorthodox. *Bear 71* uses interactions in virtual landscape to move narrative, *@Sweden* uses collective opinion to produce contextual reality, and *Soldier Brother* expounds non-linear arrangements to create subjective experiences. These projects use interactivity to express documentary forms. This study weaves New Media interaction theory into documentary studies to question what is unique in the digital documentary form. This exercise presents case for including New Media interactions into documentary theory.

**Problem Statement**

The cinematic documentary is an established, studied field; however, there is a void in academic material linking documentary and digital theory. (Nash 2012) Particularly lacking are studies of interaction. Cinematic groups such as International Documentary Festival of Amsterdam, and National Film Board of Canada have canonized digital forms into documentary studies. This industry acceptance presents the opening of a new frontier of expression. As more documentaries such as *Bear 71*, *@Sweden*, and *Soldier Brother* surface, there is a curiosity to further understand the impact of
interactivity on the documentary. Research material linking digital interactivity and documentary fields notes the lack of literature, and the importance of further review (Nash 2012). Digital documentary expression will expand with the further understanding of New Media interactivity. This study anticipates the expansion of this expression, and explicates the function of New Media in the field of documentary.

RESEARCH QUESTION

This study investigates what is unique about expression the digital form. The work of Leanne Allison in Bear 71, The Svenska Institute in @Sweden, and Kaitlin Jones in Soldier Brother present creative chimaeras of technical innovation and narrative expression. The projects display innovative methods to create documentary form for the expression of actuality. These methods, and subsequent expressions, have unique qualities that should be further considered in documentary theory. This requires explicating the digital innovation of the documentary form, which raises the question,

What is unique in the digital documentary form?

Sub questions:

Explicating digital innovations begins with understanding past innovations. This studies first approach to understanding the unique aspects of the digital documentary is to question the following:

1. When in the past has technical innovation changed documentary expression?

Understanding the past gives context to the present. The examples of Bear 71, @Sweden, and Soldier Brother all display the current aspects of New Media in
contemporary digital documentaries. These are excellent examples to the current use of New Media in documentaries. These examples approach what is unique in the digital documentary form by asking the following:

2. Which aspects of New Media are present in the digital documentary form?

The present and past frame the future of digital documentaries. The section investigates the New Media aspects or interface, communication, and narrative reflected in contemporary digital documentary examples. The last approach to what is unique to the digital documentary form contrasts three New Media concepts with past documentary theory to ask the following:

3. How do aspects of New Media reflect innovation in documentary expression?

**Research Hypothesis**

The expression and capture technology of film is under constant innovation. (Barnouw 1993). As interactive practices emerge from the New Media form, it is enlightening to include New Media concepts, particularly interactivity, in the documentary form. This study proposes digital form will innovate the documentary to include New Media concepts. Specifically this study investigates ways interactivity can redefine narrative expression by providing non-linear, parallel communication experiences.

**Motivation**

This study presents a literature review describing innovative aspects of documentary artistry in the contemporary digital form. The objective is to examine the emerging New Media phenomenon and explicate its relevance to the documentaries aesthetic art form. The literature outlines the emerging digital documentary field. This exercise will
produce a framework of technology’s impact on documentary theory, an analysis of the use of New Media in the digital documentary. The research should contribute to an emerging field, and presents a cross-study methodology. The outcome of the study is a literature review of emerging New Media concerns.

ASSUMPTIONS

This study assumes the successful use of a New Media aspect in interdisciplinary research can translate into application documentary studies. This study does not presume success of a New Media aesthetic principle equates to a successful documentary. It does assume the use of a New Media concept can transfer into documentary studies.

It assumes digital programming can be perceived through art criticism. It assumes that the formulation of computational programs is an aspect of the expression, not simply the structural framework. The digital form is based upon code generated by a human, and is therefore an extension of artistic poetic expression (Massumi 2002).

Filmmaking studies artistic expression of technological form (Beattie 2004). This study assumes all documentaries are a form of artistic poetic expression, and most have the underlying aim to express a perception of reality (Beattie 2005).

OVERVIEW OF METHODOLOGY

The research begins with the question what are the characteristics of the digital documentary. This question is framed in a historical overview of documentary film as the predecessor to the digital documentary. The framework is then applied to elements in current digital documentaries. From this analysis, a literature review explores
related New Media concepts in computer science, communication, and literature. This study aims to identify New Media aesthetic design relevant to documentary studies to further explicate the field.

In summary, the research hopes to contribute a solid basis to study the digital documentary by dissecting elements of interactivity design. The analysis of New Media applications in the documentary form should help develop an academic genre to discuss digital documentaries in future studies.

**Organization of the Thesis**

The study is organized into three sections: a historical introduction to innovation’s role in documentary theory, an analysis of digital documentary use of innovative interactivity, and a literature review of interactivity theory as it relates to documentary innovations.

The first chapter considers the historical pattern of technical innovations as a factor in documentary studies. The chapter will consider three past technical innovations causing a theoretical shift in documentary studies. The goal is identify examples of technical innovation, and identify characteristics of digital innovation. This should highlight aspects of digital innovation which could be infused in documentary theory.

The second chapter integrates the New Media characteristics defined in chapter one into existing digital documentaries. The section presents three examples of digital documentaries and describes their use of New Media characteristics. The goal of the analysis is to illuminate how New Media characteristics form innovative aspects in the digital documentary.
The third chapter presents a literature review of relevant New Media concepts based upon the New Media characteristics analyzed in contemporary digital documentaries. The literature review aims to explore three elements of interactivity that are seen in the digital documentary form. The goal of this chapter is to explicate three elements of interactivity in contemporary digital documentaries through a literature review of narrative, communication, and computer science practices.

The study compiles literature and insights which can apply to the criticism and analysis of interactivity as a digital design aesthetics.
CHAPTER ONE

THE HISTORY OF DOCUMENTARY TECHNOLOGY

SUMMARY

The history of documentary traces a history of technical innovations. This progression can be observed to form a prediction on the digital shift in documentary theory.

The premise states technology is a factor changing documentary film. This concept is founded on reviewing history of documentary film through technical innovation. The chapter discusses technical innovation shifting documentary film in the past, and digital innovation shifting contemporary documentary film. The following historical framework presents a description of the current state of documentary theory in relation to past technical innovations, and the contemporary digital documentary. It concludes that digital innovation includes interactivity in documentary form.

DEFINITION OF KEY TERMS

It is imperative to define the terms documentary, digital, technology, innovation, interactivity, and New Media in the context of this study.

John Grierson coined the widely accepted definition of documentary as the creative treatment of actuality. (Grierson 1966) Apart from this, documentary film aims to capture and present in a form to instruct or display an actuality (Barron 1968: Jacobs 1979). According to the encyclopedia of film terms, a documentary is, “A non-fiction film” (Beaver 2009:76). Documentaries are usually shot on location, and display real characters. Beaver states that documentaries focus on historical scientific, social, or
environmental subjects (Beaver 2009:78). “[Documentary’s] principle purpose is to enlighten, inform, educate, persuade, and provide insight into the world in which we live” (Beaver 2009:78).

Interactivity, by Chapman’s definition, “allow[s] some manner of direct audience engagement” (Chapman:Aitken 2005:626). Interactivity is “allowing for a degree of difference each time a piece is viewed or even, in some cases, participation in its development (Chapman: Aitken 2005:626).

Human computer interactivity defines the aesthetics of New Media. New Media is the genre of communication and expression that is based upon digital presentation. Cultural theorist and media scholar Pierre Levy describes how the ability to invisibly mediate user actions defines New Media. This mediation realistically stimulates interaction. According to Levy, New Media transforms specific cultural habits. “The techno-cultural environment that is emerging... gives rise to a new art forms, ignoring the distinctions between emission and reception, creation and interpretation” (Druckery:Levy 1996:367).

How this simulation affects documentary practices is approached through literature in Chapter Three. This approach is dependant on the dissection of contemporary New Media practices in Chapter Two.

**MEDIA ARCHEOLOGY**

The discussion of documentary past follows the development of cinematic technology. Media historian Erik Barnouw mentions three phases of the film/technology relationship; the reconstruction, the observation, and the participation phase. (Barnouw
1993) He follows the advent of the documentary from silent movie, filmed narrative, voiced interviews, synched audio, camera mass production, and television broadcast through the mechanical apparati used to create them. Barnouw concludes that the changes in film are directly caused by film technology, social industrialization and strengthened communication (Barnouw 1993).

From the 1920s to 1930s, the genre of documentary film became an established, small form (Jacobs 1979). In documentary film’s infancy; direct cinema artists played the role of uninvolved bystander in the creation of their films (Barnouw 1993). This is characterized by the director’s lack of involvement in the documentary content. The director was considerably more responsible for context, which was present in editing post-production.

In the early years of film, the technology of sound was not possible. Film was a montage of content edited through the view of the creator. During the 1950s, the observer phase, documentarians began to introduce speech into films (Barnouw 1993). Richard Leacock and Robert Flaherty wanted the documentary to better react to the world. Their aversion to the traditional voice-over began a quest to synchronize sight and sound (Barnouw 1993).

Barnouw suggests the advent of voice audio in film significantly changed the form of the documentary (Barnouw 1993). Before speech, documentaries consisted mainly of filming actions, then the editor manipulating the images to create a narrative (Kline 1942: Jacobs 1979). By 1961, the microphone and video synchronized and separated to produce a documentary with synchronized sound on wireless microphones. The synchronization of voice and sound in recording technology blurred separation between
documentary content and capture technique. Synchronization negated the need for re-enactments. This new technical innovation questioned whether re-enactments were a valid form of documentary expression (Kline 1942: Jacobs 1979).

“But talking human beings with their own, spontaneous talk were not puppets, as experiments were demonstrating. In a sense they began to take control away from the director” (Barnouw 1993: 235).

Artistic control over the real continued to be challenged throughout the history of documentary film. The role of the artist developed from uninvolved and unseen, to involved and heard. The shifting roles described in the first stage are exemplary for the broader development in the following two stages of Barnouw’s documentary history of innovation. As an example, Barnouw states Jean Rouch broke out of the observer documentary role by becoming involved in the film, and involving subjects in the review and creation process (Barnouw 1993). In exemplary films such as Chronicle of a Summer (1960), Rouch concerned himself with creating moments of revelation (Barnouw 1993). He became interested in documentaries in which characters drove the piece more than the director (Barnouw 1993). Lightweight portable equipment reduced the impact of the documentary process on the situation by reducing crew (Jacobs 1960). Thus cinéma vérité was coined to label the type of cinema directly participating in a situation (Jacobs 1979). Cinéma vérité, or “truth cinema,” was a Jean Rouch’s term for the film movement projecting genuine situations and moments with poetic license. “Cinéma vérité was committed to a paradox: that artificial circumstances could bring hidden truth to the surface” (Barnouw 1993: 255). It further involved the filmmaker in the responsibility of processing function while creating form.
The 1960s brought an influx of mass communication methods in the form of television broadcasting and affordable film tapes (Sloan 1964; Jacobs 1979).

“During the 1970s the base of documentary activity was dramatically broadened by the rise of video... As this required no processing, and tapes were simple and easy to use, a single individual could now be a production unit” (Barnouw 1993: 287).

The access to film and medium broadened the field of individuals whom described themselves as film artists (Barnouw 1993, Sloan 1964; Jacobs 1979). Mass interest and use allowed documentaries to expand into a form of social action. For guerrilla documentarians, “Tapes were not merely programs, but links in a chain of social action” (Barnouw 1993: 288). This expansion changed the relationship of director from personal characters as direct operators of the cinematic voice, to the distanced voice linking content. This innovation materialized in form wit Navaho Film Themselves (1965), a series of seven short films conceived by Sol Worth and John Adair. The documentary series gave youth of the Arizona Navaho tribe cameras, and asked them to film themselves. Thus the director was able to insert a device into a situation, filming without directly observing (Renov 2009). The youth had a biographical advantage over the director in their hereditary involvement in the documentary subject. Worth and Adair were able to use this organic perspective to display organic content unavailable through the director’s direct lens. Michael Renov notes this ability to distance creator creates a biographical moment in the documentary. The distance blurs the line between subject and event.

As mediation became less intrusive, it became possible for both the crew and characters
to overlook the camera’s presence. The mediated presence allowed actuality to be naturally reproduced. Documentary evolved to consider film and technical ediation used to cultivate an ecosystem of actuality. Documentaries of this time began to discuss the removed position of the artist. Documentary studies noted the camera created a subjective participation. Filmmaking changed from artist rendition of reality, to a realistic rendition of filmmaker’s experience (Barnouw 1993).

Barnouw describes the relationship of technology and documentary by focusing on observer, catalyst, and guerilla methods of documentary capture. The observer phase first questioned was the artist’s role in creating real from actual through editing and sound modification. The catalyst phase questioned the artist’s role in stimulating or creating the event through the use of synchronized portable film equipment. The guerilla phase questioned the relevance of objectivity through electronic film’s ability to disperse and create a throng of subjective encounters.

Barnouw’s description of how documentary method shifts with technology is echoed by Beattie and James P. Werner. Documentary film and social science professor Keith Beattie observes the symbiotic relationship between technology and society. “Technology is not exterior to society but is a constitutive feature of society and culture” (Beattie 205). Werner’s article, Post-digital Awareness, describes the shift in culture from materiality to temporal experience of visual communication (Werner 2005). The temporal influence has in turn transformed the view on participation.

“Audiences’ conception of the immersive situation in art demands that new forms of tangible, spatial interaction take place” (Werner 2005: 170).
CHARACTERISTICS OF THE PRESENT SHIFT

DOCUMENTARY REALISM

The precise characteristics of this new form of documentary is the topic of contemporary shift in documentary. The next section will outline three characteristics as proposed by documentary scholars.

One characteristic is the diminished reliance on the visual aesthetic as the filmmakers channel to express actuality. Digital representation has the innate ability to condense life into binary. This allows for the simple manipulation of image, sound, and actuality. Documentaries must find a method to authenticate the experience reality to the digital audience. Beattie considers how the ease of manipulation in digital media can create conflict in the accuracy of portraying reality (Beattie 2004). He argues that digital form is easy to manipulate. Manipulation, duplication, and additive edits are normal procedures in digital processing (Beattie 2004). Instead, Beattie claims the documentary is based on visual and auditory evidence. He is concerned that ability to manipulate digital data creates an unreliable medium for documentary. The concern shows how the technology must make a shift in its aesthetic principles to compensate for the digital ability to distort reality. Even through the reluctance to praise the form, Beattie acknowledges the power and prospect of the digital documentary.

“Throughout its history, documentary representation has been linked to changing technologies- the invention of color and sound film, portable cameras, 16mm and 8mm film stocks, video and the camcorder have all impacted variously on the documentary representation” (Beattie 2004: 205).
Beattie considers how computers, the Internet, and digital media will contribute to documentary evolution (Beattie 2004). Modern consumer culture is significantly documented through digital filming technology (Kitzmann 2004: 56). Unlike photography or film, the digital medium's accessibility and manipulation erode its validity as real.

“For many interpreters, the potential of digitization to erode the bond between image and referent jeopardizes notions of realism thereby disrupting the basis of the entire documentary tradition. According to such estimations one effect of digital revolution in media is that seeing is no longer believing” (Beattie 2004: 213).

Beattie sees the contemporary innovations leading documentary aesthetic to rely less on photographic, visual information to convey actuality. However, the specific permutation of this yet to be defined. This permutation will be defined in chapter two.

**DOCUMENTARY ESSAY**

Another characteristic of digital interactivity is the modular and dynamic essay form of expression. Film scholar Timothy Corrigan's 2011 book *The Essay Film* describes how cinema can take an essay form. An essay is a loosely bound subjective exploration. The cinematic essay is an expression based upon documentary, avant-garde, and narrative principles which restates ideas (Corrigan 2011). Corrigan defines essay film as the use of a personal perspective to narrate a complex activity for public experience (Corrigan 2011). The rise of essay film began in earnest in post-war WWII France. The rise of subjectivity steered the exploration of narrative documentary models (Corrigan 2011). Essay films are characterized by a subjective perspective and a loose narrative structure.
The lightweight Arriflex, and 35mm Éclair Comflex recording technology allowed for such subjective exploration (Corrigan 2011). Technological advances bring upon a shift. “Durable, lightweight, mobile, producing instantaneous results, the video apparatus supplies a dual capability well suited to the essayistic project” (Renov 2004:186). Corrigan’s book explores how the concept of essay can be extrapolated to the digital documentary shift. Digital means allow an essayistic form as it expounds on free structure and the expression of subjectivity through media argumentation.

Corrigan notes the essay form has not been a popular film form in the past. This could be from the difficulty to present a dynamic argument in a static form. Film exists in an intricate, linear form. Digital technology uses a non-linear format. The shift to a digital documentary form holds promise for the construction of documentary essay. The digital essay allows for a personal subjective view open for audience interpretation and addition.

Corrigan’s essay form empowers the digital documentary as it delimits the subject and narrative salience from the documentary construction process.

**DOCUMENTARY AUTOBIOGRAPHY**

Another specific characteristic of digital technology is an accurate portrayal of self. “It is both screen and mirror, providing the technological grounds for the surveillance of the palpable world, as well as reflective surface onto which to register the self” (Renov 2004: 186). Renov considers how the digital form shifts documentary creation. (Renov 2004). He considers the mass use of digital technology as changing film capture. The prevalence of digital capture and distribution changes the manner people perceive being
filmed (Renov 2004). He speculates that the rise of digital technology will shift documentary into an autobiographical form (Renov 2004). This form is based upon the user’s ability and interest in digitally portraying themselves. The concept expands on how technology decreases limitations of documentary portrayal.

Renov begins the discussion of digital documentary by recognizing the potential of the media as essay and autobiography. According to Renov, self-acknowledgement was not accepted during direct cinema (Renov 2004). However, the use of electronic filming devices allowed for the creation of subjective temporal expression.

Much like the essay, the digital autobiography presents a form of cinematic expression through multi-media accounts of personal experiences. He further articulates possibilities to include Web sites in the genre of autobiographies (Renov 2004).

“It turns out that writing, as well as photography, film, video, and the digital arts, provides some of the building blocks for personal web pages, which are decidedly composite structures” (Renov 2004: 237).

The Internet shows resurgence in the autobiographical form. Contemporary Western culture features personal autobiographies as a part of culture. Users hourly, weekly, or monthly transcribe actions and emotions into digital accessible interfaced for the purpose of self-reflection, communication, and artistic expression (Kitzmann 2004). Contemporary digital programs such as Twitter allow the user to communicate instantly and permanently in written thoughts.

The personal website may provide a unique discourse method of the autobiography (Renov 2004). Renov establishes a parallel between personal websites and a video
graphic autobiography (Renov 2004). He argues the digital realm allows for immaterial production of contextual materialization (Renov 2004). These materializations are both transcribed and presented in the same media.

It is an unusual circumstance in film documentary to feature the filmmaker as subject (Renov 2004). This argument creates the possibility for the autobiography to become a feature of film (Renov 2004). Renov states digital technologies, specifically of the Internet and the webpage, “Have radically altered the culture of autobiography in the late twentieth century” (Renov 2004: 232).

However, Renov still refuses to acknowledge digital expression as an extension of film (Renov 2004). Though he steers away from stating the personal website is an autobiography in itself, he recognizes autobiographical elements in the digital media.

“Indeed, it might be more accurate to say that the Internet has absorbed, rather than displaced, prior representational forms in a media setting that emphasizes speed of transmission and breadth of accessibility” (Renov 2004: 237).

The documentary is vulnerable to be absorbed by mass communication’s participatory features as it migrates into a digital form. Renov’s separation is a wise precaution, as it would tarry into the reclassification of the genre of media. Nevertheless, personal autobiographical websites and the Internet can be an interesting mode of documentary study (Renov 2004). Documentaries in the digital form have the capability and
interest in creating realistic mediated autobiographic expressions.

The digital display can be integrated in the procession of documentary film. The future of the documentary form remains in the prospect of technical innovation, artist access, and viewer interest. The study and criticism of film progressed with the innovations in the equipment of expression. The advent of synchronized video, the use of 35mm, the popularity of broadcast television as a channel, and the convenience of digital film all questioned the genre. John Corner also took this forward view in the advent of television and its role on documentary display (Corner 2000). Documentary professor John Corner studies how television impacts the documentary’s expression of real.

“My use of the idea of ‘post-documentary culture’ is not meant to signal that documentary is now finished but to signal the scale of its relocation as a set of practices, forms, and functions” (Corner 2000: 13).

Digital film, image, text, and spatial data can now be coded and arranged through three dimensions to produce a new mode of access. The digital form brings to the discussion the limits of the genre documentary film, and the changes technology will imprint on the artistic expression of film (Corner 2000).

Renov’s proposition of film as autobiography is hinged on the filmmaker’s self-inclusion in technology. New Media’s acceptance in contemporary society provides a unique characteristic of autobiography. This can be used in the digital documentary.
CONCLUSION

The last chapter discussed how technical innovation marks a shift in documentary theory. Three scholars considered possible changes of the digital form. Beattie described how the performative interaction with the documentary could be considered a new form of exploring reality. Renov discussed how the acceptance of the form could facilitate an autobiographical documentary. Corrigan considered how the documentary could become a form of experimental essay.

All three analysis are unified in considering New Media as a candidate for acceptance in the documentary canon. Contemporary scholars Renov, Beattie, and Corrigan agree aspects of interactivity will also impact the shift in the critical analysis of documentary. These aspects of interactivity can be addressed by observing current practices in digital documentaries.
CHAPTER TWO

INTERACTIVITY IN DOCUMENTARY

The previous summary considered several characteristics of New Media’s and ways they may impact documentary theoretic. The chapter discussed the history of documentary using Beattie, Corner, Barnouw, Renov, and Corrigan’s observations. It outlined characteristics of the shift in documentary theory due to aspects of New Media interactivity. The study first presented the digital realm as a technical innovation to documentary. These characteristics included theories of documentary as displayed reality, documentary as essay, and documentary as autobiography.

This chapter intends to identify the characteristics of New Media innovation in contemporary digital documentary projects. This concept will be discussed through an analysis of three digital documentaries’ methods of achieving interactivity. This analysis will outline questions on the direction of study for the literature review.

FUTURE OF DOCUMENTARY

Before considering examples, it is imperative to identify these documentary examples as documentaries. Documentary scholar Kate Nash seeks to contribute to the discovery of digital possibilities. She outlines four concepts which bind digital documentaries. Digital documentaries use interactivity. They are related to cinematic documentaries, but digital documentaries also possess unique aspects. Nash considers the web documentary as a vague addition to an ambiguous field (Nash 2012:197). She begins to integrate documentary theory with interactivity studies. The study compares the
cinematic to web documentary as a natural transition, similar to the film to broadcast transition. Nash notes digital documentary experiences are not solely housed on the World Wide Web. The web documentary differs from the broadcast or cinema as the user plays a significant role in the information presented (Nash 2012:199).

Nash states digital documentaries rely on interactivity. Interactivity is described as the users ability to control content. She defines the field of web documentary through the audience interactivity, considers the impact of the web documentary, “New Media technologies and new forms of communication emerge, contemporary documentary makers are engaging in a process of actively re-thinking the documentary project” (Nash 2012:197).

Digital documentaries are related to cinematic documentaries. The study concludes web documentaries resemble cinematic documentary in production process, theoretical conventions, and general purpose (Nash 2012). She notes the independent producers of documentaries are now producing web documentaries (Nash 2012). These web forms have similar goals of expression as the broadcast documentary counterparts. Very often the text of a web documentary pulls from television and cinematic documentary influences (Nash 2012:198).

Digital documentaries possess unique aspects. Beyond the aforementioned similarities, Nash cites Beattie in claiming the performance and interactivity in web documentaries create a unique experience. This experience is maintained by interaction with the web documentary space (Beattie 2008 qtd. Nash 2012). She defines the following three types of interactivity: consumer interactivity, processor interactivity, and generator interactivity (Nash 2012:199). Consumer interactivity is a situation where static,
unchanged content is digested by the user. This can be understood as a user clicking through a web page. Processor interactivity is a dynamic system relationship where the user is given limited contribution rights. This can be understood as a user having limited participatory rights on an established website. Generator interactivity is a method where the user is responsible for populating the event with activity and content. This can be seen as a user freely participating in site creation.

“The theoretical challenge ahead is to refine our understanding of interactivity and to consider the kinds of frameworks that might foster critical engagement with its use in documentary” (Nash 2012:199).

Digital documentaries have unique characteristics. Nash considers film studies as a comparable perspective to address web documentaries. According Nash, the web documentary is a collaborative structure (Nash 2012:200). Key elements to shifting the web doc structure are user community, interface, and narrative structure. She contends that the effectiveness of the web documentary depends on the audience communication with the web experience (Nash 2012:200). The interface of the documentary will greatly control the user experience (Nash 2012:207). Narrative structures in web documentaries will use a central narrator to connect the causal nodes of the web engagement (Nash 2012:204). This narrator could either be the creator, the user, or another individual.

Therefore, a digital documentary can be identified as a use of interactivity for traditional documentary representation. This is possible as web documentaries strive for the goal of representation.
**Documentary Application**

There are a growing number of documentary projects that are assuming a digital form. These can be analyzed as digital documentaries. The study will analyze New Media interactivity in current documentary projects. It will introduce three digital documentaries; *Bear 71 (2012)*, *@Sweden (2011)*, and *Soldier Brother (2012)*. These three documentaries were chosen based upon acceptance by the contemporary documentary film canon.

Two film studies institutions accept new digital forms as an extension of their artistic aims. Two of the documentaries studied are extensions of these institutions. National Film Board Canada is arguably the oldest public production studio (Cox 2006). In 2008, the department launched an interactive documentary database. The interactive documentary department funds emerging digital documentary forms. Similarly, the International Documentary Film Festival of Amsterdam began IDFA Doc Labs. The festival created an award for fully digital, interactive documentaries.

The three documentaries raise concepts of interactivity to be questioned. The goal is to observe interactivity theory in the digital documentary form.

The following three sections analyze *Bear 71*, *@Sweden*, and *Soldier Brother* respectively. The following summaries are structured into three parts; a review of digital characteristic raised in chapter one, a summary of the documentary, an analysis of digital method, an application of characteristic into method, and a final summary of implications of this application. The summary of implications strives to highlight areas of further research to be covered in the literature review.
**BEAR 71**

Beattie describes how performative interaction in the documentary could be considered a new form of exploring reality. He considers the possible negative aspects of the digital documentary. He states that digital innovation allows for greater manipulation of the reality. “Seeing” as no longer “believing” in digital manipulation (Beattie 2004). The focus turns away from visual aesthetic, and towards realism through interaction. Digital expression appends documentary theory by adding interactivity as a new aesthetic principle of documentary presentation.

*Bear 71* follows a female grizzly bear tracked from 2001 to 2009 by Canadian Wildlife officers in Baniff National Park (*Bear 71* 2012). Director Leanne Allison, and interactive artist Jeremy Mendes, used this data to create a digital documentary following the surveillance of the bear tagged number 71. Leanne Allison colligated data from ten-years of scientific observation via motion-triggered conservation officer cameras (*Bear 71* 2012). The project is a collection of data presented digitally over the web. It is available for open viewing and use at National Film Board Canada’s Digital Interactive studio site.

The documentary features a collection of Lo-fi surveillance footage, still images, officer videos and logs. Participants are shown an introduction video then led to a digital reconstructed map of Baniff. Elements are presented through an interactive recreation of Banff. This interactive map is a stylized graphical representation of the elevation and geographical landscape of the area. The live map features live trajectories of trains, automobiles, and animals through an elevation map. The main feature is reconstructed placement of wildlife surveillance cameras. Clicking on these icons brings lo-fi
surveillance videos, images, or data collected at the specific location in Banff National Park. The audience is free to explore by navigating through the map. The audience can follow paths of the bears, rabbits, and cars as they move through the landscape and cameras of the Banff Mountains. It stylistically features traffic municipal information of the surrounding urban area. The narrative is a subjective ‘autobiography’ of the life of Bear #71 based on wildlife observation data. The narrative is a scripted, first-person narrative written by J.B. MacKinnon and spoken by Mia Kirshner. Periodically throughout the exploration, omnipresent bear tagged 71 narrates an account of her life in the area. The project is twenty minutes of free exploration with an audio narration. The audio narration, introduction, and final scene cannot be changed by the user. After timed exploration the project immediately cuts back into a video, forcing the audience to a specific conclusion to the project. This is relevant as interactive navigation is the aesthetic which steers the expression of documentary footage.

THE INTERACTIVE INTERFACE IN BEAR 71

Nash states the interface of the documentary will greatly control the user experience (Nash 2012:207). Bear 71 provides an example of a digital documentary using the aesthetics of the interactive interface. This interface is used in the documentary to present an expression of actuality. Interactivity allows the user to follow the narrative of the bear by navigating the map. Navigation allows the user to mentally and physically follow the narrator’s path. The documentary focus is to display the amount of human tracking available in the wild (Bear 71 2012). The interactive navigation interface allows the user to get a sense of the wildlife surveillance system by walking through the park and noting the density of cameras.
Unlike cinema documentaries, the expression of reality is not a visual montage in this digital documentary. Visual information is of second importance to the user’s interactive navigation. The documentary relies on the interactivity of user navigation to present a performative access to narration. This documentary is interesting as its use of a map to distribute story is significant as it relies on an interactive collection of media forms to produce narrative immersion. If Bear 71 can use many media forms to create narrative immersion, the question arises of what is necessary to create immersion using interactivity as an aesthetic?

@SWEDEN

Renov describes the ability for the digital documentary to create autobiography. This ability is possible as the same device is used to interact and transcribe. Digital communication allows both real-time communication, and long-term database storage. The combination allows for realistic, autobiographical interactivity.

@Sweden (2011) is an interactive, community archived Twitter account describing the “Swedish experience.” This experience being a broad attempt to contextualize Swedish culture to a contemporary globalized audience. Part cultural documentary, part ethnographic archive, and part social media advertising ploy; the project received awards at both Clio and Cannes in 2012.

The Svenska Institutet and VisitSweden began the experiment in December 2011. The concept began with the tweet “How cool would it be if we would let potentially any Swede use this twitter account?” (Anna Dahlström 2011) Since December 2011, the project gives cultural communication power to a randomly chosen citizen Swede every
week, who is asked to tweet on the account whatever they feel relevant.

Not only does the project allow Swedes communicate to their culture, but it also presents an opportunity for average citizens to be heard by a larger social audience. The posts vary from newspaper clippings, weather, women, food, Swedes, dogs, and loved ones. Every week the curator changes, thus the international audience reads a variety of opinionated tweets.

The project acknowledges and encourages community interaction. The most poignant case is seen when July 2012 curator Sonja Abrahamson tested the bounds of interaction. She posted a series of controversial tweets labeled by the audience as anti-Semitic, crude, and insensitive. However, the project coordinators refused to repeal her curator position. “The whole point of the account is to show a varied picture of Swedish society, and this is made possible through the freedom of speech that Sonja has used,” said Sergio Guimaraes, media-relations manager of the Swedish Institute (Rachel Arons 2012).

This documentary is interesting both in its use of narrative, and it its reliance on intercultural communication. It uses a simple communication method to express a complex concept. It is significant as it organized community into a participatory expression using New Media. The question that arises from this application is how does a New Media interaction reflect the concepts of communication using digital innovations?

**Interactivity of Cultural Theory in @ Sweden**

Nash characterizes the web documentary as a collaborative structure (Nash 2012:200).
Nash considers user community, interface, and narrative structures are key characteristics in the web doc structure. As the actual documentary is molded by the audience communication, She contends that the effectiveness of the web documentary depends on the audience communication with the web experience (Nash 2012:200).

@Sweden refreshes the concept of documentary, cultural communication, and tourist information. The project questions what it means to be Swedish, and attempts to contextualize the experience of ethnicity in an open, participatory and representational manner. The autobiography exists as a method to present self (Renov 2003). @Sweden allows citizens to define Sweden. @Sweden proves interesting as it provides an avenue of cultural communication through digital interactivity.

**Soldier Brother**

Corrigan states the essay film creates a malleable template on which ideas are discussed. While documentary film is a linear media, interactivity is not a linear process. Corrigan sees new media interactivity as a bright frontier for documentary aims. The subjectivity that characterizes essay film has extended into digital documentaries. This extension presents a challenge in a non-linear form. Digital documentary creators are now faced creating plot lines in on a non-linear surface.

Kaitlin Jones’ *Soldier Brother* (2011) digital documentary portrays Jones’ relationship with her enlisted brother. The web documentary is contextualized by the director’s experience in coping with her brother at war. The documentary website displays ten artifacts, and the user selects the artifacts to access the narrative. The artifacts can be seen in any order, and any number. Each artifact node presents enough narrative information to be seen as an entity of narrative. These narrative entities can be
advanced by interacting with multiple artifacts. In this case, contextualization for the overarching narrative is provided though a text message conversation with her brother. This conversation is first displayed in a website scrollbar. After the user displays enough engages with the documentary, they are presented with the option to move this narrative into another media. The documentary as the narrator calls and texts the user’s personal phone. The documentary is interactive by using the digital screen, audio, and also the user’s personal cell phone.

This type of interaction is labeled transmedia, as it uses multiple devices to develop a narrative. Media scholar Henry Jenkins coined the term ‘Transmedia Storytelling’ to describe telling a story on multiple media platforms; each medium's characteristics contribute to audience expansion of the story experience (Jenkins 2003).

The Interactive Narrative in Soldier Brother

Nash concludes narrative structures in web documentaries will use a central narrator to connect the causal nodes of the web engagement. This narrator could either be the creator, user, or another individual (Nash 2012:204). Soldier Brother presents an example of the possibilities of digital documentary essay. Soldier Brother is a non-linear form of narrative. Soldier Brother portrays the social experience of a loved one serving in the army through interactive narrative. This narrative experience is possible due to the user’s interactivity with the soldier’s artifacts. The artifacts can be clicked in any set. One may click all or only one artifact and still receive an impression of the piece. Likewise, users can chose to engage in the plot through text message system, or to only access the site. The plot is framed by the director’s subjection, but completed by the audience interaction. Interactivity is necessary for the completion of the documentary
narrative. Moreover the user is in complete control of the completion. They navigate order, timing, and relationships independent of the author’s control. This flexibility incubates an essay form of a particular narrative by providing an open structure to create a dynamic experience.

**CONCLUSIONS**

Nash challenges the field of documentary to integrate New Media interactivity theoretic into the study of documentary. Through this example, the digital permutation of the documentary sustains relevance.

Interactivity in *Bear 71* navigates the user in the digital interface. This use of interaction as performative aspect questions the role of interface in documentary. Interactivity in *@Sweden* is used to collaborate with users in content creation. This autobiographical use of interactivity questions the role of user communication in the digital documentary. Interactivity in *Soldier Brother* allows the user to navigate and decide the elements of the project. The essayistic approach to narrative questions the role of interactivity in non-linear plot.

The use of interactivity in contemporary digital documentaries requires a union of interactivity research into documentary studies. The next chapter presents a literature review of New Media interactivity theories. The theories will consider the following three aspect of the documentary impacted by digital interactivity: interface design, user communication, and narrative structure. The aspects will be explored through a selection of preexisting theories.
CHAPTER THREE

LITERATURE REVIEW

INTRODUCTION

This chapter presents New Media research relevant to documentary interactivity. The review discusses forms of digital interactivity, and their implications to the documentary field. It considers the following design, application, and structure challenges brought on by the shift to digital technology: interface interactivity, interactive user communication, and narrative interactivity.

The review will first explicate interface interactivity methods as seen in Bear 71. Following interface, the review describes cultural interactivity literature to analyze @Sweden. Finally, the review considers narrative interactivity literature in parallel to Soldier Brother.

INTERFACE INTERACTIVITY

Renov considered the implications of the manipulation of visual reality (Renov 1993). The digital interface is the method humans use to interact with the computer. The use of an interface relies on interactivity rather then visual information for expression. If interactivity is a stronger aesthetic than visual reality, then documentary principals must shift the view aesthetic to include interactivity.

Bear 71 immerses the user in the story world by stimulating navigation. The following analysis will explicate how Bear 71 relies on user interface interaction as the main aesthetic. If this navigation were not present, the user would not immerse into
the documentary. If the user did not navigate, the documentary would not exist.

Other fields are exploring interactivity and immersion in digital interfaces. The review will first consider the implications of telepresence as an aesthetic interface principle. The study of interface interactivity will proceed through one business application and three computer science literature reviews.

Ganesh Bhatt, Associate Professor of Information Science & Systems at Morgan State University, conducted a test to explain how user interactivity impacts a website’s effectiveness (Bhatt 2004). His test analyzes how interface manipulates interactivity in New Media. He states computer science principals must be applied to a website’s method of sustaining audience immersion (Bhatt 2004). Bhatt creates a theoretical framework for interface immersion, then analyzes the websites amazon.com, ebay.com, schwab.com, and victoriassecret.com through the frame. Bhatt’s goal is to observe the “enhanced customers’ perceptions of experiencing realities during their exploration of the Web site” (Bhatt 2004: 3). It could be argued “enhanced customer perception” can be analogues to “increased audience immersion” in a digital documentary context. The study found effective sites all displayed a balance of telepresence. Each site’s use of interactivity allowed the user to become immersed in the experience of the website. It concludes that site purpose ultimately drives site design. The study finds interactivity, immersion, and connectivity all telepresence factors in successful interface design. It is limited in scope as only four sites were tested. However, the rubric provides a strong basis for further study.

*BEAR 71*
Successful digital sites thrive on the manipulation of digital interactivity. *Bear 71* shows how spatial interaction of the digital interface can be a unique aspect of the digital documentary. The digital documentaries must provide some insight into how site interaction can be categorized. The Bhatt study pulls New Media theoretic from interface and computer science theory of telepresence for use in business site design (Bhatt 2004). Interface theories could be implemented in documentary studies.

Beattie’s concern in the digital documentary is the ability to produce sufficient reality (Beattie 2003). Bhatt conducts an experiment to test immersion in digital interface (Bhatt 2004). The correlation between Beattie and Bhatt is the need for immersion using the digital interface. This need considers New Media interactivity as an aesthetic of the digital interface.

Bhatt shows that interactivity and immersion are factors in successful website aesthetics (Bhatt 2004). He mentions the ability of a digital site to evoke telepresence. The following reviews present telepresence. This overview will include computer science and New Media interface studies.

**Telepresence**

Communication theorist Jonathan Steuer defines the boundaries between telepresence and actual presence. Steuer separates presence into a physical environment, and the cognition of surroundings (Steuer 1992).

Unmediated perception is the natural integration into surroundings (Steuer 1992). Telepresence, a term created by Marvin Minsky (1980), is mediated perception of an environment (Steuer 1992). This other environment can be either spatially or
temporally separated. The environment is somehow separated from either reality, or a virtual non-real space (Steuer 1992). The difference is seen in where the audience perceives the communication to take place.

Steuer states every medium is capable of creating a degree of telepresence. Print allows users to be told a story, television allows audience to interactively listen, and new media allows the user to become the actor. (Steuer 1992:79) The use of telepresence over virtual reality is a shift in perspective. The term telepresence as opposed to virtual reality disconnects phenomena from hardware, creates instrumentation and measurement, and allows virtual reality to take place over a multitude of dimensions.

Telepresence in this study is defined in vividness and interactivity (Steuer 1992:80). Vividness refers to the sensual richness of the input. It can be further separated into breadth and depth. Breadth is the expounding of a media across senses. Steuer states the senses are “informationally equivalent” (Steuer 1992). The greater detail, or amount of senses used, the greater the uniqueness of the event. Depth is quality of sensory information presented in a media. “Informational depth depends on the amount of data encoded and the data bandwidth of the transmission channel” (Steuer 1992:83). However, not everything requires a high bandwidth (Steuer 1992). Speech, for instance, is a highly symbolic communication. Speech needs less bandwidth, of training, to communicate (Steuer 1992). Visual stimulation is less symbolic, and therefore film needs to be transferred with a higher depth to induce presence (Steuer 1992:83). The study considers how immersive visual displays create a sense of presence by allowing visual information to move with the viewer (Steuer 1992:84). Implementing a large breadth at a variable depth is effective in creating presence.
Steuer’s use of the term interactivity is a stimulus driven variable. The dimensions are the extent a participant can manipulate an environment in intended use of the medium (Steuer 1992:85). He identifies the following three factors of interactivity: speed of convergence, range of possible interactions, and mapping of the results of logical changes (Steuer 1992:85).

Speed of response, at best possible means, is real-time. Steuer defines immediacy as a property compensating for a lack of vividness (Steuer 1992:86). Range is the amount of attributes. These attributes can be temporal ordering, spatial organization, intensity, and frequency. A computer-based system differs in its ability to allow interactivity with objects in the environment in real-time (Steuer 1992:86). A large range facilitates greater interactivity in any medium (Steuer 1992:86). Mapping is the way human actions are connected to environmental mediations” (Norman 1986,1988 qtd. Steuer 1992:86). Some controls are metaphors for pre-existing symbols, while other controls are arbitrary systems. Though a metaphor is better suited for short term virtual presence, an arbitrary system has a longer shelf life, as it is impervious to shifts in symbol use.

The documentary *Bear 71* shows evidence of an interactive aesthetic. *Bear 71* uses the interface telepresence immersion to aid in the documentary aesthetic. Steuer defines telepresence as the illusion of presence. *Bear 71* creates the illusion of presence through navigation through a topographical simulation of Banff National Park. The number of people using the system intensifies the sensation of telepresence (Steuer 1992:87). This sensation occurs as human interaction is presence. Therefore interaction on a platform makes presence in telepresence. Steuer stresses the importance of establishing a first
person relationship, rather than a third person, in a mediated telepresence situation (Steuer 1992). Telepresence is constructed from the breadth and depth of vividness, and the range, speed, and mapping of interactivity. *Bear 71* uses these elements in interface design. Cartography in *Bear 71* shows breadth through the size of the interactive area. Navigation creates a vivid experience. The interactive roaming shows great breadth as the user rarely experiences the bounds of the mapped area. The map also displays depth in the ability to access specific tracking cameras. The user can view various animals on surveillance, which adds vivid informational depth data to the experience.

The range of commands in *Bear 71* are the ability to freely scroll the map, follow individual animal paths, navigate the narrative audio, and click on a range of surveillance data. The range of data adds interactivity as it does not demand the user to access the documentary in a specific manner. The user can assess the documentary from any type of interactive navigation. The speed of interactivity is real time. Speed is limited by the user device, not the documentary interface. Mouse slides by user are immediately translated into data movements in interface. Mapping in *Bear 71* involves all common computer mouse navigation procedures. The scroll allows for navigation of the map, the click allows for the access of the various films.

According to Steuer, the more people present, the greater the feeling of telepresence. The cartography shows simulations of humans interacting with the map in the virtual world. These simulations of human integration are seen in artificial and real user avatars navigating the map. These human elements work as a foreshadowing device in narrative. But the human algorithms acknowledge the presence of humans in the simulation.
MEDICATION

Matthew Lombard and Theresa Ditton’s work at Temple University is a concise description of telecommunication presence. They write to the field of media and telecommunications and explore possible typologies of telepresence. Lombard & Ditton define six dimensions of transportation presence. The study focuses on the three elements of the presence as transportation dimension. The study defines these elements for use in telepresence manipulation.

The six dimensions are presence as social richness, presence as realism, presence as transportation, presence as immersion, presence as social actor within medium, and presence as medium as social actor (Lombard & Ditton 2000). Presence as social richness in communication or organizational behavior is the amount of social interpersonal ability a medium can radiate (Lombard & Ditton 2000). Presence as realism is the gradient of accuracy a medium can recreate. Presence as immersion is the perceptual or psychological immersion the audience induces into the experience. This presence is achieved in perceptual immersion through sense stimulation. It is achieved in psychological through temporal stimulation. Presence as a social actor within medium re-creates interpersonal communication through direct address and creating the perception of conversation. Presence as medium as social actor examines how people relate to the interface as an entity beyond interface. In other words, the dimension explores how the audience directly addresses the medium. Presence as transportation examines a media’s ability to emulate presence in another situation. This dimension is best explained by examining the three variances in form. The forms are the “You are Here” form, the “It is Here” form, and the “We are Together” form.
“You are There” is arguably the oldest version of presence (Lombard & Ditton 2000). The variance is concerned with the temporal transportation of the audience into another situation. This form creates mimicry into another event. The variance is best seen by immersion.

“The oral tradition of early humans involved the telling of tales that transported each generation of listeners to a different time and place where the events occurred” (Biocca & Levy 1995 qtd. in Lombard & Ditton 2000:3).

The “It is Here” form is the concerned with perceptually re-creating a distanced artifact or human into the current space and time of the user. This form is concerned with bringing objects into an environment through telepresence (Lombard & Ditton 2000:3). The form relies on the ability of the media to expressively re-create into the audience’s perception.

The “We are Together” form is concerned with mediation of communication without complete transportation of presence. Both ends are distanced, but interaction in medium creates mutual presence. The form includes “Distributed Virtual Environments” such as chat rooms.

**BEAR 71**

Lombard and Ditton describe three states of telepresence and “You are Here,” “It is Here,” and “You are Together.” Bear 71 presents a “You are Here” type of telepresence. The user is transported into Banff National Park through interactivity with the interface map. Through the vividness of the interactive information, the user becomes present in Bear 71’s life. Thus the documentary uses a presence for immersional
transportation as part of the digital interface aesthetic. Allision remarks *Bear 71* was created to highlight the amount of surveillance through performative interaction.

"*Bear 71* lived her life under near constant surveillance and was continually stressed by interactions with the human world. She was tracked and logged as data, reflecting the way we have come to see the world around us through Tron and Matrix-like filters, quantifying and interactions" (Allision:Bear 71 2012).

**IMMERSION**

Film scholar Alison McMahan defines immersion, engagement, and presence, subsuming cinematic elements into video game interactivity (McMahan 2003).

McMahan defines six elements of presence. These elements are the quality of social interaction, realism, transportation, perceptual and psychological immersion, use of social actor in medium, and intelligence of environment (McMahan 2003).

Immersion in video games is described as the ability of a game to transport users into another world (McMahan 2003). In this sense, it parallels Lombard and Ditton’s “You are There” form of the transportation as presence dimension (Lombard & Ditton 2000). McMahan states the perception of realism is not directly connected to the quality of media information, but connected to the manipulation of content through the audience perception (McMahan 2003). Realism is created by audience expectations matching game abilities, the ability of the user to significantly impact the game environment, and the consistency of game rules (McMahan 2003).

Engagement is defined as the reality constructed by the event (McMahan 2003).
Engagement is the amount the user participates, thus the amount of real presence gained by user interaction (McMahan 2003). She considers fictional games incomplete without a participant to enact the game process (McMahan 2003). Thus, the audience engagement creates presence through creating the game. This engagement can be compared with the “It is Here” form of transportation dimension of presence in its reliance on the audience engagement to formulate a virtual situation in a real environment.

McMahan acknowledges the confusion of presence, stating it is often holistically used to describe the entire realm of other physicality (McMahan 2003). She uses the term similarly to Steuer by defining presence as the balance of immersion and engagement (Steuer 1992, McMahan 2003). Presence is the ability of a medium to transport a user into another reality, balanced with a medium’s ability to transport an environment into the user’s reality (McMahan 2003). The medium creates connective presence when the elements are balanced. This phenomena is similar to the transportation dimension of “We are Together” (Lombard & Ditton 2000). Connectivity is based upon the content’s immersion properties, the medium’s ability to provide engagement, and the audience perception and acceptance of reality.

The study applies Lombard & Ditton, Steuer, and Minsky into digital gaming. This connection is relevant as it assumes game interactivity can present itself with a form on aesthetic. By considering telepresence in terms of immersion and engagements, McMahan extents interface concerns of telepresence to define interface as not simply a game element, but an aesthetic medium.
**Bear 71**

McMahan defines immersion, engagement and presence as formidable studies for film and game theoretic. The connection is seen in interactivity’s role in immersion. *Bear 71* shows classical aspects of immersion in an innovative medium. The temporal, emotional, and spatial immersions are transferred into digital interface interaction. The user temporally tracks their path through the world, exploring both the simulation and the narrative. The user interacts in *Bear 71*'s life by emotionally involving themselves with the bear's life. The spatial immersion through interface interactivity creates realistic portrayal of actual navigation. This spatial realism is complete with slower movement uphill and faster movement downhill due to gravity. The interactivity engages the audience through the necessity to navigate to collect information. This need for movement is encouraged by other moving elements navigating paths on the same map.

A list of digital documentaries manipulating interface interactivity can be found in Appendix. (see Appendix A)

**Cultural Interactivity**

The review will consider the implications of user interactivity. This holds possibility to innovate communication as a cultural tool. The possibility is explored through one sociology application, and three computer cultural science literature reviews.

@Sweden treats the documentary process as a form of communication. Thus, it becomes important to adjust documentary theory with interactive user communication. The use of interactivity brings relevance of cultural communication into digital documentary
studies.

Renov identifies digital technologies ability to communicate and to archive as two elements of the digital documentary. His observation considers how this ability could shift documentary form.

**Place**

Christian Pentzolt is a Lecturer at the Institute for Media Research at Chemnitz University of Technology, and an Associate Researcher at the Alexander von Humboldt Institute for Internet & Society, Berlin where he researches digitally networked environments and transmedia memory.

Pentzolt ponders how interactivity can be used for communication. Interactivity allows for communication to be discussed, displayed, and documented in the same digital medium. He argues open-source communication sites such as Wikipedia can bridge the communication by providing a timeless database memory. Wikipedia facilitates cultural communication in the discussion thread, while sustaining contextualization through the Wikipedia entry. The study further describes how the London Bombings of 2005 were constructed, reconstructed, and deconstructed through the event’s Wikipedia entry (Pentzolt 2009).

The Pentzolt study examines how a digital site can be used as tool for communication. The site’s user interactivity shows the ability to create a database preserving conversation, and an interface displaying history. Interactivity allows users to interact with the interface, and interact with each other. This interaction can be viewed and reviewed by other users. These digital sites allow users to control data. The study
exemplifies New Media enabling a user base to define, create, and individualize content. The study is relevant as it considers communication and culture as a function of interactivity in New Media. This is an interesting prospect for documentary studies to consider in the digital documentary.

@Sweden

Pentzolt studies New Media user interactivity through the cultural process of memory communication, and cultural representation. He defines Wikipedia as an outlet for cultural archive and canonization. Interactivity in @Sweden shows the ability of a digital documentary to comment and contextualize culture. In this form, @Sweden is an outlet for expression and cultural archive for the memory of Swedish identity. The digital project is unique in its ability to present personal autobiographies in a cultural comment. This use of interactivity holds value for cultural preservation and communication.

Memory

Historian Pierre Nora considers the importance of memory in his work, *Les Lieux de Mémoire*. He is concerned with the importance of memory as a function of cultural interactivity. Memory is absolute, temporally bound, and creates emotional immersion based on the experiences to form collectives. (Nora 1997). Nora argues if memories would not deteriorate, there would be no need to objectify the memory, and therefore no line between memory and history. He observes individuals using digital technologies as a “mental prosthetic” (Nora 1997). The literature specifically considers technology as a possible bridge for memory (Nora 1997).
Nora separates memory into true memory and historical memory. According to Nora, memory is a trace of life. True memory is the subjective and personal memory of the event as experienced by the individual (Nora 1997). True memory is the personal interpretation of event perception. The memory becomes a historical memory when it is communicated to an outside party. In order to communicate the perception, the true memory must be altered to fit the communication channel. To the outside party, this is the best possible communication, but it is still not true memory. History is a reconstruction which preserve and restore by detaching object from meaning.

This is article is relevant as Nora mentions the ability for a culture to use digital technology as a tool for memory. Interactivity can thus be a memory tool in digital documentaries.

@SwedEn

Nora defines true memory as personal perception, and historical memory as archived document (Nora 1997). The account users communicate their daily, true memories based upon their individual culture. Interactivity on a database site historicizes communication through digital New Media interactivity. @SwedEn allows individual members to comment on Swedish life through the realistic capture of daily communication. The project formulates autobiography in the natural form of digital communication through Twitter.

Cultural Identity

Jan Assmann is an archeologist primarily concerned with the development of self, culture, and memory. He states memory is the collaboration of time and identity
Assmann articulates three levels of time, identity, and subsequent memory. Inner level is subjective personal time. This level constitutes the experience, thoughts, and emotions of individual memory. Social level is the social time of 80-100 years that is used to portray the social roles and social identity. This level consists of history, teachings, and attitudes of communicative memory. The cultural level is the gradient of distanced, mythical, and historical time. Cultural memory conveys a linkage to ideals constituting cultural memory (Assmann 1995:1).

The study concurs with sociologist Maurice Halbwachs’ claim that, on a social level, memory and consciousness are group functions depending on a collective. However, the literature’s definition recognizes the memories created by interpersonal social life. (Assmann 1995)

Communicative memory is instable (Assmann 1995). The instability stems from lack of material or symbolic transcription. The lack of stable documentation limits the lifetime of communicated memory to the generations who use it. Assmann argues the purpose of utilizing communicative memories is to socially attach groups. He proposes there are no specialists of communicative memory in a collective. “The knowledge which is communicated in everyday interaction has been acquired by the participants along with language and social competence” (Assmann 1995:114). Communicated memory is content which frames of the recent past (Assmann 1995). It embodies informality and communication through living communication and embodied memory. The phenomenon of communicated memory lasts three to four generations, and relies on widespread societal participation (Assmann 1995:117).

Assmann continues by describing cultural memory as “stable and situation
transcendent” (Assmann 1995:111). Cultural memory contains the mythical history of the absolute past. It is created through a high degree of ceremony through mediation such as and formalized rituals, texts, and icons. The cultural memory extends through mythical time and is propagated by specialized communicators (Assmann 1995:117). Objects and symbols stimulate memories in individuals, and are used socially (Assmann 1995). Groups without social objects tend to create them in the form of monuments, museums, and libraries (Assmann 1995:111). Cultural memory can be acquired. Poets, shamans, artists and scholars hold the role of cultural memory specialists (Assmann 1995:114). These are people who have acquired and stored cultural memory archives. This type of cultural knowledge is elite. The knowledge creates inclusion (and exclusion) in cultural hierarchy. The typology of memories and the structure of formation is a cyclical interactive system (Assmann 1995). However, social knowledge can be destructive to cultural memory as it may distort memory. “Remembering is a realization of belonging, even a social obligation” (Assmann 1995:114). Therefore forgetting becomes a form of assimilation used to redefine cultural roles through forgetting memories.

@SWEDEN

Assmann defines communicated memory as daily interactions, and cultural memory as the canonized memories of a culture disassociated with time (Assmann 1995). The @Sweden project portrays subjective views of populous through small, individual interactions. The project allows a broad base of Swedes to present themselves in a contextualized form. Swede “curators” use personal communication to create context and access to the contemporary communicated Swedish culture. Interactivity shapes the
communicated culture by voicing individual culture as a participating entity of the larger communicated culture.

**Oral Tradition**

Historical anthropologist Jan Vansina is concerned with oral history in culture. His work shows information becomes scarcer as the present advances. Vansina describes the differentiation as ‘the floating gap’ (Vansina 1985). This floating gap is the deterioration of collective memory as generations change. The literature limits the time of communication to three generations. This limit mirrors Assmann’s typology of communicated culture (Assmann 1995). Moving beyond the generation of communicated memory becomes difficult as chronological information becomes difficult to gather. Vansina applies the ‘floating gap’ principle to historical cultures lacking a formal writing system to properly document their communicative memory into cultural memory (Vansina 1985). However, there are a plethora of memories distanced from time (Vansina 1985). These memories can jump this gap if they are communicated, and culturally contextualized into stories. Vansina’s study shows in oral societies, there is a gap between the informal memory and the cultural memory.

The floating gap complicates the question of the significance of digital documentary interactivity in new media communication. If cultural site allows for user interaction, the digital documentary can be used as a mental prosthesis to capture historical memory from user as true memory input. Holding this premise true, there seems a need for more studies in methods for digital interactivity to capture memory in a meaningful way to bridge the floating gap.
@Sweden

Vansina describes the floating gap as the chasm between time-bound communication and timeless cultural memory (Vansina1985). @Sweden is a digital documentary based upon a live cultural archive. Swedish citizens create the organic documentary narrative. As Swedes communicate, they also participate in culture by shaping the cultural representation of Sweden. The twitter account history archives the memories Swedish citizens feel compelled to share.

A list of digital documentaries displaying similar cultural interactivity qualities can be found in Appendix. (see Appendix A)

Narrative Interactivity

The concept of digital non-linearity shadows the field of documentary studies. Soldier Brother presents a story of a sister’s battle with war. It analyses her relationship with her brother through a series of interactive artifacts. The story unfolds as the user interacts with the narrative parts connected to these objects. The documentary uses an essay approach to re-enact the author’s personal exploration. This essay approach is created through the non-linear, interactive structure of the documentary.

The documentary field must include methods of creating non-linear narratives through New Media interactivity. This literature review presents several articles researching the interactive narrative. The hypertext narrative and New Media narrative both wrestle the idea of a non-linear portrayal of data. The narrative interactivity review will consider the implications of non-linear plot as a game narrative through one
narrative application, and three hypertext game literature reviews.

**Narractivity**

Paul Booth, Assistant Professor of New Media and Technology at DePaul University, considers how interactivity creates a narrative in a New Media environment.

This article considers how interactivity creates narrative in the New Media environment through database additions. It considers user-based wikis as a form of database literature. Booth studies the fan Wikis of the *Lost* and *Heroes* television series. He observes narratives to be created in two ways. First, the audience constructs the show by assembling and formatting series data into a logical order. In the other method, the narratives created by the audience in “imaginative discourse” deconstruct the series. Deconstruction is an individual, unique serial path through the data. The personalized narrative is created through user interactivity, and narrative structure.

Digital users of the fan site contrive context from interaction with the site. Booth introduces the term “narractivity,” which he defines as “the process by which communal interactive action constructs and develops a coherent narrative database” (Booth 2009: 373).

The study investigates interactivity in the *Lost* database creating a subjective narrative event. He considers the repetitive or incomplete nodes as significant additions to imaginative discourse. This type of incomplete, imaginative discourse is a form of narrative essay. The wiki presents a platform in which narrative and interactivity-narractivity-creates a subjective, user stimulated plot. The study affirms interactivity and narrative as coexistent in some equations. Digital documentaries are investigating how interactivity can be used, and how narrative can be controlled. This investigation
requires the integration of game studies and hypertext narrative studies into essayistic
documentary design. *Bear 71* requires the participant to interact with a mapped
database of surveillance tapes. These tapes present data on multiple wildlife subject
through various times and locations. This data is immense and difficult to interpret
without a binding framework. *Bear 71* uses a digital interactive map to present this data
in a narrative, interactive form.

**GAME**

Danish game scholar Jesper Juul defines games by the construct of rules. His book,
*Half-Real*, is a secondary source based on a selection of game scholars. The book defines
game, separates game from narrative. Juul uses this separation to analyze game play.
The primary concern of the book is the manner fiction and rules battle in games. All
games have six features: 1) rules, 2) variable and quantifiable outcome, 3) variations of
possible outcomes linked to positive and negative values, 4) effort by the player, 5)
emotional attachment to an outcome and 6) can be played with or without real-life
consequences. (Juul 2011)

Juul separates games into games of emergence and games of progression. Games of
progression “Set up challenges indirectly because the rules of the game interact” (Juul
2011:67). Examples of progression games are adventure games. In these games, the
answer is simple but game is complex.

Games of emergence “directly set up each consecutive challenge in the game” (Juul
2011:67). Emergent games include ping-pong, card games, and board games. This
game structure is easy to learn, but difficult to master. Most multi-player games are
emergent as they involve more than rule memorization (Juul 2011). The literature
describes emergent game design as contingent on cognitive architecture (Juul 2011:76). Desirable emergence leads to interesting interaction to elements and better game play, while undesirable emergence bends the rules and makes the game less enjoyable. Emergence makes interesting games as the irreducibly complex structure has many variables which create unforeseen patterns and combinations. Games of emergence are produced by the interaction of game and human cognition (Juul 2011).

Games are best when they match the player's abilities (Juul 2011). If the game is too difficult, it will cause frustration. If the game is too easy, it will be boring (Juul 2011:112). “A game is a series of interesting choices” (Sid Meier, in Rollings and Morris 2000: Juul 2011: 38). Game play is a result of interaction between game rules, player interactivity, and player ability (Juul 2011). The best game choices include multiple satisfying options, variance in option satisfaction, and an informed player.

Juul investigates the challenge in balancing games and narrative (Juul 2011). Good rules are clear, simple and unquestionable. Good narrative is complex, ambiguous, and produces discourse. When a narrative is incoherent, we can blame the rules, whereas in classical narrative when the rules were incoherent, we blamed the narrator. “Rules and fiction compete for player’s attention” (Juul 2011:121). Something can be considered an abstract game if the narrative is explained by the rules, and something is a representational game narrative if the rules are explained by the story (Juul 2011:130). He observes that when describing game play becomes too difficult to communicate, one will resort often to describing game rules (Juul 2011:130).

Soldier Brother
Juul states games are determined by game law and game play variables. *Soldier Brother* takes theory from an emergent game. He describes games of emergence as simple rules with complex outcomes, and progression as complex rules with simple outcomes. The simple interactivity of choosing an artifact to click can be seen as an action that is based upon game theory. This action is repeated with variance in outcome. *Soldier Brother* presents ten artifacts, ten stories, and a complex interactive narrative through the emergent interaction.

ARCHITECTURE

Jenkins states game narratives often act as a sequels, or prequels, to traditional narrations. He proposes game stories are reliant on previous story elements and character developments and complex plot lines to shortcut constructing complex plot and structure.

Not all games tell stories. Emergent games, such as *Pong*, are arguably not based upon narrative principles (Jenkins 2004). *Pong* relies on a narrative to emerge through gameplay. This narrative develops from the endophysics of game rules. Juul would define this narrative as emergent (Juul 2011).

Jenkins notes many games do attempt to create narratives. These games rely on narrative plot to structure game rules (Jenkins 2004). He denotes the need for organizational typology between game and narrative, but not rigid categorization. The literature strongly states narratologists should not limit the form of game by confining the description (Jenkins 2004). A game cannot be reduced to story—game is integrated and entangled into plot (Jenkins 2004). He recognizes game narrations cannot be
described by film or game means solely

Jenkins brings a neutral ground between narrative and game with the classification of ‘environmental storytelling’ (Jenkins 2004). Here, plot is designed into the geography of spatial interaction, “So that obstacles thwart and affordances facilitate the protagonist’s forward movement towards resolution” (Jenkins 2004:8).

The integration of plot and game is a delicate balance of interactivity (Jenkins 2004). Interactivity threatens plot development, but plot development threatens user engagement (Jenkins 2004).

“Spatial stories are not badly constructed stories; rather, they are stories which respond to alternative aesthetic principles, privileging spatial exploration over plot development” (Jenkins 2004:8).

Soldier Brother

Jenkins states narrative and game principles are in conflict. (Jenkins 2004) Soldier Brother shows a method of integrating game play into narrative with the text message system. Jenkins concept of game is implemented through the user participation in the cell phone narrative element. The digital documentary asks for user’s telephone number. The documentary texts the user narrative information. The system is a simple, effective way to bridge game and narrative. The text message displays in a different media than the documentary. Under normal use, the addition of another media would add another “Rule” to game play. This addition would tip the balance of game and narrative, creating a conflict of immersion. However, Soldier Brother uses the “rule” to
introduce narrative structure, thus creating a tie between game rule and plot narrative. The system allows the user to interact in story play, while still providing narrative structure.

**Possible Worlds**

Ryan discusses five permutations of the non-linear virtual plot, comparing and contrasting each (Ryan 1991). This discussion outlines four permutations, as the fifth, Authorial Perspective, is a proprietary project of a single individual.

The first permutation, transition networks plot model, is comparable to the model seen in the *Choose your Own Adventure* series (Bantham 1979-1998). Though the plot uses choice, the structure breaks plot into nodes (Ryan 1991). The structure relies on user interactivity control navigation (See narractivity Booth 2009). The result is a concrete number of nodes which are entirely flexible. Nodes can be accessed in any order and at any quantity. She notes the flexibility of the transition network plot model may functionally fail to identify goals, and sustain considerable plot tension.

The transition network model lacks a greater contextualizing framework (Ryan 1991). However in non-linear, spatial forms such as the digital, the issue is exacerbated. The issue with a transition network plot model is the system is not dynamically changing through user interaction. The system plays no role, or has no knowledge of, the principles governing action.

A grammar-driven model presents a computed narrative based on coded rules. Ryan states the model is a pattern set by the machine dictating structure through a set of grammatical laws (Ryan 1991). The code defines itself as implied narrator. These
grammatical interactions present non-linear opportunities by coding information accessibility. The grammar driven form lacks creativity in the use of medium, and is often difficult to portray in a satisfying manner. Users are pulled between accessing the linear code or the non-linear plot. This model also displays an inability to generate parallel storylines, and events fulfilling more than one function (Ryan 1991). Thus, it is barely considerable as a non-linear method, as the documentary is difficult to subjectively re-contextualize through data selection.

Simulative algorithmic non-linear plot models are focused fully on creating representation and telepresence through depth (Ryan 1991). The depth of information available is coded into a non-linear interactivity. The simulation algorithm is not fully accessible to the user. This type of plot works only for mysteries, and must use concrete blocks made of specific details (Ryan 1991). The model is one directional and linear, as the program would fail to function using backwards logic (Ryan 1991: 243).

A simple version of non-linear digital plot is the problem solving algorithm model. One simply codes all possible laws, and runs the program (Ryan 1991). Ryan states problem solving algorithms lack aesthetic value and variance in tellablity (Ryan 1991).

"An intelligent program should be able not only to construct solutions, but also to decide whether or not a given line of action is sufficiently imaginative to present an intrinsic narrative appeal" (Ryan 1991: 244).

Soldier Brother

Ryan’s literature describes computational plots. Soldier Brother presents an example of narrative framework that is constructed by digital interactivity.
Soldier Brother displays a simulative algorithmic non-linear plot model. The plot is a mystery. The website displays text messages between narrator and brother while the artist explicates the significance of each of the soldier's artifacts. The display is the surface. Jones' documentary allows immersive depth by asking the individual for personal phone numbers. From there, Jones programmed the documentary to send the user text messages which further explain the depth of emotion of the life of a family member whose loved ones are at war. The simulation algorithm creates mystery to be solved by the non-linear nodes of narrative text. This narrative is not developed by the viewer until fully accessed through interactivity. The depth of information available is coded into a non-linear exploration of Jones' brother's life.

A list of digital documentaries displaying similar interactive narrative use can be found in Appendix. (see Appendix A)
CONCLUSIONS

SUMMARY OF RESULTS

This study explored the unique aspects of the digital documentary. The study began by questioning the relationship of documentary and technology. The research framework described moments of technical innovation which changed documentary film form. Barnouw explained how documentary theory shifted with the innovation of audio, the innovation in the size and weight of equipment, and the innovation of video and broadcast media. (Barnouw 1993) Each technical innovation led to a shift in documentary studies. Nash presents the postulation that digital media is a technology which will shift documentary through interactivity (Nash 2012). Beattie states the shift will redefine the boundaries of real (Beattie 2004). Corrigan states this digital shift will further subjective expression (Corrigan 2011). Renov explores how new digital methods could shift the documentary into an autobiographical renaissance (Renov 1993).

LITERATURE ANALYSIS CONCLUSIONS

Interactivity allows telepresence, cultural participation, and non-linear plot to be used in the digital documentary. Interface literature describes how interactivity within interface can become aesthetic in the digital documentary. Communication literature considers New Media’s ability to provide interactive communication can evolve the digital documentary into individual or cultural autobiography. Narrative literature explains how interactivity in New Media allows for alternative game plot construction.
that can be used in the digital documentary to create a subjective essay approach.


The study explored aspects of interactivity in correlation with these postulations. The study examined how interactivity is used to create telepresence through interface. It explained how cultural communication could be captured through user interactivity, and it described methods of subjective non-linear plot construction.

*Bear 71* relies on user navigation for immersion. This navigation takes place through the digital interface. The documentary’s interface relies on telepresence theories to stimulate the interactivity needed to allow the audience to fully immerse. Interface interactivity thus becomes an integral part of the documentary aesthetics.

The review began by considering how the digital interface could shift documentary aesthetic. Bhatt described how audience interaction with interface could create immersion (Bhatt 2003). Steuer defined telepresence as the illusion of presence, and described telepresence as the two aspects of vividness and interactivity (Steuer 1992). Lombard and Ditton described three typologies of telepresence as “You are Here,” “It is There,” and “We are Together” (Lombard & Ditton 2000). McMahan placed immersion, engagement and presence as aspects of digital aesthetic (McMahan 2003).
Within these bounds, it is arguable that the interactivity within interface can become aesthetic in the digital documentary.

@Sweden presents an opportunity to simultaneously communicate archive and canonize the Swedish experience through digital interactivity. This memory stimulation of information and cultural archive evolved the twitter site into both an individual and cultural autobiography. Thus the concept of cultural communication is now a relevant topic in the digital documentary.

The review considered interactive user communication’s potential to shift documentary design. Pentzolt described how New Media user interactivity could create memory communication (Pentzolt 2009). Nora defined true memory and historical memory (Nora 1989). Assmann defines communicated memory as daily interactions, and cultural memory as the canonized memories of a culture disassociated with time (Assmann 1995). Vansina describes the floating gap as the chasm between time-bound communication and timeless cultural memory (Vansina 1985). New Media’s ability to provide interactive communication can evolve the digital documentary into individual or cultural autobiography.

Interactivity in Soldier Brother adds rules through text message system and access to a subjective user plot structure. Soldier Brother allows user interactivity to control the game and narrative aspect of the documentary. Interactive narrative structure thus becomes an element in the digital documentary.

The last review studied how interactivity creates non-linear method for subjective essay plot. Booth described how plot could be formed through user interactions. (Booth
2009) This description steered the study to consider game theory and non-linear plot methods for the digital documentary. Juul presented a definition of game and describes games of emergence and progression (Juul 2011). Jenkins states narrative and game principals are in conflict (Jenkins 2004). Ryan presented methods for constructing a computational, non-linear narrative (Ryan 1991). Interactivity in New Media allows for alternative plot construction that can be used in the digital documentary to create a subjective essay approach.

New Media presents a unique manipulation of interactivity. *Bear 71* application of telepresence is a significant element of the digital form. The telepresence is created through interactivity of the user interface. @Sweden presents a cultural communication method which takes advantage of the archive and communication properties of the digital form. This communication allows a culture to communicate and contextualize through digital participation. *Soldier Brother* displays a non-linear narrative technique available through the spatial design of the digital form. The non-linear and game aspects of the narrative are created through user’s interactivity.

**DISCUSSION OF RESULTS**

Digital innovation shifts the documentary studies to include interactivity in documentary form. The history of documentary describes how technical innovations are responsible for the shift in documentary theory. The framework set the premise of a correlation between technical and theoretical innovation. This was done through considering how broadcast media added mass communication subjectivity, and smaller film equipment re-defined the canon of reality.
The review examined interactivity functions and explicated their theoretical structure. Interactivity in New Media allows game theory, non-linear plot, telepresence, and cultural participation and representation to be used in the digital documentary. Interface literature presented interactivity within interface as an aesthetic in the digital. This aesthetic correlates with the changing value of visual information in the digital documentary form. Communication literature shows New Media’s ability to provide interactive communication. This correlates with the evolution of individual or cultural autobiography. Narrative literature shows interactivity in New Media allows for alternative plot construction in the digital form. This correlates with subjective essay documentary approach.

The digital documentary manipulation of interactivity presents unique digital aspect. *Bear 71* presents a use of telepresence that creates interactive aesthetic in the digital form. This telepresence is created through interactivity of the user interface. *@Sweden* presents a cultural communication method for archive and canon which relies on interactive processing available in the digital form. This communication allows a culture to communicate and contextualize through digital participation. *Soldier Brother* presents a non-linear narrative through the spatial quality of interactivity presented in the digital form. The non-linear and game aspects of the narrative are created through user’s interactivity.

**SUMMARY STATEMENT**

The digital documentary is unique in the use of interactivity. The digital form provides a unique ability to manipulate interface aesthetics, user communication, and narrative structure. This innovation allows the digital documentary to create a performative real
through telepresence, autobiographical cultural communication, and subjective non-linear narrative essay.

**IMPLICATIONS FOR FURTHER RESEARCH**

The study aimed to explicate terms to further the language used in describing digital documentaries. This addition of literature focused on describing interactivity in digital form. This study has added language, but has not constructed grammatical implications. The preceding literature review and analysis serves as fundamental theoretical material. The significance of this material is seen in its use for future design, construction, and implementation of digital documentaries.

Further study should analyze the effectiveness of interactivity in documentary expression. It is stated that interactivity is a unique aspect of digital documentary aesthetic. Further study of interactivity effectiveness should question the validity of interactivity as a positive attribute.

A broader range of studies must be produced to canonize the unique properties of the digital documentary. This study presented interactivity as the principle element of digital documentaries. It should be established the impact interactivity has on the documentary construction. It is evident that the digital documentary varies from the film counterpart. Researching the impact of interactivity should delineate if the digital documentary is a faction of film, or a unique emerging field.

The study has identified and explicated several relevant theories related to interactivity in the digital documentary. The purpose of this explication is to provide a language for further discourse. Further discourse may transform or compact the language into a
more symbolic or concise form. The interactivity theories presented will compact and transform as they are further enveloped into documentary theoretic. Further application must be done before a canon of digital documentary theoretic can be solidified.

**Implications for Practice and Recommendations**

This thesis provides discourse material for the analysis of digital documentaries. There is very little literature on interactivity in the contemporary digital form of documentaries. Researching this question discovered a lack of understanding of interactivity may add difficulties to creating documentaries in the digital form. Literature review enables the discussion of digital documentaries from the approach of digital interactivity. Interactivity in digital changes the way documentaries are creates, accessed, and enjoyed. The goal of researching interactivity is to induce scholarship in the field of digital documentaries. Film documentaries accustomed to cinematic aesthetics express their art in a visual and audio aesthetic. The preceding research aids in translating expression to a digital interactive form. The interactive form provides a correlation between film and digital expression rather than an abandonment of the cinematic form.

**Relationship of Results to Theory**

The introduction suggested the digital documentary form by considering what is unique about the digital documentary. This question found there to be a lack of literature reviewing digital technology and the documentary form. The framework considered the relevance of the study by linking innovations in technology to innovations in documentary theoretic. It considered how the new digital shift could
correlate with a shift in documentary theory. The theories were reflected into digital documentary projects. These projects showed the current trajectory of documentary studies in accordance with interactivity in New Media. Interactivity became an evident connection between documentary studies and various implications to the digital form. The literature review sought possible methods documentary theory could progress through New Media interactivity. These various theories were explicated to understand the unique aspects of the shift.

LIMITATIONS

The ability of technology to shift documentary studies is limited by the ability of documentary to transfer into technology. That is, the expression in the digital form is contingent upon how expression can migrate into an interactive aesthetic. Digital documentary’s reliance on interactivity vastly differs from the traditional documentary form. This break from cinematic canon is a natural exploration as the digital documentary. The term documentary is explored in the broadest terms as to provide an expansive extension of the field. A recursive constricting study would be necessary to condense the field.

The literature’s main purpose is to explicate a phenomenon. The study integrates interactivity into the digital theoretic, but does not hold qualitative analysis on the effectiveness of use. The significance of this study is to add relevant literature to assess the unique aspects of digital documentaries. Therefore, the focus lies in documentary relevance to digital aspects more so than a concentration on New Media theory.

The examples of documentaries chosen present a limited scope of application based upon the literature presented. The goal of this thesis is to consider what is unique in
the digital documentary. The aim was to present new theoretic for future use in documentary analysis. The simple analysis presented represents the suggested elements of digital documentary to be reviewed in further applications.

**Final Concerns**

This study explicated unique aspects of the digital documentary form. Relevance stemmed from the historical relationship of technical innovation shifting the documentary theoretic. The theoretical framework sustained New Media interactivity evident to incite a theoretical shift in documentary. The digital documentary observation has shown digital interface can create documentary aesthetic. The observation explored how the database quality of digital form paired with the user interactivity can create a powerful method to capture communication. It has shown the spatial quality of interactivity allows for a non-linear form, which compliments the subjective essay documentary form. This study concludes interactivity could shift documentary theory to include participatory aspects which expand the current documentary theory of reality, expression, and temporal subjectivity.


Corner, John. "Documentary in a Post-Documentary Culture? A Note on Forms and


Gielen, Pascal. The Murmuring of the Artistic Multitude: Global Art, Memory and


Montgomery, R. A., and Edward Packer. Choose Your Own Adventure. New York:


Rheingold, H., 1993. The Virtual Community. ACM/Addison-Wesley, Reading, MA.


APPENDIX A

DIGITAL DOCUMENTARIES FOR FURTHER STUDIES

Further digital documentaries which produce a strong sense of telepresence through interface interaction are *The Block* (2012), directed by Matt Smith and Alicia Hamilton; *Sound Ecology* (2011), directed by Alexandra Guite; *Alma, a Tale of Violence* (2012), directed by Miquel Dewever; and *Farewell Comrades* (2011), directed by Lena Theile.
