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Gameenvironments of the Past.

by

Derek Fewster and Ylva Grufstedt
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Abstract
This article explores the complexities and affordances of historical representation that arose in the process of designing a mobile augmented reality video game for teaching history. The process suggests opportunities to push the historical documentary form in new ways. Specifically, the article addresses the shifting liminal space between historical fiction narrative, and historical interactive documentary narrative. What happens when primary sources, available for examination are placed inside of a historically inspired narrative, one that hews closely to the events, but creates drama through dialogues between player and historical figure? In this relatively new field of interactive historical situated documentary, how does the need for player interaction and therefore the need for novel narrative elements interact with the need for authentic primary source material? How are demarcations made in the interactive text? How can a learner distinguish between historical fact and historical drama? How can the blurry line between these help learners to understand that history is in fact a constructed narrative and how might the situated documentary provide unique opportunities to teach aspects of the construction of responsible historical narratives? The game that is subject of the chapter is a situated documentary, specifically, a place-based, interactive mobile game and simulation focused on teaching early 20th century Jewish, labor, immigrant, and women’s history on location in New York City.

Keywords: keyword situated documentary, mobile game, augmented reality, history education, learning, historical fiction, primary sources, historical thinking

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Introduction: Constructing Situated Documentaries

The digital mobile situated documentary is a relatively new form, with its earliest experiments in the late nineteen nineties (Höllerer, Feiner and Pavlik 1999), and just over a decade of more expanded experimentation in the mobile handheld form (Gottlieb, Mathew, Schrier and Sly 2014). There are a number of examples of situated documentaries to teach history, but not many. At the cutting edge of this locative documentary form, questions arise differently. While researchers in social studies education are now delving into the use of the documentary form in history education, little if anything has been considered in this new, digital and situated form. Documentary as a category is fraught, as it has, since its inception, been a variety of non-fiction footage, carefully selected, and in many cases, staged re-enactments.

Fabrications have been a part of the cinematic and video documentary form since its inception, and only the degree to which the documentary is transparent about the fabrications has shifted. The first feature length documentary, Flaherty’s Nanook of the North (1922) included re-stagings, fabrications, often developed in concert with the indigenous people (Nichols 2008, Rony 1996, Ruby 2000, Russell, 1999). Since at least the 1990s, Werner Herzog has denied the distinction between notions of truth in documentaries and truth of fiction filmmaking, sharing with festival audiences’ moments of fabrication. In 1997, Herzog screened Little Dieter Needs to Fly (1997) at the Telluride Film Festival and explained how a scene in which the subject, Dieter Dengler, repeatedly opens and closes his home door was one Herzog invented and enacted on the spot as a kind of symbol or metaphor (Herzog 1997). Herzog (2010) discusses “ecstatic truth,” a kind of poetry achieved through the rare transcendent moments of the form that hint at something beyond simple representation. Renov (1993), in developing a poetics of the documentary has included “expression” as one of the categories along with persuasion. And so, documentary, as distinct from
journalism, as a medium, has long been aware of the constructed nature of its form, as well as the search for poetics rather than truth claims. It is this aspect of the documentary form that may be the most important in considering the contemporary teaching of history in interactive media.

**Learning History with Mobile Games**

There are a number of ways to approach the teaching of history, one of which is through the discipline of the historian (Brush and Saye 2008, Gee 2007, Squire and Barab 2004, Schrier 2014, Wineburg 2001). Learners are placed in the role of examining primary sources, evaluating various possible interpretations as well as narrative constructions. History is taught as an investigative process as opposed to the imbibing of a set of dates or a single interpretation. They are taught how to construct arguments, weigh perspectives, and give fair hearing to opposing perspectives. Just as history education with documentaries requires the additional step of examining the constructed nature of the documentary form, an interrogation of the means of production, selection, choices, sources, techniques of persuasion (Marcus and Stoddard 2009, Stoddard 2009, Stoddard 2010) the interactive situated documentary likewise calls to those who play within it to consider the means by which the documentary likewise calls to those who play within it to consider the means by which the documentary hails its players. This may be an easier task for educators and designers to embark upon given the strange combination of fiction and non-fiction that an interactive game demands. Video games require input from players and players require feedback from games. And so a straight ahead historical narrative, unaffected by player choices lacks the necessary engaging qualities to make the piece a viable game or simulation. Interactivity requires participation of a very different order than, say a cinematic presentation, which one could argue, requires simply attention.
In order to begin considering the kinds of mobile history games that would allow for participation, we can look to the styles initiated by Karen Schrier in *Reliving the Revolution* (2005), developed further by Jim Mathews in *Dow Day* (2005) (Mathews 2009, Mathews and Squire 2009), and further developed in my game, *Jewish Time Jump: New York* (2013) (Gottlieb 2014, Gottlieb 2015). These situated documentaries place the player in the position of historian or reporter, placing the player, on location of the original historic sites, as an observer, witness, and investigator. While the timeline does not change, the various perspectives of historical figures do vary. In *Reliving the Revolution* (Schrier 2005), there are varying accounts of the Battle of Lexington to uncover, discover, and then decisions to make about those accounts. In *Dow Day*, set on the University of Wisconsin Madison campus in 1967, there are protesters against Dow Chemical, police, by-standers, and faculty members as the player works as a reporter to gather the story. In *Jewish Time Jump: New York*, players take on the role of journalists in Washington Square Park, but this time, jumping back in time to Greenwich Village, New York in 1909. A more detailed description of the game follows in the next section.

The position of player as investigator, charged with the quest of researching, learning, and coming to a contextualized understanding can allow for the historical data to remain while participation occurs in the parsing of that data. This can solve the issue of how a game or simulation could maintain a non-fiction record of the past, while requiring participation and interactivity. The agentic position for the player is distinct from a purely fictional game or other narrative, which may place a player/reader in a well-researched historical setting, though not connecting player inquiry into non-fiction elements to progress in the game.
And yet, situated documentary can allow for strange and novel combinations of fiction and non-fiction side-by-side. Jewish Time Jump: New York provides a case to examine such strange combinations in the context of history education.

**Design-Based Research: Jewish Time Jump: New York**

I designed Jewish Time Jump: New York, with a number of colleagues through the organization that I founded and run, ConverJent: Jewish Games for Learning. My dissertation at New York University was a design-based research (DBR) study on the game, examining changes in learner behaviors over the course of multiple design iterations.

DBR is an umbrella of research methods which is suited for any “rich contextualized setting in which people have agency” (Hoadley 2013). Design-based research is an iterative, proto-theory-testing approach to developing learning theory and design knowledge. Designer-researchers prototype a learning environment or intervention over the course of a number of iterative cycles comprising theoretical rationale, design, field trial, data gathering, analysis, and return to theory and re-design. Learning theory is used as a starting point for design, and that theory is held suspect during investigation (see Barab and Squire 2004, DBRC 2003, Hoadley 2004a, Hoadley 2004b). Outcomes from DBR are new theory on the learning environment. In the process, this ideally also leads to improvement in the intervention, as through iterative cycles, the learning intervention (in this case, a video game and simulation) reaches closer and closer to the desired learning outcomes.

I designed the pilot based on current educational research and theory. Then I took the game into the field with learners and educators, gathered data before, during and after play, including observational video, digital log files of player moves, pre-
and post-surveys, and semi-structured interviews. I analyzed the data and returned to the field over the course of a number of iterations, and worked to move closer and closer to the educational goals, including specific civic and democratic educational outcomes, including providing a best case, fair hearing for alternative perspectives (Gottlieb 2015).

*Jewish Time Jump: New York* is a mobile augmented reality history game and simulation for iOS devices (iPhones and iPads). In the game, fifth to seventh graders and sometimes their families play reporters for the fictional *Jewish Time Jump Gazette*, sent back in time to recover a story lost in time. Players land in 1911 on the eve of the Uprising of 20,000, the largest women-led strike in US History, when garment workers took to the streets to fight for better working conditions. Players have to gather perspectives from various digital characters including young Jewish women labor organizers, manufacturers, and others including Irish and Italian immigrants in Greenwich Village.

Players pick up various primary historical sources in their digital inventory: newspapers, strike flyers, ephemera and see photography based on their GPS location from over 100 years in the past. Because players can change the player-character’s garb back and forth during the game to blend in with those they are trying to meet, they might get mistaken for strikers and be set upon by *shtarkers*, tough guys, hired by shop owners to rough up strikers who can take away health points. Players meet manufactures concerned about competition, manufactures who themselves had been immigrants just a few years before, manufacturers who had come up through the worst of sweatshops and build new factories with the latest technology.
Players come to discover that the strike led to all but a handful of shops changing working and safety conditions and becoming union shops. Eventually, players “jump” through time into 1911, aided by their time travel device, the Chronometer (their mobile device) to be on sight at the Triangle Shirtwaist Factory Fire, during which 146 workers, mostly young Jewish and Italian women lost their lives. Upon returning to present day, the players come to discover that the mobile devices on which they play are also the site of labor dispute, reading news of Apple’s Foxconn factories in China, and Apple’s work to improve working conditions. Earlier in the game, they had learned of the recent garment factory collapse and deaths in Bangladesh. In the curriculum we were developing through ConverJent and the Jewish Women’s Archive, they would also come to understand that exploitation of immigrant workers still exists today in the United States, including in New York City.

Science Fiction, Historical Fiction, Primary and Secondary Sources

Over the course of designing and rolling out the game, I came to realize that this “situated documentary” was raising different kinds of questions regarding form than I had encountered previously in the study and making of documentaries. One important moment in realizing this liminal space happened during an educator training session\(^1\) for Jewish Time Jump: New York. One educator asked me to discuss which parts of the game were “real” or drawn from primary sources, secondary sources, or historical fiction. I knew all the distinctions and how they were marked in the game space so they could be recognized, but had yet to articulate those distinctions for educators. I was also challenged by colleagues to delve more deeply into the implications of the mixing of historical fiction and non-fiction.\(^{ii}\)

Jewish Time Jump: New York involves a combination of fiction and non-fiction, which I believe is novel in the situated documentary thus far. The game is framed in a science
fiction narrative. While *Dow Day* suggests time travel, through the augmented reality form itself, the narrative of the game does not include other time travel elements themes and tropes. In *Jewish Time Jump: New York*, the mobile device itself is a time travel device, with a digitally painted display, The Chronometer, who goes by the name “Hank” in the game has its own personality and role in the game, as guide and companion. At times the device malfunctions due to solar winds, at times the player is jumped through time unexpectedly. Hank sometimes functions to provide reflective moments. The time travel storyline and frame are clear fiction demarcations in the game.

The historical narrative of the game melds historical fact with historical fiction in specific ways. Numerous historians consulted on the game and the narrative was all drawn from careful research. The game is driven by dialogue as players interact with dozens of characters. These characters include actual historical figures (denoted by having both first and last name appear when the player first meets the character) including Rose Schneiderman, Clara Lemlich, Pauline Newman, Abraham Cahan, Joseph Zito, Francis Perkins, Max Blank, and Isaac Harris. With the exception of some of Clara Lemlich’s dialogue drawn from an actual speech that she delivered at Cooper Union, the dialogue is inspired by the events, attitudes, speeches, and writing of the characters, but it is not drawn from primary sources. This is historical fiction and a conceit of the game, to allow players to learn of the perspectives of the historical characters. Historical fiction is regularly used to teach history, and Levstik and Barton (2005/2010) provide guidelines for use of historical fiction in teaching history in their work *Doing History: Investigating with Children in Elementary and Middle School*: “Well-written, historically sound narratives (fiction as well as nonfiction... can support informed and disciplined imaginative entry into events—and help students make better sense out of expository texts” (Kindle Edition, Chapter 9, Section 1, last paragraph). The teacher is critical in providing guidance and facilitation – and
historical fiction can deeply engage learners.

An additional level of characters in the game are amalgam characters (denoted by a single name when the character first encounters them). These include Maria, an Italian woman character who speaks Italian, English, and Yiddish – such women were key to organizers bringing together coalitions. Biff is a *shtarker*, based on a number of boxers, thugs, and tough guys hired to beat strikers. There is also a “Tammany Cop,” who might threaten to throw the player into jail. Catherine, an Irish Worker laments her family not wanting her to strike despite working conditions she cannot bear (Catherine is drawn from sources including Theresa Malkiel's autobiographic historical fiction of the strike, Malkiel 1990). Again, these are techniques of historical fiction.

But beyond historical fiction, *Jewish Time Jump: New York* includes and requires the examination of numerous primary sources: newspapers in English and Yiddish (with translation into English), ephemera such as a strike flyer, and dozens of photographs from the historic events. The whole game is played on location in Washington Square Park and at the Brown Building, one block away, where the Triangle Shirtwaist Fire occurred.

The game is not only an interactive historical fiction, but playtime can dilate around the primary sources. Some students will read an entire newspaper page from 1909 (students can self-pace during the game, within bounds set by the group leaders). Learners can pinch and zoom photographs and are encouraged to do so to find details within the photographs.

In addition to the primary sources within the game, the narrative and the events in the game are all drawn from a variety of secondary source material written by a
variety of scholars including Diner (2011), Orleck (1995), and Greenwald (2005). Most importantly, the key tasks of the players are to seek out, learn, and evaluate a variety of characters’ perspectives.

Opportunities to push the Historical Documentary Form with Situated Games

History documentaries often re-enact, but seldom use alternative genre fiction as part of their form. We may consider the works of Ken Burns (The Civil War 1990, Baseball 1994, Jazz 2001, Jackie Robinson 2016). In many of Burns’ films, professional actors read letters and quotes from historic figures no longer living. These actors provide a living voice where no voice was ever recorded or remains. Here this dramatic license maintains the text of the primary source, even as it imbues the source with a new tone.

Werner Herzog pushes the form in other kinds of directions. In Little Dieter Needs to Fly, Herzog takes a Vietnam veteran and pilot who had been a prisoner of war back into a jungle, decades later, to re-enact his capture. The viewer learns of history from the subject, but in a self-re-enactment, and as mentioned above, Herzog also fabricates when it is not necessarily obvious to the viewer. While the re-enactment of Dieter Dengler’s capture in the jungle is obvious, the little detail of how Dengler opens and re-opens the door to his home, Herzog revealed in conversation outside the body of the film - was something he fabricated. Herzog discussed this at a question and answer session following a screening of the film at the Telluride Film Festival (Hezog 1997). This fabrication is only known to those to whom Herzog spoke, those they tell, or if at some point he decides to document that fabrication (no director’s commentary appears on the DVD of the film). But Herzog often talks about various fabrications. It seems as though Herzog places his fabrications in spaces of
his films that are less critical to a primary non-fiction narrative. In Cave of Forgotten Dreams (2010) amid travels into caverns to give cinematic witness to 32,000-year-old cave paintings in France, Herzog sprinkles fanciful tales of modern day irradiated reptiles, and a modern day man acting as if he were a caveman. Moments of testimony from scientists contrast with poetic weirdness. There is a tension between these moments in which a viewer must ask “Is this real? Is that real? That can’t be real. That must be real.” Amid the poetic fascination, history emerges with fuzzy boundaries, along with pleasure, fascination, and poetry.

Marcus and Stoddard’s work on the constructed nature of the documentary narrative is important for approaching the question of the documentary and history education. (Marcus and Stoddard 2009, Stoddard 2009, Stoddard, 2010). They point out that the ability to critically evaluate documentary material is an important aspect of a justice-oriented civic education. Understanding the rhetoric of constructing historical narratives is key to developing an ability to evaluate evidence and claims. Marcus and Stoddard are not explicitly discussing Herzog’s work that I mention above. Herzog’s work is challenging. It pushes the boundaries of the documentary form further than most other artist/historians. I believe it is at the intersection of Marcus and Stoddard’s need for those learning history to interrogate the form of the documentary, and the highly defiant and complex forms that Herzog brings to bear on historical events that brings into relief the possibilities of the situated documentary game form for teaching history.

Because of the active role of the player and the nature of the devices and time used, the situated documentary game can provide both the blurring opportunities and the evidentiary analysis possibilities previously unavailable. Non-historical fiction can be used to frame a history narrative. It could also be melded with the narrative. Embedded within a fantasy story can be actual historical artifacts for players to
explore. The demands of historical investigation could be used to unlock fictive levels. There are a variety of paths that designers could take. Key is promoting the ability to evaluate evidence and claims. These techniques could also be taught in fictive scenarios and then re-applied in non-fiction scenarios.

To consider this fictive end of the spectrum, an interesting example of disciplinary instruction can be found in Stanislaw Lem’s novel *Solaris* (Lem 1961/2016). The novel includes passages in which the protagonist, a space travelling scientist, searches through books on a space station library, following indices and footnotes from volume to volume desperately searching for answers. Such a passage shows the steps of scholarly investigation, albeit in a fictionalized and dramatically heightened circumstance. And so the process of historical evaluation could just as easily be taught inside of a fictive or dramatic environment. Games are rule-based systems with player objectives. Because of the nature of a game, the necessity of the goal or quest can demand disciplinary thinking (Barab, Ingram-Goble and Scott 2009). Historical thinking and even critical evaluation of historical or documentary narratives need not require that which is being evaluated to be non-fiction. This is the essence of simulations used for training and practice used in the process of the training reflective practitioners (Schón 1987/2009).

There is great opportunity in the situated documentary form to embed primary source material in any combination of fiction, historical fiction, narratives. This raises a responsibility for educators, because as Levstik and Barton point out, facilitation by an educator is critical. While a film or game can hint at the divisions between fiction and non-fiction, or by blurring the boundaries call for investigation, those formally providing social studies education will have to continue to follow through on challenging learners to investigate claims and learn the methodologies to discriminate and weigh evidence.
Although a film or video can be paused, and a DVD or Blue Ray may have commentary tracks or extras, the environment that games can provide for investigation of primary and even secondary sources is far wider. In addition to having the ability to provide narrative story including film and video clips, situated documentaries can allow for exploration of locales, communities, parks, architecture, or even local ethnographies (for an example of situated documentary and learning ethnography see Wagler and Mathews 2012). Learners can examine primary sources on location, carried on her or his smart phone, and reviewed at leisure. Learners can also stretch, zoom, and compare those primary sources side by side. One of the abilities of the mobile game is to carry tool sets onto location, allowing students to gather data, such as recording interviews in Wagler and Mathews’ *Up River* (2012). Likewise, it provides easy transportation of historical documents for quick reference or distribution.

The situated documentary form provides a framework within which documentarians can play with mixes of fiction, (whether historical or genre fiction), non-fiction, and historical source material. Mobile devices allow for interactive play, document transport and analysis, and the use of field tools. With all of this flexibility, the limits of use for history education appear to rest with designers and educators’ ability to facilitate an awareness of the means of production of the historical narratives.

**Game the game: Turn the Investigation Back on the Medium**

From a design perspective, the blurring of the line between fiction and non-fiction in situated documentaries requires an additional design step. Besides signposts suggesting that aspects of the situated documentary are constructed, what other ways can documentarians using the situated form raise the issues of the constructed
nature of the history narratives they design or co-design with learners? One approach is to use self-reflexivity, to point out the means of production. In *Jewish Time Jump: New York*, there is a late stage reveal that shows players that the kinds of labor disputes that women and men faced at the beginning of the 20th century have echoes in the present day. Players learn that their devices are also the site of labor dispute, learning of the Foxconn factories where Apple devices are produced, the calls for reforms, and actions that Apple took to improve working conditions. Also, the very obvious science fiction wrapper story is an opportunity for educators, learners, and families to discuss how one can evaluate what is fiction and what is non-fiction? But how might we push this even further in the situated documentaries to come?

One path is of course, to encourage learners themselves to design their own situated documentaries and to work with them in the decision making process. Other possibilities for future designs could be including a section of the game that is self-referential to the ways the game is produced, for example, showing a video clip of the process of writing dialogue, choosing various photographs. This is akin to the practice now used in museums, demonstrating to visitors some of the ways in which the curation of an exhibit was conducted. Yet another possibility would be to build into the game mechanics (those actions types that players perform throughout the game to achieve their game goals) an objective of sorting the kinds of data players encounter, and teaching differences between primary, secondary sources, historic fiction, and other forms of storytelling. Balancing the immersive nature of the story with an analysis of the means of production of that narrative also suggests that the processes might work best if separated temporally. It would likely be quite difficult to engross in the story while deconstructing its form. For situated documentaries intended to teach history there is the opportunity to deeply engage. At the same time, there is an opportunity to use the medium’s unique ability to straddle
document and artifact analysis with a mix of fictions and non-fictions to highlight the production of the historic narratives in the game itself. The specific means of balancing those opportunities is the task for educators and designs to explore together as the medium develops further.

Conclusion

The mobile situated documentary form, interactive games and simulations played on historical sites are a relatively new form. Because they allow for examination of primary sources and a mix of historical fiction, even when telling the story from the perspective of an investigator examining different perspectives, they can be a medium that provides a unique mix of historical fiction, actual primary source material, and even fiction elements in the narrative. While documentary since its earliest stages have involved fabrications, and the contemporary form of the documentary includes fictions as part of its poetics, there appear to be opportunities for education in the newer form because of the flexibility of exploring different means of narrative expression, raising the question about the nature of different elements of the situated documentary. Some elements, such as clearly fictive wrappers can signal to the learner/player to consider the constructed nature of documentaries.

Some will question the danger of the genre of the situated documentary, as it blurs the line between that which is fiction and that which is history. I would argue the blurred line is itself important as students come to understand the constructed nature of historical narratives. They will have to judge the veracity of sources and documents and make distinctions between what is actual and what is constructed, and as news morphs into infotainment and photographs are increasingly manipulated, perhaps it is the historical narrative with fiction elements and primary
source material that provides the best medium in which to test learners’ ability to judge evidence, be skeptical, and come to understand the means of production of historical narratives. This will need to be scaffolded by educators, even for young learners, and those educators who pick up these kinds of narratives will need to stress these questions – but doing so can make for rich inquiry and historical learning. The situated documentary, as a medium, in this way could help learners understand the careful and important work of decoding history.

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i The development of *Jewish Time Jump: New York* as well as educator training sessions were funded by Signature Grants from the Covenant Foundation.

ii While a Ph.D. Candidate, my teachers, historians Robert Chazan, Benjamin Jacobs, and Jonathan Krasner pushed me to address this intersection. Their challenge and encouragement led to a discussion in my dissertation which is the kernel that I have significantly expanded for this article.