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# Abstracting Evidence: Documentary Process in the Service of Fictional Gameworlds

by Aaron Oldenburg

## Abstract

Documentary filmmaking and the design of videogames have often converged in the form of "docugames", games that aspire to the form of documentary. This paper looks at a related strategy for creating content and gameplay: that of using documentary processes, such as interviews and on-location evidence collection, for games that involve varying levels of fictionalization. It will discuss abstract approaches to the idea of realism in docugames as well as traditional documentary film. It will also detail an original design project that begins with documentary evidence collection and ends with an impressionistic fictionalized narrative. It will discuss the benefits of this approach, and the seemingly paradoxical creation of a form of realism through fictionalization. Playtesting results of this experiment will be detailed and related paths will be suggested for continued exploration.

**Keywords:** docugame, artgame, documentary, travelogue, realism, cross cultural

## Introduction

Game designers have often experimented with the goal of creating videogames that are documentaries. The challenges and contradictions that are unearthed in the process have been documented, and the definition of what makes a documentary game, or "docugame" [1], is contested. There are still under-explored paths, approaches to realism, and strategies in the usage of documentary material in the creation of videogame experiences.

This paper focuses on one of those paths: that of using documentary [2] development *process* in the creation of an abstract, fictionalized videogame [3]. It will detail the creation of an original videogame to explore real stories through the lens of abstraction and fictionalization, specifically through the procedural experience afforded by the medium. During this design-based research project, I discovered challenges in working with documentary evidence to create an expressive, meaningful game experience. I also discovered opportunities that the videogame medium provides players to interpret that evidence through their cognitive interaction as well as the emergent re-contextualization of that evidence in the game system.

Filmmaker Werner Herzog terms the "ecstatic truth" the feeling that a great truth can be found in fictionalization, one superior to *verité* representation (that which is supposedly based on direct, unfiltered observation). To him, it is a type of content that is "mysterious and elusive, and can be reached only through fabrication and imagination

and stylization" (Ebert, 1999). In this sense, there are certain elements of reality that can be simulated through fictionalization.

In detailing an original example of a fictional world created through documentary process, this paper will discuss why the process was essential and how the found content directly informed game design decisions. It will look at possible benefits of this approach to realism in a game. Abstraction and fictionalization of documentary content might provoke players to filter and question the representation of an experience. Some methods of abstraction might engage the player in building empathy. In abstracted narratives, often the player is required to cognitively fill gaps in representation, and the assumptions provided by the player might have a stronger feeling of reality than a simulation can provide. In the end, there might be a necessary tradeoff for all games that work with documentary material, in that for some simulated or reproduced content to feel real, other aspects must be fictionalized. These are all possibilities that I sought to explore in my design research.

The original design research will be compared with relevant documentary film and docugame works, thus limiting the scope of the prior work to be surveyed. The goal of the paper is not to detail the breadth of docugames and documentary film, but to focus specifically on the opportunities and challenges of this design experiment. Docugame examples presented will focus mainly on how the act of abstraction serves their forms of realism, and film examples will focus mainly on experimental documentary that provokes a form of cognitive interaction on the part of the viewer through abstraction and fictionalization. It will explore how these film methods approach truth and reality, and what constitutes their relationship with realism.

### **Gathering of Documentary Evidence for Game Design**

There are several benefits that a designer of a fictional gameworld can take from documentary design process. Using documentary content brings new constraints, inspirations and partnerships into the development process. An interview or a turn down a particular road may change the direction of an entire project. One may go into the documentary collection phase with no idea what the gameplay of the final product will be, and through the first-person sensations, connections and observations, discover gameplay that would not have arisen from the designer's previous experience and worldview. There are also tangential personal benefits to a game design process where developers, by choice, spend a sizable amount of the process away from computers and in situations outside of their comfort zones.

Using documentary process as a launching point for game design results in a fictional world that references the real one. It may take place in a real location, with the environment reconstructed from reality, using characters from real-life, or it may fictionalize and abstract either of these. It may reference the game designer's previous experience as the documentarian, but requires fictionalization to allow the player to make different choices than they did, while at the same time attempting to stay true to the experience of making those choices. The designer may also find that after collecting all the interviews, photos, videos, audio and written notes, there is only a small part of the experience that they are interested in simulating, one that is the spark around which they can build a game.

In the end, it is often the acquired content that dictates the design choices, even the choice to abstract and fictionalize the content. In the summer of 2013 I travelled to a small suburban desert town in Peru, called Cachiche, for the purposes of creating a docugame. I was initially intrigued by the story behind this town, which was founded by witches who had fled from the Peruvian Inquisition hundreds of years ago. The town today has many townspeople who are descendants of these witches, and some of them still practice traditional medicine and fortune-telling. The intention of the project was not only to explore

the local ghost stories and strange history, but to document the quietly odd everyday life of a small town in the flux of a burgeoning tourism economy. It was also to simulate the experience of an outsider.

The documentary process involved staying with a local "brujo", which loosely translates as "sorcerer", named Don Miguel Angel, a visionary entrepreneur who runs a restaurant and hotel, tells travellers' fortunes in a pyramid, and regularly leaves his body in the form of a spirit to roam the countryside. He was one of several people interviewed for the game.

Other materials collected during the four days spent in Cachiche were images of the town layout from high vantage points, textures to use on 3D models, ambient audio from the town environment, and extensive notes on unrecorded encounters. This project was begun without a form of gameplay decided, and the documentary content would eventually dictate the final product.



Figure 1: Screenshot of a model of a Cachiche landmark compared with its reference image.

In the two years following the trip, this material was turned into a videogame using the software Unity3D and open source character creation program MakeHuman. In the beginning of the development process, the area was visually reproduced in a somewhat verisimilar way to see how the experience of navigating the space might influence the design (Figure 1). What was most compelling to me in this prototype and my memories of the experience was the feeling of walking down the dusty streets, discovering side paths, interacting with strangers, sharing photos and stories, the spookiness of wandering at night, the spontaneity of movement and encounter, and sitting with the staff of Don Miguel's restaurant and watching the waves of mostly-Peruvian tourists come and go from their vantage point. The eccentric history of the town was less interesting than all of this; the five hundred year old story of the witches fleeing the inquisition felt by comparison to be simply a collection of data.

On returning home and beginning the design process, I was left to re-examine my goals. What did I want the player to experience? How did I want them to engage with the narrative? I had begun the documentary collection process without a sense of the type of game I wanted to create, and was initially unsure what form of presentation would communicate the more ineffable aspects of the experience and location.

## A Form of Realism

I found the answer to that design question by exploring philosophies of realism and representation that were outside of literal storytelling and audiovisual verisimilitude.

Apichatpong Weerasethakul's *Mysterious Object at Noon* (2003) is a documentary that was created through the filmmaker's visits to villages in his native Thailand where he asked locals to contribute to a surrealist exquisite corpse story. The story itself is fictional, created through an improvisational game where each person adds to a long, unpredictable narrative. It is also a traditional documentary, investigating the imaginations and collective unconscious of people living in rural Thailand. The film is mainly composed of storytelling interviews, but in some scenes, Apichatpong asks participants to act out scenes from the created narrative. This is revealing in a way similar to a straightforward documentary, despite the fact that the story, itself, is fictional. This film was a major influence on my own videogame design experiments with documentary process.



Figure 2: NPC discussing a player's photograph.

For my game design project, the mechanics on which I eventually decided were photography-based. The player assumes the role of a visitor who originally arrives for the cliché purpose of ghost photography. However, in wandering sections of town at night, exploring alleyways and eavesdropping on conversations, encountering non-player characters (NPCs) with personalities, they quickly become distracted from that purpose. A key component to the gameplay is not only taking photos, but showing those photos to NPCs the player meets (Figure 2). Those characters see the photos, and in a mechanic inspired by Weerasethakul's film, describe the photos in ways that are often stream-of-consciousness and imaginative, due to the semi-randomness of the description. Although the stories given to photographs do not build on one another in the obvious sense of *Mysterious Object at Noon's* exquisite corpse, they do build on one another in the player's head as they combine to form a portrait of the town and its people. The game simulates the experience of going to a foreign place and probing the imaginations and personal experiences of the people one meets. The descriptions are a mix of literal explanation of the contents of the photos, poetic non-sequiturs and abstractions, and subtitled audio lines from interviews removed from their interview context and re-contextualized in a procedural way with related imagery.

Like the film, this game forces the player to interpret the reality of the location through the "real" products of the minds of the inhabitants.

The player's sense of reality is based on the descriptions of the NPCs, but it is not dictated by them. The player must not only decide what is true and what is a fiction created by the NPC, but they also must project the NPCs with personalities through the gaps in meaning.

### **Player Interprets Incomplete Information**

A successful fictionalization of documentary content does not necessarily require the designer to imagine all the divergences from collected evidence. Some elements of the simulation can come directly from the player, and gaps in information can be filled by the player's cognitive processes. Game theorist Jesper Juul (2011) writes of what he calls incompleteness in games, which he defines as fictional worlds that have "blanks the player must fill in" (132), and describes this as an inherent quality of gameworlds.

In the Cachiche game project, not only is the NPC interpreting the player's photographs, but the player must infer what aspect of the photograph the NPC is describing, or to what they must be reacting.

Technically the NPC is not examining the photos but looking at metadata that describes what was seen by the camera at the moment the photo was taken: people, landmarks, houses, animals, events, for example. This information is then ranked by order of importance: for instance, if another NPC is visible in the photo, the describing NPC will mention them rather than the foliage that is also visible. NPCs each have a list of phrases that they will say about certain elements in a photo, based on the constructed personality of the NPC, who is usually based on a real person. When they run out of these (for example, if they have identified too many pictures with houses as the main feature in them), they move on to a database of phrases that all characters choose from. When these are exhausted, the game begins creating sentences by combining the subject of the photo with a random description. These are often poetic-sounding, absurd or funny, and may imply that the NPC is making a joke, using their own creativity, or bored with the process of looking at the player's photos. Playtesters [4] sometimes stated that they felt like an NPC had begun making fun of them, which was not entirely unintentional. Another remark from a playtester was that you have to "assume a lot" about the intentions of the characters. This also is reminiscent of a strategy in artificial intelligence (AI) where a computer will respond with a non-sequitur response rather than admit to not understanding something a human has said, a strategy which often is said to make the AI feel more real. The player's interpretation of the NPC's motives and mindset happens at the intersection of two things: the actual photo and the NPC's description of it, which may not match what the player feels is the main subject of the photo. Often players felt that some lines were more convincing than others, and occasionally a description would fall far enough away from the content of the photo that the player was unable to see a connection. Through playtesting, text was altered iteratively to avoid the most egregious of those circumstances.

Originally the game was titled *Cachiche*, a placeholder inspired by the name of the town. I felt that the title should better reflect the mechanic of photo-taking in a place charged with mythology and the hallucinatory stream-of-consciousness of the main photo-interpretation mechanic. The title *1,000 Heads Among the Trees* was chosen, inspired in part by stories of flying witch heads.

One challenge was incorporating the recorded interviews into the interactive product. After transcribing and translating them, they were cut into statements and brief stories and tagged with elements in the game that are related to the subject of what is being said. The interviewees are characters in the game, and when the player shows them a related image, the character will play that line of the interview. For instance, a picture where houses feature prominently would solicit from Don Miguel, "It's amazing how long this place has been isolated, and there are more than 1,500 families here". This, of

course, leads to the possibility of a line of interview being taken out of context and the real person being misinterpreted, but context clues were left to avoid unwelcome and possibly slanderous interpretations. In many cases, however, it leaves the interview clips intriguingly ambiguous, and opens up spaces for the words to gain added, but benign, meaning.

The resulting gameplay forms a kind of dialogue system, where the player forms nonverbal questions with the photographs they choose to take and show, and the characters respond to the player's prompts by describing the visuals in front of them or making a related comment. These sometimes random, often surprising and occasionally obvious descriptions create an emergent narrative, and often send the player off in new directions. These directions, of course, are a result of the player deciding what the NPC's words meant within the context of the game.

This projection on the part of the player can also lead to something like empathy. Their attempts to make sense of the content of the dialogue is frustrated, so they attempt to understand the motivations and state of mind of the NPC.

There were design choices outside of the photographic-description mechanic that also attempted to lead the player to fill in gaps in meaning. Early playtesting showed that players were interested in exploring the alleys between houses, so I began putting conversations on which the player could eavesdrop in open windows and beyond fences. These vignettes outside the player's reach created a sense that the world was larger than the one in which the player was constrained to wander, as there was action happening beyond the boundaries of the gameworld. One playtester said he felt there was much of the world that he had missed on playthrough. Initial feedback indicated that some players felt there was not enough of a goal, or at least an indication of what to do next after figuring out that they could take pictures and show them to NPCs. The original intended goal was to explore and discover. Aside from creating an explorable and discoverable environment, typical game design methods for encouraging exploration, such as scattering collectable objects or creating quests, aptly dubbed "lists of chores" by indie developer Ed Key (2012), felt forced and distracting. Several strategies were used, however, to give the player a sense of moment-to-moment goals. The main strategy was to give the player a form of "to do" list in the game, which after initially guiding the player with a few concrete tutorial goals, gives the player progressively more abstract goals. Eventually the player is asked to "Find a place where someone else saw something", "Take a picture of something that assumes the shape of something else", and "Record before and after", among others. The player then must decide, when they find that these goals have been checked off, what they did that accomplished the goals. Playtests seemed to indicate success, as players stopped saying that they did not know what to do next, despite the abstractness of most of the goals. Some goals had to be changed, however, because the player saw through the impossibility of the game engine assessing them, one of which was "Take a picture with your eyes closed".

There were indications after release that letting the player fill in gaps of information was a strategy that worked. Writing about *1,000 Heads Among the Trees* for Kill Screen, Chris Priestman wrote that "what works here is that uncertainty space". A Steam commenter (DeathMetalMercenary) wrote that a positive aspect of the game was that "[t]he story somehow has the paradoxical ability to be both subtle and specific at the same time". Rebekah Kirkman (2016), writing for the Arts section of the Baltimore City Paper, wrote of the effects of the game's sparseness:

You stumble upon things that don't make sense by themselves: an unmarked warehouse stocked to the ceiling with branches; shells of narrow homes that store

countless large, white sacks. There's a bar on one side of the town that you can't find a way into, but you can stand outside and listen. Someone called El Brujo describes Cachiche as a place with a "large cone of energy" and tells you about a Jarjacho -- a ghost who lives in the field and wears a sack over his face. At best, all you get are snippets of information about Cachiche and its stories, rather than a full history -- which is better, and it's seemingly how the artist experienced it, too, when he visited the town.

These writings suggest that the uncertainty created through the presentation of the game's elements created a sort of impressionistic realism.

However, not all reactions to the game's ambiguities were entirely positive. Steam commenter Mrs. uLLetical™-L- | Soapby wrote that the game did not make sense to her, and that there was "[n]ot much explanation about what is going on". A mixed review given by YouTube gamer TheRPGMinx (2015) is described as, "[reviewers] Minx and Sinow slowly go insane as they realize they have no idea what is happening [in the game]". There is clearly a pleasure in ambiguity that not everyone experiences. For some, it emphasizes feelings of uneasiness and provokes them to explore the mysteries of the created world, and for others it provokes feelings of disinterest and boredom. It is possible that if one wants to pursue a creative strategy that reaches the widest audience, this is not the one to choose, but for those it does reach, the experience can be powerful.

### **Fictionalization to Encourage Critical Engagement**

A fictionalized game that makes use of documentary evidence might help players get to the truth(s) behind the presentation. An important effect of abstracted documentary content might be to provoke players to exercise the part of their brain that filters and questions every part of an experience. Given that no simulation will be perfectly accurate in all aspects, it might even be dangerous to not require players to engage this faculty. Creating a question in the mind of the person engaging with documentary material can help involve crucial critical faculties.

There are some documentary films that expect a certain amount of cognitive interaction on the part of the viewer to assemble facts, fill in the gaps and decide what is reality. Luis Buñuel's *Las Hurdes: Tierra Sin Pan* (1933) was an ethnographic documentary of a real group of people with a narrator who becomes increasingly unreliable. The narrative falsifications presented over genuine documentary footage become more apparent to the viewer as the film progresses, requiring them to use their own critical faculties to analyze the visuals. Cinema theorist Vivian Sobchack writes that using this technique, Buñuel forced upon the viewer "the freedom to see" absent a reliable narrator (1998, p. 81). Buñuel's stated intentions suggest that he was searching for depths of understanding and experience that a descriptive narration could not create, as film critic Andre Bazin writes, "Buñuel's surrealism is nothing more than his concern to get to the bottom of reality" (1963, p. 191). It is narrative falsification in the service of a form of realism.

Could it be possible that a game system, that is initially assumed to simulate an aspect of reality, could come to be seen by the player as a form of unreliable narrator? Could the slipperiness of a game system cause the player to view the subject matter, itself, as ambiguous?

The videogame *The Cat and the Coup* (Brinson & ValaNejad, 2008) presents historical events as the setting for abstracted gameplay. It is a surreal exploration of the life of overthrown Iranian Prime Minister Mohammed Mossadegh and the CIA-backed coup that removed him from power. The player does not directly participate in these events,

as in the game they are uncontested history. The player's interactions only dictate how Mossadegh, represented as a third-person character on screen, interacts with his memories of the events. Gameplay takes place in the building in which he is under house arrest, and the player controls his pet cat. The disruptive actions of the cat spur Mossadegh to move through his environment and engage with the hallucinatory memories that the player is led to feel he wants to forget. This may, however, be more a case of projection than empathy, as the outside world, particularly those from the United States of America, may be more wont to forget the disgraceful actions that removed a democratically-elected foreign leader from office, than Mossadegh would be, himself. Nevertheless, through the game's playful simulation of the jogging of his memory, the game has caused players to imagine what the mindset of someone in his position might be.

In traditional documentary, there is an indexical relationship between what film captures and its subject that ensures that "there is congruence between what is being seen, and a real-world referent" (Bogost and Poremba, 2008, p. 6). In *The Cat and the Coup*, however, the player is expected to identify and separate the fictionalized, abstract elements of the narrative -- Mossadegh's interactions with his cat in his topsy-turvy house -- from the documentary fact of the events that he is remembering. It is not challenging to separate fact from fiction in this case, as the fictive elements are mainly constrained to the gameplay and presented as highly surreal, whereas the non-fiction elements are shown in the background as static news headline-style narrative. However, it emphasizes almost subliminally the slipperiness of narrative when seen from the perspectives of citizens of different nations with different motives, information and propaganda.

A documentary film that specifically challenges the reliability of its own narrative evidence as it explores the nature of memory, is Omer Fast's *Talk Show* (2009). Incorporating the format of the childhood game of "telephone", the film takes place on the set of a fictional talk show. A guest is telling a true (though this is not initially made explicit to the audience) and highly personal story about the events surrounding the death of her husband in Iraq to an actor who plays the role of the talk show host. When the story is finished, the storyteller/ guest leaves, to be replaced by another actor who has not heard the story. The previous host now assumes the role of storyteller and addresses the new actor, who has assumed the role of host. The actor recounts the narrative imperfectly as if it were his or her own. The coming and going of actors and switching of roles continues for several more rounds until the story is almost unrecognizable. It ends with the original storyteller returning to the stage, but this time in the role of host and listener, and hears her own story presented to her with all changes. This work investigates the mutations that occur in memory when it moves from individual to collective, and uses the game-like structure to create slippage between reality and fiction.

A system in a videogame that emphasizes the imperfection in documentary evidence can be considered a form of "procedural rhetoric". This term, defined in Bogost's book *Persuasive Games* (2007), "is the practice of using processes persuasively... [It] is a general name for the practice of authoring arguments through process". Fictionalizing documentary game content creates processes for a player to go through that can cause them to critically engage with documentary evidence. It procedurally argues that evidence must be questioned. Although this critical engagement is often provoked through words or images, like a film documentary, it is the procedures of the player interacting with the game system that alter the context of the documentary evidence and lead to the questioning. In this procedural rhetoric, the "arguments are made not through the construction of words or images, but through the authorship of rules of behaviour, the construction of dynamic models". The contradictions



and ambiguities are embedded in the programmed behaviour of the game.

Like a tourist constantly obsessed with "authentic experiences", those which happen organically in the space they are visiting, rather than those that are created specifically for the tourist's benefit (Miller, 2008, p. 6), the player of *1,000 Heads Among the Trees* is forced every moment to distinguish genuine reality from the fiction created for them. There is some evidence of players questioning what is and is not real. Priestman writes that the game successfully "explore[s] the unsettling margin between documentary and the unknown", although his comparison to *The Blair Witch Project* suggests that this ambiguity is more in service to a sense of suspense than one of provoking the player to critically approach the reality of a space as presented to an outsider.

### Provoking a Player's Self-reflection

The documentary process for this game project involved a game developer from the United States visiting and documenting life in a village in Peru. There are ethical concerns when a documentarian enters a group of people as an outsider with the goal of documenting it. The author's voice often controls the voice of those being documented through presentation. This is compounded when the documentary evidence is not presented straightforwardly, but fictionalized.

Although *1,000 Heads Among the Trees* is on its surface about a community of people in Peru, the game mechanics attempt to provoke the players to reflect on themselves in their roles as outsiders. Often the main comments from playtesters are less about the strangeness of the community they are documenting and more about how they themselves felt like an unwanted, sinister presence. Many of the NPCs' responses to photos are directed at the player, such as, "Why are you really here?" and "Someone said there was someone rattling their door trying to get in last night. I have to tell you since everyone knows you were wandering around all night, they're a bit suspicious". One playtester said that the self-consciousness came from the "nosiness and voyeurism that comes from entering a town, peeking into houses, eavesdropping on conversations in back alleys and open windows, taking pictures of everything and everyone, asking a lot of questions", and what those actions said about the character they were playing. In one part of the game, the player is photographed by a local person, from a distance, a role-reversal that puts the player in the shoes of the NPC experiencing an unwanted photograph, and adds to the feeling of being watched, having someone or something "following you wherever you go" (Priestman, 2015). There are also more benign ways in which the NPCs draw attention to the player, sometimes gently mocking them for coming to town with the goal of photographing ghosts.



Figure 4: Home destroyed after photograph was taken.

The player is told that they are more than just an observer, not just by the NPCs, but by the environment, itself. Sometimes the act of

taking photos causes a change in the structure of the town. In a region with a history of earthquakes, as well as a town that is in rapid change due to tourism, some of the player's photos accelerate this change. Inspired by Susan Sontag's assertion of pictures consuming reality (2001, p. 170) and Honoré de Balzac's belief that living bodies were layers of ghostly films that were used up by photographs (Sontag, 2001, p. 158), some of the gameplay involves a magical realist expression of the destructive power of photography. Several buildings, when photographed, fast-forward in time to an eventual destruction by earthquake, at the split-second the photo is taken (Figure 4). This means that the player's photograph is automatically the last picture of the building taken while it was still standing. This mechanic emphasizes that the world being photographed will rapidly not exist outside of the photo. Photography also can play a destructive part in the player's relationships with NPCs, as several express their unhappiness with their photo being taken by ignoring or walking away from the player.

The vast majority of playtesters had no experience in the region depicted. One commenter on Steam (Lady3Eye) said that, although she did not have experience in Peru, the game reminded her of her own time exploring Latin America, stating that "[t]he colors, the feel of the game, all of the way the game is designed, mimics my own experience South of the border... I enjoed (sic) that feeling and I am amazed at how weel (sic) the game was able to trap and capture such ephemeral feelings of being a stranger in a strange land". Although the real-life differences between Cachiche and the area of Latin America she experienced are likely great, her feelings of being "a stranger" hints at some success in the game's ability to provoke a sense of self-consciousness in the player.

Researcher Kiri Miller writes of the similarities between the experience of being a tourist and that of playing a videogame, particularly the state of "distanced immersion" and feeling of flow, characterized by "removal from the normal rules, of limited duration and unique social relationships, and of the feelings of immersion and intensity" (2008, p. 7). In her experience playing *Grand Theft Auto San Andreas* (2004), she found that although there were many similarities between exploring the virtual world and being a tourist, there was one benefit that the virtual world provided. By virtue of the player's avatar and role, they are not viewed by NPCs as tourists, but instead "pass as natives in gritty urban underwolds; in San Andreas, for example, white middle-class players can costume themselves in gang colors and drive around blasting rap music without risking mockery" (p. 5). An interesting experiment would be to take the experience in the opposite direction, to give the player a third-person avatar that makes them feel even more out of place in the gameworld, giving them the "fish in a fishbowl" experience of being an obvious outsider. Videogame *L.A. Noire* seemingly unintentionally moves in this direction, as it breaks the illusion that the world does not revolve "entirely around the player" (Hamilton, 2011). In that game, the lives of NPCs seem to constantly revolve around discussion of the player's police officer character, as they are forever in discussion of his every move. A game designer whose goal was to encourage self-reflection and analysis may find it useful to borrow that approach.

There are other elements of gameplay that may resemble colonial actions or mentality. The player's exploration of space, conquering and gaining access, may feel like a subtle metaphor for colonial domination (Miller, 2008, p. 9). Although most likely benign when the theme of the game is unrelated to real-world societies, one must be aware of this when creating a game about an outsider exploring and documenting another culture. One way to turn this on its head may be to represent a world where the player does not gain more territory and access, but is instead pushed inward and forced to analyze themselves and the world they come from.

This would point games toward a form of realism that games theorist Andrew Galloway proposes: one that moves toward critical reflection "on the minutia of everyday life, replete as it is with struggle, personal drama and injustice" (2004, p. 5). He brings up the possibility that "realism in gaming is about the relationship between the game and the gamer" (p. 11), that the height of realism may be a sense of self-awareness brought about within the player.

### **Procedural Fictionalization**

Poremba brings up what seems to be a necessary shortcoming of docugames, as a film documentary has the "ability to carry with it a degree of representational excess. Regardless of what the documentarian intended to capture, we find additional visual details, expressions, sub-audible comments -- in other words, a richness of representation beyond the explicit intent of the documentary creator" (Poremba, 2013, pp. 18-19). In virtual worlds, generally the creator has generated all audiovisual material, or at least chosen what is used to represent the world. Some docugames, such as *Fort McMoney* (Dufresne, 2013), use substantial film footage, so these visual details are automatically present.

In games, the representational excess is most likely to be created procedurally. Content that is generated by an algorithm, whether that algorithm is informed by an expressive, abstracting sensibility, or whether it has the nonfiction goals of a physical simulation, this algorithm can create the excess of content and detail that film documentaries have.

Given the limitations of technology that would reconstruct real-world three-dimensional scenes with little human input, one might have to search for alternate methods for generating content that is not explicitly the intent of the creator. One way is to bring in user-generated content: this would bring the discussion back to the form of realism that is manifested in the relationship between the game and the gamer. This content could be accidental: realtime webcam footage (with player consent), facial or bodily motion capture, voice or ambient audio recording and interpretation. All would bring in content that neither the player nor designer necessarily intended.

The photographic method of exploration in *1,000 Heads Among the Trees* brings up issues of selective attention in areas of potential representational excess. The player must look at the same photograph that the NPC has described and decide what element of the photo stood out to them. In the process, they are potentially misapplying the description to another object in the scene, but perhaps in a way that makes their experience of the virtual world richer. Walter Benjamin (1935/1969, 230), states that "The camera introduces us to unconscious optics as does psychoanalysis to unconscious impulses". The NPC might also be showing the player their own unconscious motivations for taking the picture.

### **Usage of Collected Documentary Evidence**

There is potentially a trade-off that needs to happen in the creation of worlds out of documentary evidence, as focusing on some types or aspects of realism makes other types or aspects of realism less realistic. A designer must choose what type of realism, and what elements or facets of the experience to make realistic.

Lindsay Grace's post-mortem of his docugame *Third World Shooter* (2011) details the drawbacks of choosing the wrong type of realism and wrong elements to simulate realistically. In this experimental game design project, he found that rigorous adherence to aspects of reality can not only make players lose interest in the gameplay, but also take players further away from an understanding of and empathy for the experience of the character they are playing.

In this game, the player spends a large amount of game time moving through a jungle, as a way to simulate the way a soldier in Guinea-Bissau would have realistically spent their time. It is clear that although the player is simulating, moment-for-moment, an aspect of the reality of the soldier's experience, the only emotion the players feel is boredom. That may on one level be a success: the real people on which the player's character are based possibly also felt much boredom. However, one imagines they also felt a range of other emotions and physical sensations that the game does not provoke: fear, exhilaration and passion for the cause, heat, hunger and pain. These are much more interesting as well as challenging to provoke in a simulation. It is also possible that these are only able to be provoked in a three-dimensional simulation through abstraction or even fictionalization.

According to Poremba, the videogame *Escape from Woomera* (Oliver, 2003), a documentary critique of Australia's detention centres, is somewhat more successful at provoking the developers' intended feelings. It accomplishes this "less by immersing players in a physical space, or revealing truths about the logic of Woomera and detainee strategy, and more in crafting insight into the enacted subjectivity of Woomera refugees, read through the player's embodied gameplay experience" (2013, p. 5). Unlike *Third World Shooter*, it constrained its simulation to a single simulation and gameplay goal: that of being trapped and attempting to escape. It used the potential for boredom (by forcing the player to sit in a cell) to inspire an engagement with the mechanics of the game (provoking them to attempt an escape). With this technique, it inspires a broader range of emotions: hope, fear, and excitement.

Choices were made in *1,000 Heads Among the Trees* as well, as to what would be abstracted and what would remain indexical. Fictionalization in the game happens primarily through conversation and impressionistic and magical realist events, while the experience of the environment is presented in an attempt at three-dimensional verisimilitude. The abstracted narrative is present within an environment whose features have a somewhat indexical relationship to the actual environment on which it is based. I wanted the player to infuse the real space with their interpretations.

The creation of the environment began by modeling houses based on pictures, using textures of walls and doors. Eventually, due to the photographic limitations of the town, an image from Google Earth was used to help with layout. Using the map to assist with layout gave the placement of houses and landmarks a more randomized, organic feeling. There is a contrast between the somewhat rigid placement of houses in lines along the street that were created from my memory, and the more spread out and varied houses placed with the help of satellite imagery.

Landmarks in the game are both obvious in their touristic importance and mundane, ranging from a statue of a famous town witch in a tree, to an oxidation pond that I had originally mistaken for the San Pedro lagoon. An isolated stretch of road through trees and fields that appears to go nowhere figures prominently as an area activated by curious exploration, and given new meaning through fictional in-game events. There is a meditation centre built by Don Miguel (Figure 3), a spooky shack on a desert hillside that had been gutted by vandals, and overlooked the San Pedro lagoon, and a "pond" full of vegetation and little water. There are other details included in the game to allow players access to the successes and failures of an aspiring tourist destination and real-life work-in-progress town.



Figure 3: Former meditation retreat as gutted shack, represented in game.

Although the intention of the three-dimensional graphics was to include a certain degree of representational indexicality, it did not rely on full visual verisimilitude. For instance, the quality of the modeling and texturing was often criticized in post-release feedback. Even in generally positive reactions, the visuals were often considered “low budget” or “ugly”, though these qualities were sometimes said to contribute positively to the atmosphere of the game. Also, in the virtual space, I did not represent everything from the real-world location. It is an incomplete representation of the space, and my editing was informed by my overall expressive goals, and this worked together with the fictionalization of other elements of the game.

## Conclusion

*1,000 Heads Among the Trees* gives the player access to some of the originating documentary subject matter, but allows the player to recombine and re-contextualize pieces of reality, creating meaning. Slippage is created between stories told by NPCs and the visual evidence the player has photographed. In these gaps, the player is asked to project their interpretations.

The design of the game explored a multitude of potential benefits of abstracting and fictionalizing documentary evidence. Some areas were more thoroughly investigated, and received stronger responses from players, than others. The ambiguity of the game, this requirement of the player to fill in the gaps, received the most strongly positive and negative feedback from players. It could be said to be the element that guided the experience of the game. Similarly successful, as noted by players, was the game’s ability to make the players feel a sort of self-consciousness. As noted before, this is a potential other form of realism: that found in the relationship between the player and the game.

Perhaps not as successful, as it was not articulated as often by players, was how fictionalization could work to encourage a player’s critical engagement. Most of the reactions to any sense of unreliability in the game’s reality show a passive enjoyment on the part of the player of the mysteries and ambiguities rather than a critical assessment of the documentary evidence. This could be due to the game’s similarities with elements of the horror genre, so ambiguities are categorized by players as weird and spooky. Similarly, a major opportunity for the player to come away with a sense of the inherent imperfections of documentary evidence could have been the snippets of recorded interviews that were presented out of context in response to certain photographs. However, playtests did not reveal a critical view toward the nature of the documentary material, and if anything, felt that they heightened the sense of “realism”. All of this suggests areas for future concentration.

Additionally, there are multiple traditional documentary processes that were not explored in this project’s development. Conducting of interviews, background research, making connections with content

experts, and documentation of the location and people involved in the story were a part of the process. Elements of film documentary process that were not used, though, were the incorporation of video footage, playing with the format of traditional documentary narrative arc, and use of certain aesthetic choices common to documentary, such as the talking head interview, unpolished, hand-held video, and descriptive interludes or re-enactments to portray content that is un-filmable.

Despite the imperfections in visual representation, the sense of reality of the locale of Cachiche being simulated contributed greatly to the sense of atmosphere for the players. The photography mechanic only slightly suggested the possibilities of procedurally creating representational excess on the level of documentary film. This continues to be a rich area for further exploration.

Although interactive documentary has been a fertile area of exploration, documentary game scholar Cindy Poremba observes that "the genre of documentary games has stagnated after an initial crop of games, many of which... are no longer considered documentary by their creators" (2013, p. 171). News publishers such as Al Jazeera and The Guardian have recently created many "interactive documentaries" to tell news stories, but they have avoided the use of the word "game" in their categorization of these projects. The design of these documentaries' interaction often simply provide a way for viewers to choose the order by which they consume information, and the choose-your-own adventure style of presentation provides little by way of procedural simulation or even interactivity. By contrast, the procedures within docugames often provide a level of complexity that leads to an emergent understanding of and engagement with the systems being documented. Because of this, docugames are a worthwhile genre, but perhaps one that needs additional paths of exploration opened, such as those discussed in this article.


There are a couple of possibilities as to the reason for the stagnation of docugames. One possibility is that designers have given up on the idea of creating games that are truly documentary, that a form of realism they perceive as the essence of documentary film, such as the indexical quality of filmed footage, are impossible to accomplish in a digital simulation. Another is that the definition of docugame has solidified, and artists who were initially interested in experimenting with this fluid new medium are no longer, now that its possibilities appear less open-ended. Perhaps they are still creating abstract experiences that they may have once called docugames, but these no longer fit under the newly-restrictive docugame category.


It is possible that investigating the benefits of exploring other forms of realism, including the abstraction of evidence, could add vital and fruitful paths of creative research at the intersections of documentary and game design. Games created with this philosophy, like some of the most beguiling film documentaries, could offer "a unique capacity for revelation rather than merely mechanistic observation or reflection of the real" (Chapman, 2009, p. 9).


## Endnotes

[1] Docugame is a term applied to videogames that are usually serious and/ or journalistic, about current or historical topics. There is discussion over whether games can ever be considered true documentaries, whether the name is descriptive or "aspirational pre-naming", an attempt by game designers to borrow from the established cultural cachet of documentaries (Fullerton, 2005, p. 3). [\[5\]](#)

[2] To be inclusive of the margins of film-based documentary experimentation, as this often offers the greatest inspiration for, as well as similarities with, game design, this article will use the broad

definition of documentary given by John Grierson, an early and influential documentary filmmaker, which is "a creative treatment of actuality" (Chapman, 2009, p. 9). 

[3] For the purposes of this paper, we will define videogame broadly, using the "digital playspace" definition that experimental game developer David Kanaga (2012) uses to allow for the expansion of the possibilities of the art form. This definition, though new, draws from historical definitions, such as theorist Roger Caillois's game definition as activity that is "Free... [as in] not obligatory", "Separate", "Uncertain", "Unproductive", "Governed by Rules", and "Make-believe" (Caillois & Barash, 2001, p. 9-10). More rigid definitions, such as Katie Salen & Eric Zimmerman's "a game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome" (2003, p. 80), are useful as sets of artistic constraints, but if applied rigorously to defining what are included in discussion of videogames, would unnecessarily exclude avant-garde works that push against the perceived boundaries of the medium. 

[4] Playtesting took several forms. During development, I invited a handful of participants to engage in hour-long recorded play sessions. I also exhibited the game in-progress at a local festival, GameScape, where I observed a wide range of people from the community playing the game. Some feedback was received from a small group of online playtesters. In all instances, I took extensive notes on how the players engaged with the game and explored the environment. After the game's release, another form of feedback came from player comments, gameplay videos and reviews. These were not incorporated into the design, but they provide valuable information on how the game is played and perceived. 

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