Steampunk Allohistory in *Bioshock Infinite*: The Video Game as an Engine of Speculative Creativity

By: Mary Agoncillo

With the rising prominence of critically acclaimed steampunk video games like Irrational Games' *Bioshock Infinite* (2009), it is no longer possible to deny the influence of a genre that millions consume, create and participate in. Previously, both steampunk and video games were seen as leisurely forms of entertainment with little academic or artistic bearing on conventional culture. Video games have only recently entered an era that is narrative-based and cinematic because today's consumers are demanding the intelligent treatment of deeper themes through complex game mechanics in order to remain engaged. This development, in conjunction with the fast-paced development of animation technology, has elevated video games into a viable form of multimedia storytelling deserving of academic attention. Academics are only beginning to form a cohesive formal framework for the study of video games. The most common approach is to explain video games through existing media such as film or literature.

In game developer Frasca's article on ludology,[1] while a comparative approach is certainly valid, these analyses can deny recognizing the full potential of games: "This potential is not narrative, but simulation: the ability to represent dynamic systems."[2] The primary objective of this paper is to explore the ways in which the rhetoric of allohistorical[3] steampunk ideologies are echoed within the complex temporalities of *Bioshock Infinite's* city of Columbia primarily focusing on why these ideologies are effectively formed through the video game's narrative mechanics. While this paper will make references to theories formed through the close study of steampunk film, readings of scenes in *Bioshock Infinite* will specifically analyze how the video game's dynamic systems unearth steampunk rhetoric within the game's diegesis.

Steampunk aesthetic is present throughout the world of *Bioshock Infinite:* Songbird, the mechanical bird guardian of the city; Elizabeth and Booker's Victorian-inspired clothing; the Sky-Rail system; steam-powered machinery littered throughout the environment; and the gramophone-based Voxophones (whose recordings supply much of the universe's supplementary narratives) all recall turn-of-the-century technologies. The architecture is a combination of garish American carnival culture and old Victorian-style buildings. However, *Bioshock Infinite* is more than just superficially steampunk in nature. It is important to note that steampunk aesthetics can be used as a rhetorical framework only if these stylistic choices are rooted to key value systems. While steampunk may originally be rooted in the shining moment of the steam engine's invention, the term has developed new meanings in retrospect. David Beard summarizes steampunk as an exploration of Victorian Era "conventions '[that] both challenge and reify certain social relationships: (a) technological relations, (b) gender relations, and (c) race relations.'"[4]

Influenced by the 1893 World Columbian Expo set in Chicago, 19th century novellas, the film *Blue Velvet* (1986) and turn-of-the-century idealized Americana, it is difficult to label Columbia in *Bioshock Infinite* or its technologies as exclusively steampunk in aesthetics or technology. When assessing *Bioshock Infinite* in relation to steampunk, this paper will view steampunk culture as a rhetorical tool that allows us to play with and dismantle the intricacies of an alternate past free from the limitations of humanity's relationship with technology from that era.

Bioshock Infinite is a narrative first-person shooter set within the year 1912 in the fictional

city-state of Columbia, an air city that is slowly collapsing. Columbia is a unique site of steampunk culture in that it focuses on nineteenth-century values of American Exceptionalism rather than those of the more typical Neo-Victorian London. It was founded in America by self-proclaimed prophet Zachary Hale Comstock and began as a floating fair that travelled from continent to continent, before it was revealed to be a powerful battleship. When China held several Americans hostages during the Boxer Rebellion, a true pro-nationalist uprising in China that was anti-Christian and anti-foreign, Columbia intervened without government knowledge and destroyed the entire city of Beijing. When the power of Columbia was realized, a rift in leadership occurred. Promptly, Columbia seceded from the United States to be ruled by Comstock under martial law as a theocratic city-state, eventually vanishing into the skies.

The player-character is former Pinkerton[5] agent Booker DeWitt, who must retrieve Elizabeth, a captive raised in Columbia, in order to wipe away the debt from his deeds as a war veteran during the 1890 Wounded Knee Massacre.[6] Though the Columbia that DeWitt is introduced to initially appears idyllic and utopian, there are underlying dystopian characteristics: an indictment of a non-existent idealized American past, violently enforced institutional racism by Anglo-Saxon Americans, and religious rationalizations of bigotry. Columbia also hosts a burgeoning anachronistic rebellion by the vicious underclass, the Vox Populi, led by the uncompromising Daisy Fitzroy. Booker and Elizabeth become embroiled in the conflict when Booker discovers that Elizabeth is able to manipulate the 'Tears' from failed scientific experiments that plague the city. These 'Tears' expose alternate realities within spacetime and amplify the rising civil tensions within Columbia, allowing radical individuals to exploit the future in order to develop advanced technology and weapons. The end reveals Elizabeth to be Booker's daughter, Anna DeWitt. They discover Comstock to be a version of Booker that exists within an alternate reality where Booker accepts baptism for his crimes at Wounded Knee. In order to stop the cycle of existing Comstocks, Booker and Elizabeth traverse back to the moment of the baptism and Booker allows himself to be drowned.

Video Games and Urban Space

The articulation of an urban environment within the video game space is extremely complex. While the first-person video game is constrained in similar ways to film in that the protagonist is confined to the spaces of the narrative, unlike film, video games have to account for space beyond the camera. The player becomes a free-floating point of view, constrained only by the character's limitations within the narrative of the game engine. The design of a video game's level requires extra consideration for a degree of flexibility; set designers must also account for potential variations of movement from computer-controlled characters within the environment. Set systems determine specific outputs resulting from the player's interactive inputs within the game's environment. *Bioshock Infinite* is unique in that all the narrative cutscenes[7] take place from within the playable game-engine rather than in separately rendered sequences. This allows the player to remain immersed without being jarred between different animation qualities or disrupting gameplay. Ken Levine, the creator of the *Bioshock* series, is known to dislike cutscenes, stating: "I want to play. I don't want to sit down and be told the story. I want to interact with the story."[8]

Outside of narrative intent, first person shooter environments allow strategic combat to take place. Columbia's urban space is primarily articulated through the first-person shooter view of Booker as he battles his way through the city. The potential for combat always hangs ominously over the player as Booker explores Columbia. Central scenes take place completely from a first-person view, with either the crosshair, gun or hands onscreen. As Booker travels via SkyRail

over the city, or walks through its pathways he is forced into situations of battle, inducing in the player a sense of persistent unease. Unlike the claustrophobic confines of most dystopias, Columbia is open and freely mobile. Parts of the city can detach and reattach. Columbia's SkyRail system is accessed through hand-held hooks. This use of high-speed altitude in combat situations is also relatively rare in the shooter genre, which prefers cover and suppression fire. In combat, the player's actions mimic this freedom of movement, giving the player a sense of agency whilst exploring the city.

A major proponent for all immersive narratives is a sense of emotional investment from the audience – in this case, the player. This emotional investment also administers a sense of accessibility to the fictional urban space. *Bioshock Infinite* does this so effectively because the engine is built around a singular relationship: Booker and Elizabeth. Thus, the larger allohistorical backdrop is made more emotionally accessible through their relationship. Throughout the gameplay, the player-character becomes reliant on Elizabeth for her skills. She is an avid lock-picker, passes ammo to the player in battle, and even opens Tears to help aid in complex battle situations. In her patchwork of inventiveness and time-space manipulation, Elizabeth could be said to be a manifestation of the steampunk tinkerer archetype.[9] Elizabeth also serves as a moral litmus test to the player. Throughout the game, Elizabeth comments about the ways Booker interacts with Columbia and is acutely disturbed by violence and blood. At a turning point in the game, Elizabeth kills Vox Populi leader Daisy Fitzroy before she can kill a child, after which her character noticeably shifts. Elizabeth no longer reacts to killing and becomes more apathetic and aloof. Elizabeth's transformation also mirrors the player's descent from righteous to amoral violence. In essence, the game's narrative is built around a sense of familiarity and co-dependency between the player-character and the computer-controlled companion.

The video game is an ideal engine to explore the complexities of a steampunk urban space like Columbia. Unlike literature or film, the expository of the city's complicated history is discovered through the player's interactions with the present Columbia, much like a tourist discovering a foreign city. It is through a flaneur-type[10] of exploration that the city's dark secrets are revealed. Columbia is initially a joyous experience: warm golds and whites greet the player, and the citizens exchange pleasantries. As Booker descends into Columbia's civil war, the palette takes on the tell-tale cooler tones of an industrial dystopia.

Modernity in America: What Allohistory says about American Exceptionalism

On his paper about steampunk counterfactuals, McKenzie suggests that "steampunk can be viewed as a particular strain of allohistory — a strain offering stories and settings with extraordinary visions of history and fantasy that turn on the varieties of ways the world could have been different."[11] Through this exploration of an alternative history, Columbia undercuts the idealized values of steampunk culture by reviving the less desirable attributes of the past, drawing from the era-specific tensions of white supremacy, classism, totalitarian politics and violence from multiple misinterpretations of a singular ideology.

There have been some critiques that reviving such narratives romanticize the cruelties present in that time, contributing to the oversimplification of history. Historians commonly reject the concept that subtle changes to history would attribute to the rise of totalitarianism. This form of overarching allohistory in *Bioshock Infinite* is what McKenzie refers to as the "point of divergence."[12] While the game diverges from history at the point of The Boxer Rebellion, this point of separation runs more deeply. *Bioshock Infinite's* allohistorical narrative contemplates on issues

that the steampunk community does not commonly linger on: American colonialism. While current steampunk culture commonly favours themes of British imperialism,[13] *Bioshock Infinite* focuses on how Americans can also be a colonial power. Columbia is a unique amalgamation of American extremes: the pursuit of superior technology, carnival culture, consumerist monopolies and the notion of the 'ideal' American. Comstock hails himself as the 'American prophet' throughout the game. Through Columbia, Comstock transforms American Constitutionalism into a theocratic model of white supremacy, with the founders acting as gods. The enemies that the player fights reflect Columbia's strange relationship between technology and supranationalism. Mechanized versions of the patriots are equipped with massive turrets and come in four varieties: George Washington, Abraham Lincoln, Benjamin Franklin and Thomas Jefferson. Creator Ken Levine cites the clockwork automatons as "[...] completely fearless. [They don't] have a sense of self-preservation, so [they'll] just keep coming at you and coming at you."[14] Associating the founding fathers with a relentless and single-minded pursuit exalts them as protectors of Columbia, and by extension, protectors of the American ideal, while simultaneously lowering them into subservience under Comstock.

Columbia poses important questions about the meaning of turn-of-the-century modernism in the American context. While on the surface level it means the push for technological superiority, lurking beneath the extreme pursuit of such ambitions are dangerously radical supranationalist ideologies. It is crucial that steampunk's Victorian origins do not entangle the multiple notions of empire that existed during that era. At the time of the game's setting, multiple nations are at odds with one another to create a divisive political atmosphere. *Bioshock Infinite* criticizes the notion that Americans have trouble admitting to empire.[15] The amalgamation of influences in Columbia allows the city to transcend historical nostalgia. Instead, it paints a more accurate picture of turbulence; despite being speculative fiction, Columbia manages to capture some anxieties that early idealistic steampunk literature does not.

Non-Linear Time Space Continuums: Technology and Tears in *Bioshock Infinite*

Like any narrative that involves alternate universes and time travel, temporality in *Bioshock Infinite* is a complex topic in that Columbia's very existence relies on the disintegration of time. Tears in Columbia are a manifestation of the non-linear narrative and fragmenting realities that parallel the steampunk rhetoric as a means to retrieve an idealistic past. Ironically, the technology to make Columbia possible is only accessible through these Tears, creating a unique paradox. Time-space theory aside, *Bioshock Infinite's* play with time-lines is self-referential to steampunk's relationship with the Victorian era. Steampunk suspends the technological history of the Victorian era prior to coal combustion. Inventors were seen as tinkerers that played within the constraints of steam technology in innovative ways, and technology was unable to have the destructive capability it has today. *Bioshock Infinite* subverts this role of the inventor through multiple individuals.

Chen Lin and Jeremiah Fink are the two weapon and technology developers within Columbia. Fink is able to run a weapons monopoly on the economy thanks to funding from Comstock, access to the Tears thanks to Comstock's control on Elizabeth prior to her escape, and the exploitation of the working underclass. Almost all proceeds cycle straight back to Comstock. This economic model grounds the working class into a powerless position. Chen Lin is a Chinese gunsmith who works under Fink Manufacturing until he began covertly supplying weaponry to the Vox Populi, when he experienced racial prejudices. Lin calls up to the player the steampunk self-taught tinkerer, while Fink subverts the steampunk niche of a working-class inventor.

In-game, the player is able to interact closely with these steampunk-style weapon designs before selecting a combat inventory. The player can only purchase upgrades at steam-powered carnival booths littered throughout Columbia. The participatory nature of the video game encourages the player to participate in the internal economy of the city. The player is also able to accelerate and manipulate these economies through Elizabeth's Tears. At a later point in the game, the player must open multiple Tears in order to find a universe with access to Chen Lin's weaponry. These economic prompts create an interesting dialectic in relation to steampunk's inventory capabilities and its inherent appeal to the era's working-class.

Peculiar anachronisms throughout the game levels also disrupt Columbia's well-built alternate chronology. This is most evident in the bizarre music Booker hears throughout Columbia. A barbershop quartet sings the proverbial "God Only Knows" by the Beach Boys, and a calliope plays "Girls Just Wanna Have Fun" by Cyndi Lauper.[16] When Booker meets Elizabeth, she tries to use a book titled "The Principles of Quantum Mechanics" to defend herself. The cause of these smaller intrusions from the future stem from Elizabeth's ability to manipulate time. This non-linear sense of time allows the player to position themselves at a non-existent point of historical inquiry. Tears add another level to speculative history where nearly endless possibilities to access future timelines are constricted to affect the immediate timeline of 1912 Columbia.

Alternative Histories through Player Agency and Choice:
Steampunk Inquiry

Irrational Games asserted that no player choices would have any significant influence on the narrative's outcome. Narrative decisions prompted to the player throughout the game are simply meant to allude to variables in a blatantly self-referential way: they represent choices in the controlled narrative of the video game world. *Bioshock Infinite* undercuts the concept of player choice since the narrative's outcome remains the same no matter the variables. Through this act, *Bioshock Infinite* distinguishes between perceived agency and genuine agency.

An example of this perceived agency is the moment at the raffle where the player's utopian vision of Columbia is shattered. The player draws a winning ball from a basket, prompting the curtains of a nearby stage to part. Behind is an interracial couple that is about to be stoned to death. During the early 1900s, interracial marriage was illegal throughout the southern and western United States. The interracial couple on the stage are one of two interracial relationships in the game, the other being Chen Lin and his Caucasian wife. The player can choose whether to throw the ball at the couple, at the announcer, or do nothing. No matter the choice, the police will always grab your hand as you contemplate the throw.

In this sense, game mechanics and technologies parallel the idea of a speculative history. The crux of this point relies on the ending of *Bioshock Infinite*. When Elizabeth's powers reach their full extent, she takes the player back to the beginning of the game: a lighthouse off of Maine where Booker is catapulted into Columbia. In this inter-dimensional space, there are multiple lighthouses and docks where the player can see other Bookers and Elizabeth's mimicking their movements. The extent to which Booker's decision caused changes in the narrative's iteration is not made entirely clear. In terms of larger alternate histories, the point of divergence truly comes from the site of Booker's baptism after the events of Wounded Knee. The Booker that accepted the baptism emerged as the Zachary Hale Comstock that worked with quantum physicist Rosalind Lutece to create Columbia and develop time-space technology. When the Tears render him sterile, Comstock travels back in time to take his daughter, Anna, from his past self.

Booker decides to give her away in exchange for wiping away his debt, but at the last minute, he changes his mind. During the ensuing struggle, Anna's pinky is cut off when Comstock closes the Tear, allowing her to exist in multiple universes and manipulate time. This decision also creates the possibility for Bookers that do not accept the baptism to exist. The realization colours every single decision made throughout the game with a new weight. The critical point of historical divergence becomes crystallized around their father/daughter relationship and Booker's parenting decisions.

In the first third of the game, Booker must choose between two Victorian-style cameo brooches for Elizabeth to wear for the entirety of the game: a bird or a cage. The player is prompted to select between the two, but the choice has absolutely no bearing on the larger narrative of the game. It is meant to build up a sense of agency, personalization, and by extension, investment. In terms of augmenting the urban environment, similar smaller choices build a sense of Columbia's local economy and the types of antiquities. In the ending scenes, the brooch the player picked for Elizabeth is noticeably absent from her neck. This is when Booker realizes that this is not the same Elizabeth that has been his companion for the duration of the game. It is this new and omniscient Elizabeth that finds the courage to drown Booker at the baptism.

Every choice that the player is presented with in-game carries a moral weight, no matter the outcome. This perceived ability of choice is one of the distinguishing qualities that allow video games to explore speculative histories so effectively. It is powerful to simulate the feeling that an individual's choices reflect changes in alternative history. The player feels like an active participant in steampunk allohistory, even though their choices are ultimately arbitrary within the scripted ending. Steampunk revolves around historical inquiry; a process of the independent investigation of historical questions and speculative solutions for a lost era.

Conclusion

A defining tragedy in steampunk culture is that participants in the genre are limited to contemplate on historical narratives that they are unable to experience personally, or intervene socially and politically.[17] Contrariwise, they are able to share a collective sense of past, however tenuous. As time passes, the gap between the subculture and those who have experienced it becomes progressively wider. As such, the ability to simulate those experiences becomes even more vital to steampunk's cultural relevance. The vestiges of history become refracted in our own contemporary understanding of these moments, and articulated through the technology available to us.

Bioshock Infinite is an exciting representation about the possibilities of exploring the steampunk subculture through virtual realities. It has become universally recognized as an 'art game' that exceeds a video game's capabilities. Through player agency, an immersive and intricate in–game environment, and a self-referential push toward technological ambitions, video games are able to weave an ideal platform for complicated discourse about the possibilities of speculative fiction. Video games like *Bioshock Infinite* create a digestible platform to consider our social order, moral imperatives and historical inquiries within a framework that grants us an experience of agency. As video game technology develops and simulations become more engaging and complex, the passive steampunk participant can begin to participate in steampunk economy, narratives and communities. Separately, the video game and steampunk are realms of possibility–together, they have the potential to signal an iconic new era for speculative creativity.

"There's always a lighthouse... always a man... always a city." – Elizabeth[18]

Notes:

1. The disciplinary study of video games, theories and forms of play.
2. Gonzalo Frasca, "What Is Ludology? A Provisory Definition," http://www.ludology.org, (July 08, 2001).
3. Alternate history.
4. David Beard, "Introduction: A Rhetoric of Steampunk," in *Clockwork Rhetoric: The Language and Style of Steampunk,* (Jackson: University Press of Mississippi, 2014), xxiv.
5. Once the largest private law enforcement organization in the world, the Pinkerton National Detective Agency is a real-life private security and detective agency founded at America in 1850.
6. The 1890 Wounded Knee Massacre was a real-life massacre that occurred in South Dakota between the American government and the Native Americans on Lakota Pine Ridge Indian Reservation, attributed to escalating tensions between European Settlers and the Lakota. Approximately 150-300 were killed, with around half being women and children caught in the ensuing crossfire. It was one of the last conflicts in early America's war against Native Americans.
7. Cutscenes refer to event sequences in a video game that are not interactive.
8. Fred Dutton, "Del Toro, Levine speak out against cutscenes," http://www.eurogamer.net/articles/2011-11-17-del-toro-levine-speak-out-against-cutscenes, (November 17, 2011).
9. Beard., xxi.
10. Flaneur refers to the act of strolling – in this context, the act of walking through the city of Columbia within game engine as a playable character.
11. John M. Mckenzie, "Clockwork Counterfactuals: Allohistory and the Steampunk Rhetoric of Inquiry," in *Clockwork Rhetoric: The Language and Style of Steampunk*, (Jackson: University Press of Mississippi, 2014), 135.
12. Ibid., 141.
13. Steampunk is rooted in Victorian England, where Great Britain began the Industrial Revolution through technological innovation. However, this wave of innovation impacted nations worldwide, creating new relationships and tensions between countries.
14. Stephen Johnson, "Bioshock Infinite Motorized Patriot Revealed: Meet your Red, White and Blue Nightmare," http://www.g4tv.com, (March 07, 2012).
15. McKenzie., 150
16. Chris Suellentrop, "BioShock's Latest: Civil War in a City in the Sky," http://www.nytimes.com, (March 25, 2013).
17. Andrew Mara, "Steampunk's Identity Horizon and Contested Memory," in *Clockwork Rhetoric: The Language and Style of Steampunk*, (Jackson: University Press of Mississippi, 2014), 159.
18. Dansg08. Bioshock Infinite (All Cutscenes). 2013. Accessed December 07, 2016. https://www.youtube.com/watch?v=6iZZg2qiBos&t=11424s.

the happening occurred. *Shoot* was specifically performed in an art gallery with white walls and those invited were 'art connoisseurs,' who may have avoided interfering to preserve the integrity of the artwork.[10] This manipulation of the art audience is illustrative of the psychological principle of the bystander effect. As defined in A *Dictionary of Psychology*, the bystander effect is "[t]he reluctance of bystanders to intervene in an emergency, especially when a person appears to be in distress or when a crime is being committed."[11] Burden's usage of the bystander effect can be further understood by his allusions to gun violence and the normalcy of voyeurism during acts of violence.

The performance encapsulates Burden's fascination with masculine subcultures of southern California and the physical risk taking behaviours associated with those subcultures.[12] Particularly, Burden explores the viewership of gun violence in the United States and the differences between lived violence and witnessed violence. There is a gluttony of media in the United States; this includes the 1970's, when this performance occurred, and continues into the present day. The overabundance of media has permeated into the unconscious of the public, resulting in an information overload. Psychological research on media and depictions of violence have proven that continued exposure to media violence leads to desensitization.[13] Images of violence have become commonplace and lack the shock factor that Shoot had received when it was performed. Critics and commentary about his work included sensationalized titles such as, "He Got Shot — For His Art"[14] and "Shot in the Name of Art."[15] Burden toys with the line between passive responses to fictional media representations of violence and emotional responses elicited by real-life tragedies. There is a disconnect between the response to fictional violence and personal opinions about violence; while one may accept and seek out violence on television or in movies, this is not equivalent to condoning violent acts in real life. Burden's piece delivers shock value to the viewers of his work, a response that is normally reserved for actual representations of violence. There was no tragedy, no narrative, and no real reason to explain why Burden was shot, other than that he did it for his art.

In an interview, Burden states that "everyone subconsciously has thought about what it's like to be shot," and that instead of creating work about the experience, he creates the experience.[16] Burden's comment on the unconscious is illustrative of his fascination with the human psyche and how the subconscious interacts with the real world. There is an incongruence in the minds of most, where they may accept the representations of violence and even seek them out, yet never have the urge to experience violence voluntarily or condone acts of senseless violence. *Shoot* depicts a violent act, however, there is no actual violence that occurs in the performance, and this is because the perpetrator and the victim are both the same person. The very act of seeking out violence through personal choice is indicative of the privilege Burden enacts through the performance of Shoot. Furthermore, the fact that *Shoot* has been constructed to explore the subconscious wondering about being shot trivializes gun violence. Although Burden was not the shooter himself, the situation was orchestrated through his conception. He is simply an artist who has been shot for the sake of being shot and there is no threat or imminent danger that precedes the act. Burden retains the privilege of deciding that he will be shot.

In *The Photographic Message*[17] and *The Rhetoric of the Image*,[18] Roland Barthes argues that the connotative and denotative layers of meaning in a photograph can be analytically distinguished. A denotative reading of the documentary photographs presents them as just that: images that document the event as it occurred. Upon exploring the connotative meaning of these three images, signs that reveal more than simply documentation begin to appear. This unravels the various connotations mediat-

ed through the photographic documentation of *Shoot*. The images and their component parts reveal information about the performance that would not be available simply through an account of the performance. For example, the photographs present the viewer with a glimpse into the gallery space, and indicate the positioning of the artist in relation to the viewers and the shooter. At a first glance, these images seem to only denote what had occurred. However, upon further inspection, an interpretation considering the formal qualities of this placement along with the socio-political climate at the time appears. Connotations that link these images to those of the Vietnam War begin to emerge, despite the fact that Burden has never publicly accepted this connection.[19] The piece was enacted during the tumultuous period surrounding the war, inviting an inevitable comparison. Burden has been careful to clarify that his wound from *Shoot* is nothing compared to those of people who have suffered trauma through the Vietnam War.[20] Despite Burden's clever avoidance of the contentious relationship between his work and the war, the performance is not independent from its historical context.

A comparison can be made between the documentary images of *Shoot* and those of the Vietnam War. As an example, the iconic photo of the Saigon execution of 1968 will be compared to the documentation of *Shoot*. The image being compared is that of a Viet Cong soldier being executed by a Saigon Police Chief. In this black and white image, the police chief stands to the right of the victim, facing him with his gun pointed directly at his head. Burden's image standing in front of the shooter mimics this image; the shooter stands facing Burden with the gun held up, ready to shoot. In both images the person being shot is slightly blurred as a reaction to the impact of the bullet and the face of the shooter remains obscured. Another similarity between the other images of *Shoot* and the image of the war are the appearance of an audience in the background: a small yet specific audience catered to the context of the shooting. In both images the bystanders lurking in the background are unidentifiable, whether they are viewers of the art action (Figure 2), or viewers of an execution. These formal similarities, along with *Shoot's* trivialization of gun violence, presents a representation of the atrocities that occurred during the Vietnam War and creates a spectacle that mocks the tragic images that portrayed soldiers suffering from the consequences of war.

Shoot is asserted as a performance artwork through the performativity of the documentation; the indexical nature of the document allows the viewer to understand it as the performance. Since there is a larger audience, beyond the audience that was present on the day of the performance, we must examine the impact of the performance on viewers that have experienced the performance through documentation. Each of the variables that affect the reading of *Shoot* can be found through a close reading of the images and accompanying text that document the performance. Marketing research has found that people are more likely to attend and respond to a combination of visual and textual information and that visual data is imperative for the consumption of information. Anyone who considers Burden's *Shoot* in the present day can interpret the performance based on the performance documentation.[21] There was a meager audience present for the 'real' viewership of the performance of *Shoot*. Anyone who was not present at the performance as it was enacted at 7:45pm on November 19th, 1971 must view the image through its mediated forms of documentation.

In her essay "The Question of Authenticity in 1960s-1970s Californian Body Art: Posing a Challenge to the Concept of Presence" Anja Kangieser argues that,

"unlike other art forms - such as painting, sculpture and drawing — where the body of the artist was but implicated in the presentation and

experience of viewing the artwork, body and performance artists argued that their artform overcame that division between art and life by overriding the absence associated with art through their corporeal presence."[22]

In other words, the presence of the artist's body in performance art is what makes it distinct from other art forms in overcoming the distance between art and the artist. Pure performance has been theorized by Sven Lutticken to be dematerialized with nothing left as a trace other than the ephemeral action.[23] The documentation of *Shoot* causes a departure from dematerialized performance because of the documentation both on Burden's flesh and in photographs. Burden marks his body as the artistic site with the ephemeral trace of the bullet wound, eliminating the divide between the artist and the artwork. As quoted by Kanngieser, Burden believes that his "art is an examination of reality. By setting up aberrant situations, [his] art functions on a higher reality, in a different state."[24] This statement illustrates Burden's attempt to break through representation associated with other art forms and use the body to explicitly access the 'real.' *Shoot* was a 'real' somatic experience, and resulted in injury to Burden marked by the bullet wound that ran through his arm. The wound is an indexical vestige of the performance and documents the occurrence of the event in the physical and temporal world.

As investigated throughout this paper, there are multiple readings of *Shoot*; these are based on the bystander effect, gun violence in the United States, and the historical context of the Vietnam War. Without the photographic and written documentation of the performance, the only remnant of performance would have been the wound on Burden's arm and the memories of the performance in the minds of those who were present. The performance could not have been as sensationalized as it was in the media without the text or photographs to accompany it. Images and text that accompanied the performance were crucial to its widespread acclaim and also its relationship to portrayals of gun violence in the media and their trivialization of gun violence. The physical performance, photography, videography, documentary text, and performance remains are different manifestations of the same work. Through the evaluation of Burden's *Shoot* and its documentation, it becomes evident that it is essential to contemplate documentation when creating performance art.

Notes:

1. Chris Burden, *Chris Burden* 71-73 (Paris: Bloc-notes, 1995), n.p.
2. Frazer Ward, "Gray Zone: Watching *Shoot*," *October* 95 (Winter, 2001): 114-130.
3. "In Shoot I was supposed to have a grazed wound. We didn't even have any Band-aids."Willoughby Sharp and Liza Bear, "Chris Burden: The Church of Human Energy, an Interview by Willoughby Sharp and Liza Bear," *Avalanche* 8 (1973), 5.
4. Ward, "Watching *Shoot*," 115.
5. Kevin D. Moore, James Crump, Leo Rubinfien, and Cincinnati Art Museum, *Starburst: Color Photography in America 1970-1980* (Ostfildern: Hatje Cantz, 2010).
6. Philip Auslander, Performativity and the Performance of Documentation from Perform, Repeat, Record. (Perform, Repeat, Record, 2012).
7. Thomas Crow, "Mind-Body Problem: Chris Burden's Performances," in *Chris Burden: Extreme Measures*, ed. Lisa Phillips (New York: Skira Rizzoli, 2003), 47.
8. Chris Burden, *Chris Burden* 71-73 (Paris: Bloc-notes, 1995), n.p. Refers to quote at the beginning of the paper.
9. Ward, "Watching *Shoot*," 115. Ward's essay includes information about each of the concepts referenced and how they relate to Burden's *Shoot* and the audience that was present.
10. Ibid. 115.
11. Andrew Colman, "Bystander Effect," In *A Dictionary of Psychology* (Oxford University Press,

2015).
12. Crow, "Mind-Body Problem," 47.
13. Kostas A. Fanti, Eric Vanman, Christopher C. Henrich, and Marios N. Avraamides, "Desensitization to Media Violence over a Short Period of Time," *Aggressive Behaviour* 35 no. 2 (2009): 179-187.
14. Peter Plagens, "He Got Shot — For His Art," *New York Times*, 1973.
15. Eric Kutner, "Shot in the Name of Art," *New York Times*, May 20, 2015, accessed April 10, 2017, https://www.nytimes.com/2015/05/20/opinion/shot-in-the-name-of-art.html.
16. Ward, "Watching *Shoot*," 119
17. Barthes, Roland. 2012. Przekaz fotograficzny. [the photographic message.]. Konteksty: Polska Sztuka Ludowa 66 (3-4): 212-399.
18. Sonesson, Göran. "Rhetoric of the Image." In Encyclopedia of Semiotics. : Oxford University Press, 1998. http://www.oxfordreference.com/view/10.1093/acref/9780195120905.001.0001/acref-9780195120905-e-248.
19. Ward, "Watching *Shoot*," 120.
20. Ibid. 120.
21. Marius Manic, "Marketing Engagement through Visual Content," *Bulletin of Transilvania University of Brasov. Economic Sciences* No. 8 (2015): 89-94.
22. Anja Kanngieser, "The Question of Authenticity in 1960s-1970s Californian Body Art: Posing a Challenge to the Concept of Presence," *Australasian Drama Studies* 44 (April, 2004): 65-77.
23. Sven Lutticken, "Progressive Striptease," in *Perform, Repeat, Record: Live Art History*, eds. Amelia Jones and Adrian Heathfield (Bristol, UK: Intellect, 2012), 187-198.
24. Kanngieser, "The Question of Authenticity," 67.

Figure 1: Chris Burden, *Shoot* (1971). F Space, Santa Ana, CA

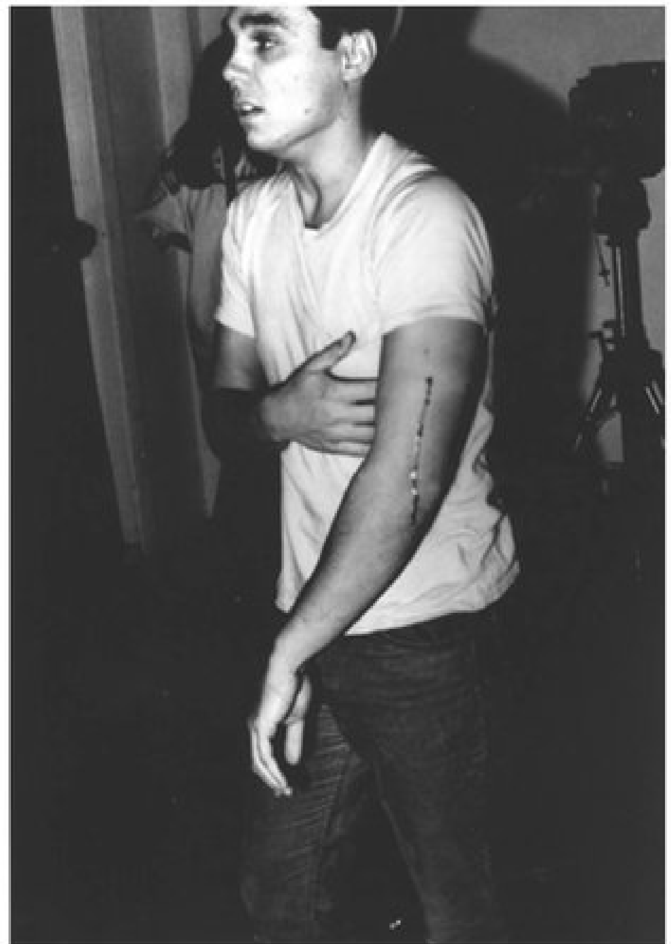

Figure 2: Chris Burden, *Shoot* (1971). F Space, Santa Ana, CA

Figure 3: Chris Burden, *Shoot* (1971). F Space, Santa Ana, C

The Burden of Performance Documentation

By: Simranpreet Anand

"At 7:45 p.m. I was shot in the left arm by a friend. The bullet was a copper jacket 22 long rifle. My friend was standing about fifteen feet from me."[1]

These three sentences are Chris Burden's account of his notorious performance titled *Shoot* (1971). Chris Burden has come to have the notorious reputation of "the artist who shot himself."[2] The intention was that the bullet would simply graze his arm, but it happened to go through his arm and cause a much more serious injury.[3] *Shoot* took place in a gallery space, after hours, for a small audience of around ten people.[4] Although this work has been abundantly referenced and written about both in the art world and mass media, the audience that witnessed the performance first hand was modest in scale. Burden's performance continues to live in the realm of performance art mediated by the photographs and short film that were taken as documentation of the happening. The verbal descriptions, media stories, physical wounds, Super 8 film, and photographs are indexical documents that are metonymic of the performance. Examining the performance documentation of *Shoot*, it becomes clear that the performance has continued to exist as mediated by the performance remains.

Shoot has been documented by the description of the action — the bullet wound — and, most importantly, the black and white photographs of the event. The three images that will be discussed have been widely circulated as the remnants of the performance. One of the photographs (Figure 1) depicts Burden standing in front of a wall with the marksman just ahead, his rifle is raised and directed towards Burden. Burden is blurred, indicating that he had flinched in response to the performance; the blurring of the image can be interpreted as a physical response of Burden flinching to the gunshot and as a result Burden's face becomes unrecognizable. A second photograph (Figure 2) frames Burden in a medium long shot, walking, with his right hand across his chest and blood dripping down from the bullet's entry and exit wounds in his upper arm. The third image (Figure 3) presents Burden seated in a chair, with his left arm raised and rested on the back of the chair. An unknown subject's hands are holding gauze to his arm as he stares point blank into the camera. In all the images, Burden wears a simple white t-shirt and jeans for the duration of the performance. The images do not show any defining features of the small audience present for the performance — who are also mentioned in the documentary text — the only figures we see are the woman standing behind Burden in Figure 2, and the person holding the gauze to his arm in Figure 3. Figure 1 includes the shooter, however, his face is turned away from the camera and his hair creates an impermeable wall disallowing viewers to identify him. It is important to note that other images are available where his head is not fully turned away yet the movement of the camera has distorted his face. The indistinct identity of the shooter frees them of any judgement or guilt from both critics and the authorities. Furthermore, this absolves the shooter of any moral or ethical questioning from the audience, instead it offers Burden as the artist that had himself shot. The documentary images of shoot are relatively meager for the publicity and acclaim that followed the performance and the large majority of images surrounding *Shoot* are disseminated in black and white, although colour photography was becoming increasingly available.[5] The choice to use black and white photography was an aesthetic one made by the artist in documenting the performance work, alluding to the images serving a purpose as art objects in their own right. The image labeled as Figure 2 has been published in colour on multiple occasions, however, the other images are generally shown in black and white;

this fact provides further evidence of the stylistic choice of the black and white images. If the images were purely documentary, formal decisions contrary to the norm of emerging colour photography available at the time would not have been executed; colour photography would have provided greater mimesis and clarity than black and white photography.

As noted by Philip Auslander, there are relationships of touch and indexicality between the performance and the documents of the performance which indicates an ontological relationship.[6] Burden's *Shoot* consists of both the action of him being shot, as well as the documentation that follows. The multiple layers of the work pose the questions of "what constitutes the 'art' in this performance?" and "is the 'art' the action itself?" If the performance did not take place, the photographs would not exist, and conversely, if the photographic documentation did not exist, the performance would not be able to exist beyond its occurrence. While the performance would exist in the minds of those who attended the event, the disappearance of the physical gunshot wound with Burden's death would render physical evidence obsolete unless we consider the existence of documentary photographs and film. The action itself, the bullet piercing through Burden's flesh, took place in only a fraction of a second, being "as brief a performance as could be imagined or effected."[7] Thus it can be argued that, as the rapid experience of the gunshot is not humanly perceivable by the audience, the artwork becomes the surrounding dimensions of the preparation and aftermath of the action, including the performance documentation. The images provide visual documentation of the events of the performance, however, the visceral experience, the noise of the gunshot, and the anticipation of Burden being shot are all absent from the images. Similarly, the written document of the performance is minimalist,[8] as it does not include any descriptive cues to create a sense of being in the scene. The description of events provides readers with minimal information to provide a simple trajectory of events that took place. The performance is that which only a limited audience was able to see in person, however, the images that document the performance are crucial to the widespread reception of the work. Circulation of the documentary images of *Shoot* are an indexical remnant of *Shoot*, as is the bullet wound in Burden's flesh. The scar of the wound on Burden's arm remained as an indexical trace until his recent death, which has made the scar as ephemeral a trace as the audience's memories of the performance.

While the documentation of *Shoot* is crucial to its existence, it is important to explore the performance as it occurred at 7:45 p.m. on November 19th 1971, as this includes the presence of the audience and what their behavior implies about the work. Arguing that the body is the artistic site because of its corporeal presence may contradict the understanding of the document as a metonym of performance. To resolve the dissonance between both the body and the documentation existing as artistic sites, one may consider the physical performance and the people involved in both viewing and enacting the action as equally integral to the work as its documentation. It is important to consider the audience as a significant component of *Shoot*, in order to contemplate ideas of voyeurism, public and private violent acts, and the consumption of gun violence in popular media.[9] The audience present during the performance is crucial to the artwork and its reception as it implicates the viewers and the shooter into the meaning of the work. People were present who could have stopped the shooting from occurring, or the shooter could have backed down at the last minute. Though there was a small audience, their presence and that of the shooter poses ethical questions about viewership and audience engagement that would be absent without the audience's presence. None of those present interrupted the performance or stepped in to stop it from happening, which could have been due to Burden's manipulation of the audience: he chose who was present and where

The Luminous Image

By: Nick Loewen

Histories of photography often consider the printed image as the primary photographic format. However, examining the projected photograph within the context of other illuminated media, from Javanese shadow puppets to 19th century Parisian spectacles, makes it possible to situate photographic practice within a much older and more diverse tradition. What follows is an outline of several key moments within this expanded history, with special attention paid to amateur slideshows in the latter half of the twentieth century, and to *Road Trip* by Janet Cardiff and George Bures-Miller, an artwork which discusses the experience of those slideshows.

Besides acknowledging overlooked influences, there are two key motivations for looking at photography in this expanded way. The first is the inevitable fact that the trajectory of art is determined by the technology available, and, likewise, the development of technology is often determined by the needs of art. The broader and longer the history we consider, the better we can understand the forces which impel it forward. The second motivation has to do with the way in which different media prompt different affective responses. Until recently, all images have depended on either projected or reflected light—slide or print, shadow puppet or painting. Now, luminous screen images are increasingly dominating visual culture. These luminous images have some of the characteristics of print, such as portability and scale, and some of the characteristics of projection, such as luminosity and ephemerality. Understanding the relationship between projection and print will help us to better understand how we are affected by these hybrid images.

Firelight

'*Photograph*' is a word assembled from Greek roots, essentially meaning a 'device for recording light.' However, when printing from a negative, the enlarger's lamp illuminates the whole surface of the paper indiscriminately. The image is only created when obstructions are placed in the path of the light, causing shadows. The photograph's form is determined as much by shadow as it is by light. Likewise, a traditional projection is made by blocking light rather than directing it. These practices could also appropriately referred to by the term '*skotograph*:' that is, a device for recording shadow. The history of photography can be seen as a history of increasingly sophisticated shadow puppetry.

This story begins far before Niépce and Daguerre, perhaps as much as 24,000 years ago, by which time the earliest known ceramics had been created.[1] It seems reasonable to imagine that by the time fire was used to give permanent shape to sculpture, it would also have been used as a tool for casting and manipulating shadows. Naturally, the ephemeral quality of the shadow leaves this hypothesis as an open question. Perhaps the shadow was not considered until later, or perhaps it was investigated much earlier. It is common to think of the intentional control of light as a modern phenomenon, but its beginnings were probably as early as the beginnings of sculpture and painting.

One of the most celebrated traditions of shadow play is a Javanese practice: *wayang kulit*, or 'shadow leather,' named for the material from which the intricately detailed puppets are created. This art form has more than a thousand years of history. *Wayang kulit* is used to tell a variety of tales, featuring intrigue, mysticism, romance, or comedy, which are typically extrapolated from stories with which the audience is already familiar. These stories are told over the course of a whole night, traditionally lit by a brass oil lamp, and accompanied by the metallic percussion of the gamelan.[2]

For a North American audience, *wayang*

kulit at first seems quite unfamiliar. Fundamentally, however, it has quite a lot in common with a tourist's home slideshow in 1970s America: darkness, a screen, a lamp, a means of blocking the lamplight to create an image, and a privileged figure who both determines and speaks about the images which are shown. The aim of this comparison is not to diminish the unique and specific cultural position of *wayang kulit*, but rather to argue for an understanding of the history of the illuminated image with a breadth wide enough to encompass a greater diversity than is often permitted.

A key feature of both *wayang kulit* and the tourist's slideshow is theatricality. Since it is easier to project a large image than to draw one, the projected image is well suited to public spectatorship, a prominent feature throughout its history. Unlike the printed or painted image, it can exist only in one place and at one time, so the audience must be present all at once, rather than drifting in and out of a gallery whenever they wish. Writing about cinema, Jean-Louis Baudry describes "the arrangement of the different elements—projector, darkened hall, screen" as "reproducing in a striking way the *mise-en-scène* of Plato's cave."[3] In 370 BCE, Plato wrote an allegory describing the power of cast shadows in order to demonstrate that the way in which an image is received is determined by the form through which it is presented.[4] Not only does Plato's allegory provide a framework for understanding the way in which these images function, it also serves as a reminder of the long history of these ideas. Drawing on this tradition, Baudry's comparison emphasizes how the formal elements of projected images encourages strong, even mystical identification with the uncanny 'reality' being shown.

Lanternlight

The story of the photograph is often imagined to have begun with advances in optical technology by polymaths such as Hasan Ibn al-Haytham, Johannes Kepler, Galileo Galilei, and Isaac Newton, whose work facilitated the creation of the telescope, microscope, and, eventually, the refinement of the *camera obscura* into the photographic *camera*. Advances in illumination technology were equally important. In the 1700s, a day's wages could purchase about an hour's worth of light. Around 1850, artificial light became significantly more accessible with the introduction of kerosene, which brought a five-fold decrease in the cost of an hour's light. This improvement was so marked that it encouraged a rapid period of innovation, culminating with the availability of electric light. Now, a day's work earns enough for tens of thousands of hours of light.[5]

Naturally, artists responded to this changing technology. A new interest in light appeared in Impressionism, as artists found that new pre-packaged paints allowed them to begin painting *en plain air*. Outside of the studio, they were able to capture the world in its natural light, in addition to exploring the new environment of the industrial city. These twin interests in the effects of light and industrialism can be seen clearly in Gustave Caillebotte's *Paris Street, Rainy Day*, a scene built around the stalwart verticality of a lamppost. Meanwhile, artificial light was encouraging the development of wholly new media. Silhouette style shadow-portraits, for example, became so popular that machines were developed specifically to simplify their creation.[6]

Particularly popular amongst new image technologies were the lantern slide and magic lantern. Lantern slides were made of glass, and were large enough that they could include moving parts to achieve special effects. They could be cumbersome, however, as the slides had to be loaded into the magic lantern individually in advance of projection. In the catalogue for his exhibition *Carousel* at Zalucky Contemporary in Toronto, Sam Cotter discusses the development of projection technology from magic lantern to Kodak carousel, a story which begins with the

appearance of the typical magic lantern design in the mid-1600s. The magic lantern, which inverted the function of the camera obscura, further exemplifies how projection was a tool for theatrical presentation: "hand-crafted and performer-mediated shows shared suspension of disbelief as a core value — like shadows dancing across the cave wall, the projected impressions and imprints offered atemporal two-dimensional windows of understanding into otherwise inaccessible worlds."[7]

Daguerre's *Diorama* (a proto-cinematic spectacle featuring enormous paintings, lighting effects, and a moving platform) also represented another important early stage in the development of the projected image, as evidenced by the fact that a key part of Daguerre's description of his *Diorama* is a set of directions for constructing a projection screen. Subsequently included are instructions for lighting the screen to create a variety of special effects.[8] Later, Daguerre would go on to develop the daguerreotype process, one of the first viable techniques for print photography. This continuation of his studies in light was very much indebted to his earlier study of the tradition of theatrical projection.

Lamplight

For a short period following the introduction of the Daguerreotype, photographic reproduction was focused on the print. Soon, however, early motion pictures could be made and shown using a combined camera-projector called the 'cinematograph,' created in the 1890s by brothers Louis and Auguste Lumière.[9] This invention signalled a return of the theatrical projected image. Around this time photographic lantern slides also became available, replacing earlier hand painted slides. In her book *An Eye for the Tropics*, Krista Thompson documents the first connections between slideshows and tourism: after photographic presentations had become common in America and the British Colonies, they were adopted by the tourism industry as an advertising tool.[10]

The next major development in the history of projection was the introduction of easy to use 35mm roll film. In 1936, Kodak began selling 35mm Kodachrome, the first colour film suited for amateur photographers. This was, notably, slide film; colour negative film was not available until 1942.[11] This early availability, and the fact that slides were more economical to produce in large numbers than prints, meant slide projection was an important tool for amateur photographers. Kodak began selling projectors in 1937, but it was the 1961 introduction of the more reliable and user friendly carousel projector which created the icon of the projected slide.[12]

Road Trip

Setting aside the historical outline momentarily, what follows is a case study considering how *Road Trip*, a 2004 installation by Janet Cardiff and George Bures-Miller, reflects the ideas discussed above. Cardiff and Bures-Miller work primarily in multimedia installation, placing a particular emphasis on the role of sound in creating immersive experiences. *Road Trip* fictionalizes the artists' experience sorting through a collection of slides photographed by Bures-Miller's grandfather as he drove across Canada to New York seeking cancer treatment. The slideshow is set up in a small room, with chairs for viewers. The artists are present, but not visible, as their voices play throughout the room from two speakers. The slides advance and reverse as the disembodied artists discuss and argue, giving the feeling that one is eavesdropping on a private living room conversation. The audience hears the artists "discussing the order and reason for the slides, trying to discover the mystery behind the images."[13]

In an interview with Michael Juul Holm for a Louisiana Museum of Modern Art catalogue, Cardiff's commentary hints at the tone of the work as he explains how *Road Trip* taps into

the transporting theatricality described earlier by Jean-Louis Baudry:

"[...] And we say on the audio track, well, why don't we just rewind it and re-order it? And everybody knows it's just a slide machine there being directed by two speakers, but they hear it going [making slides-clicks] and they see the slides on the screen going backwards so they believe that it's really rewound itself and somehow we have re-ordered the slides. It's very anthropomorphic. We're interested in this idea of how you can take the understanding of how media functions and screw with that."[14]

Cardiff and Bures-Miller also identify a nostalgic aspect to photography, which is present both in the action of revisiting a moment through a photograph, and the desire to capture precious moments which feel fleeting. The first of these, the inherent nostalgia of a photograph, is present in the form that the *Road Trip* takes — what Bures-Miller describes as "this ancient, ok this very old technology, of slide projections."[15] Cardiff addresses the idea of anticipated nostalgia as well:

"It's also very much about the nature of photography, what is it about photography that makes people want to take pictures [...]? Perhaps it's about really trying to hold onto something. Like, why did his grandfather take so many shots with no one in them — maybe he knew that he was dying."[16]

This re-interpretation of the images after time has passed reinforces the theatricality of the experience, which is necessarily to some extent the creation of a fiction. Part of the piece is the acknowledgment of its own imperfection and incompleteness. Not only is the photograph an imperfect document, as every photograph represents a choice about what will be left out of its frame, but its reliability also fades over time, as knowledge of what was left out disappears. The artists are well aware that they will never know how accurately they have recreated the journey. As Bures-Miller admits, "we were of course creating a fictitious journey as well—we may call something Lake Superior while in fact maybe it was Lake Huron but we are kind of tracking this route that we *imagined* was the route he took."[17]

Theatricality, an acceptance of the slightly fantastic, a sense of accessibility or clarity marred by uncertainty: all of these key features of projected imagery are demonstrated and explored in *Road Trip*. The fact that all of these features can be found in this piece, which is more than just a 'typical' slideshow, demonstrates how this broader and longer view of photography allows for more historical and theoretical connections to be discerned.

Screenlight

The history of image and light continues to evolve as different types of viewing collapse in on one another, and become increasingly interconnected. The proliferation of the television introduced a new sort of image. The television's image is a luminous image, neither projected nor printed; it is theatrical and publicly disseminated, but privately viewed. The advent of the television fixed the image to a specific time. The viewing experience is contingent on the viewer's own positioning in time and space, changing if you tune in late, or miss the end of a programme. Similar medium-specific features have become increasingly pronounced as technology has evolved. Computer screens and the internet give us more control over what we see: for example, we are no longer restricted to the news that is broadcast each evening, but can find our own sources to fit our tastes.

The modern image became fragmented and cut in new ways, too. The vertically scrolling format of most media means that images are seen as partially visible as often as they are seen in full. The enormous number of images available through computers makes old school 'channel

surfing' feel like a quaint and frustratingly slow process, having to wait at each step to know what one is seeing, rather than knowing what is coming before you follow the link. All of this is true of mobile devices as well, although these have some greater kinship to printed material, in their size, weight and portability.

Every step in the evolution of photography has changed the way in which we understand ourselves and our world. This has been studied with regard to print, as in discussions of how revolutionary it was to see an image of *oneself* for the first time. It has also been discussed with regard to cinema, as in Jean-Louis Baudry's analysis of how the apparatus of cinema encourages a feeling of association between the viewer and the character on screen. There is still more work to be done in understanding the affective response brought about by the projected image. It occupies a space somewhere between cinema and printed photography, and perhaps a similar emotional position. Whereas print excels at documentary, projection is a powerful tool for storytelling. Projection appeals to a sense of nostalgia for the experience depicted, whether it is real or imagined. Likewise, it creates a longing for the comfort of the safe space of the darkened room (or cave) wherein understanding is delivered readymade to a comfortable, passive audience. Considering this long arc, which begins and concludes with us gathered around a flickering light, will help us to understand how we will respond to the images and technologies which are yet to come.

Notes:

1. P. B. Vandiver et al., "The Origins of Ceramic Technology at Dolni Vecaronstonice, Czechoslovakia," *Science* 246, no. 4933 (1989): 1002.
2. Tim Byard Jones, "Developments in Performance Practice, the Creation of New Genres and Social Transformations in Yogyakarta Wayang Kulit," *Contemporary Theatre Review* 11, no. 1 (January 1, 2001): 43-44, doi:10.1080/10486800108568609.
3. Jean-Louis Baudry and Alan Williams, "Ideological Effects of the Basic Cinematographic Apparatus," *Film Quarterly* 28, no. 2 (1974): 45.
4. Plato, C. J. Emlyn-Jones, and William Preddy, *Republic* (Cambridge, MA: Harvard University Press, 2013): xxviii.
5. David Kestenbaum and Robert Goldstein, "The History of Light," *Planet Money* (NPR, April 25, 2014), http://www.npr.org/sections/money/2014/04/25/306862378/episode-534-the-history-of-light.
6. R. Schellenberg, *A man drawing the silhouette of a seated woman on translucent paper suspended in a frame and lit by a candle*, 8 November 2014, accessed 8 December 2016, https://commons.wikimedia.org/wiki/ File:A_man_drawing_the_silhouette_of_a_seated_woman_on_translucen_Wellcome_V00 49670.jpg.
7. Sam Cotter, *Carousel*, (Toronto: Zaluchy Contemporary, 13 September 2016): 1.
8. L. Jacques Mandé Daguerre, *Esposicion historica y descripcion de los procedimientos del daguerreotipo y del diorama*, Madrid: Imprenta de D. Ignacio Boix, 1839: 114.
9. "Cinematograph," in *The Encyclopedia Americana*, ed. George Edwin Rines, vol. VII (1920), accessed December 8, 2016, https://en.wikisource.org/wiki/ The_Encyclopedia_Americana_(1920)/Cinematograph.
10. Krista A. Thompson, *An Eye for the Tropics: Tourism, Photography, and Framing the Caribbean Picturesque* (Durham: Duke University Press, 2006): 32.
11. "Photography," Kodak, accessed 9 December 2016, http://www.kodak.com/corp/aboutus/heritage/photography/default.htm.
12. *The Evolution of KODAK EKTAGRAPHIC Slide Projectors*, PDF, Kodak.
13. "Road Trip," *Janet Cardiff George Bures Miller*, accessed 8 December 2016, http:// www.cardiffmiller.com/artworks/inst/roadtrip.html.
14. "Janet Cardiff and George Bures Miller Interview", Michael Juul Holm and Mette Marcus, eds., *Louisiana Contemporary: Janet Cardiff*

& George Bures Miller (Humlebæk: Louisiana Museum of Modern Art, 2006), republished at http://www.juliabailey.info/files/research-paper-240909.doc.

15. Ibid.

16. Ibid.

17. Ibid.