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Racquel Maria Gonzales

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I Don't Want to Set the World on Fire...or Do I?: Playing (with)

History in *Fallout 3*

APPROVED BY

SUPERVISING COMMITTEE:

Supervisor:

Michael S. Kackman

Shanti Kumar

**I Don't Want to Set the World on Fire...or Do I?: Playing (with)
History in *Fallout 3***

by

Racquel Maria Gonzales, B.A.

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Dedication

To M, D, and GM for providing access to the world of gaming and encouraging my play.

To J and R for always showing me how.

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Racquel Maria Gonzales, M.A.

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SUPERVISOR: Michael S. Kackman

While considering the role of media in shaping and examining histories, we must also grapple with formal limitations in approaching and understanding the past. The thesis aims to bring video games into critical conversations regarding history, memory, and nostalgia by considering the similar and unique perspectives the medium can bring alongside film, television, radio, and literature. Player positionality and interactivity within the unconventional, non-linear game storytelling form allows for different engagements with history. Focusing on the futuristic, post-apocalyptic role-playing game *Fallout 3* (2008), this study interrogates the game's nuanced presentation of genre as a cultural mediation of the past, the negotiation of memory with history, and our problematic assumptions about technology and narratives of progress. While the study finds games may provide rewarding and potentially critical explorations of history, the self-reflexive nature of video gaming emphasizes the medium's possibilities, limitations, and implications as a cultural product shaped by the very forces constructing history.

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Introduction

Imagine the year is 2277 and you enter a world you've only read about in sci-fi stories or watched in futuristic films: the post-apocalyptic so-named Capital Wasteland, formerly Maryland, Virginia, and Washington D.C. Here, the threat of nuclear world war was actualized 200 years prior during the Great War between China and the United States after years of conflict. Life has survived, but society as remembered has long been fractured with recognizable government, economic, and cultural institutions in ruins. This is the world of *Fallout 3* (2008), a video game that thrusts players into a post-World War II alternate history from our own, technologically progressing towards a post-nuclear future. The game invites players to recognize familiar historical, cultural fears, and optimistic projections about the future made reality in the Capital Wasteland. Here, you must find your own way, navigating through life-threatening dangers and foes while filling in your gaps of America's past amid conflicting sources, histories, and memories. This study considers how players of *Fallout 3* can play history and "play" with history to critically explore our cultural mediation of the past, our prevailing notions of memory, and our relationship with technology while broadly considering how the gaming medium uniquely engages with history.

Undoubtedly, video games have become an established, commercially successful, and widely popular medium that has grown technologically and culturally from its *SpaceWar!* (1962) and *Pong* (1972) beginnings. Nevertheless, they still haven't received

the cultural recognition as meaningful art alongside fellow media.¹ It has been difficult to break away from gaming stereotypes since popular criticism still purports most games encouraging destructive, violent behavior in youths and very little else.² However, there is a growing body of game scholars, historians, and new media enthusiasts exploring games and their layered approaches to history. In the collection *Playing the Past: History and Nostalgia in Video Games*, editors Laurie N. Taylor and Zach Whalen argue “video games operate with a clear—and a clearly *mediated*—relationship to the past,” one both connected to and separate from other media because the player interaction allows form and function to be experienced simultaneously.³ Moreover, games can offer more complex examinations of historical representation and “mediated temporality and memory” because gaming elements like interactivity, replayability, and multiple paths of completion explore and “test out” alternatives and cause-and-effect.⁴ For Taylor and Whalen, games might engage with histories or cultural themes explored previously in film, TV, and literature, but games bring medium-specific elements that can “inform and reshape prior critical thinking.”⁵ Instead of “allegorical example,” for instance, game theorist Alexander Galloway finds games “[unify] the act of playing the game with the immediate political experience,” meaning critical thought can take place while playing

¹ Alexander R. Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis, MN: University of Minnesota Press, 2006), 85.

² Kurt Squire, “Cultural Framing of Computer/Video Game,” *The International Journal of Computer Research* 2.1 (July 2002) <http://www.gamestudies.org/0102/squire>.

³ Laurie N. Taylor and Zach Whalen, “Playing the Past: An Introduction,” in *Playing the Past: History and Nostalgia in Video Games*, eds. Zach Whalen and Laurie N. Taylor (Nashville, TN: Vanderbilt University Press, 2008), 2.

⁴ *Ibid.*, 11.

⁵ *Ibid.*, 4.

through the game content.⁶ In contemporary culture, games offer diverse, rewarding platforms to pursue critical exploration of countless topic matters like war nostalgia and gender performativity.

Historian Claudio Fogu proposes that games and digital archives provide useful spaces for historians to think outside the traditional “linear-narrative” of most historical fiction and therefore challenge constructions of “what essentially happened” in history.⁷ Likewise, Edward L. Ayers finds gaming offers versatile components that better represent history’s complexity because contain variables that historians set aside when narrowing their research focus.⁸ Of course, digital archives and video game worlds are not flawless mediums and can often be reductive in their historical representations, a problem with all representational mediums. This should not restrict potential, but push us to consider new possibilities alongside criticism because, at their best, video games can “reorganize perception” of the world and help players see varied perspectives of existing issues.⁹ As a scholarly endeavor, such deliberations point to future paths of inquiry and present alternate modes of research and conceptualization of historical trajectories.

Fallout 3 is particularly suited for these investigations because the game puts into question established history through an alternate history/future environment.¹⁰ Like its PC predecessors *Fallout* (1997) and *Fallout 2* (1998) created by Black Isle

⁶ Galloway, 103.

⁷ Claudio Fogu, “Digitalizing Historical Consciousness,” *History and Theory, Theme Issue 47* (May 2009): 103.

⁸ Edward L. Ayers, “The Pasts and Futures of Digital History,” 2009, <http://www.vcdh.virginia.edu/PastsFutures.html>

⁹ Kevin Schut, “Strategic Simulations and Our Past: The Bias of Computer Games in the Presentation of History,” *Games and Culture* 2.3 (July 2007): 215. The term “reorganize perception” is credited to Ted Friedman, “Civilization and its discontents: Simulation, subjectivity and space,” in *On a silver platter: CD-ROMs and the promises of a new technology*, ed. G. M. Smith (New York: New York University Press, 1999), 132-150.

¹⁰ Chapter 2 explores this further. More information on the alternate history genre can be found in Karen Helleckson, *The Alternate History: Refiguring Historical Time* (Kent, OH: The Kent State University Press, 2001).

Studios/Interplay, *Fallout 3* is set in an alternate post-WWII timeline in which the world embraces the power and possibilities of atomic energy and technology, resulting in a far different Cold War from our own.¹¹ This world conflict includes the disintegration of the United Nations, the annexation of Canada to the United States, the Communist Chinese invasion of Anchorage, Alaska, and the eventual global-scale nuclear war. While each game presents unique challenges and game-play, they all share a main, overarching quest: players emerge from a protected underground vault into the post-nuclear apocalyptic United States and try to obtain a G.E.C.K. (Garden of Eden Creation Kit), which will provide clean, radiation-free water to surviving U.S. citizens. Role-playing games or RPGs have multiple quests, tasks players must accomplish to progress, but typically one central mission or goal that can be followed throughout the game. While I hope to eventually integrate the previous games in future study, my research focuses on *Fallout 3* for several key reasons. A shift from the previous *Fallout* setting of Southern California to Washington, D.C. engages with notions of national identity and American history, a deliberate move by Bethesda, creator of *Fallout 3*.¹² Also, *Fallout 3* uses real-time, first person point-of-view game-play versus the previous turn-based form, resulting in a more immediate, self-reflexive interaction with the environment.¹³ Furthermore, the game was a critical and commercial success, winning numerous gaming awards and selling well

¹¹ Due to financial difficulties, Black Isle Studios/Interplay sold the *Fallout* franchise rights to Bethesda Softworks in 2007 who created *Fallout 3* separately. And although the three games share the same timeline, *Fallout* is set in 2161, *Fallout 2* in 2241, and *Fallout 3* in 2277.

¹² Martin McEachern, "Back to the Retro Future: Bethesda Turns the 1950s World of Tomorrow into a Radioactive Wasteland in *Fallout 3*" *Computer Graphics World* 32.3 (March 2009): 7.

¹³ The gameplay in turn-based games resolves game actions and combat in ordered turns similar to board games rather than real-time interaction. Turn-based games also feature isometric, third person point-of-view versus real-time's first or third person point-of-view.

over five million units.¹⁴ Thus, it is not an obscure game among hundreds of more popular titles, but one deserving of closer attention because it is enjoyed by game critics and players alike.

Fallout 3 is an RPG mixed with first person shooter elements against a “sandbox” environment, where exploration and interaction within the virtual world is as much a game goal as completing game objectives.¹⁵ Shooter games emphasize weapon combat typically in first person point-of-view. As a sandbox RPG, the game form itself encourages alternate “histories” of play by presenting multiple game paths and outcomes dependent on player choice. The game type also encourages repeated play to experiment with decisions, events, and their reverberating effects on future choices and character interactions. With over 100 hours of game-play, my own gaming experience defies simple, linear narrativization and does not account for all possible outcomes. While challenging, the gaming form lends itself to the mutable experience of grappling with history and memory. Additionally, the game actively defies cohesive narrative closure by offering downloadable extension packs to foster ongoing exploration, while the upcoming *Fallout New Vegas* (expected in 2011) will expand the game world even further.¹⁶ *Fallout 3*'s content and form offers an alternative to the limitations, and arguably comfort, of grand narratives and closures when translating historical events into

¹⁴ Such information can be found with citations at the “*Fallout 3*” listing on Wikipedia as well as individual critical gaming sites. While not the ideal sources, there is not a complete collection of the awards since they come from countless industry-wide organizations.

¹⁵ Jesper Juul, “Without a goal: on open and expressive games,” in *Videogame, Player, Text*, eds. Barry Atkins and Tanya Krzywinska (Manchester, UK: Manchester University Press, 2007), 191.

¹⁶ Five add-ons are currently available for the Xbox 360, PS3, and the PC which add new quests, items, and content to the original game: *Broken Steel*, *Operation: Anchorage*, *The Pitt*, *Point Lookout*, and *Mothership Zeta*.

narratives.¹⁷ *Fallout 3*—and many other video games—can offer unique engagements with history and memory through player interactivity and game-play. This playing (with) history can generate meaningful critical discourse about how we remember and mediate our past and present.

Researching *Fallout 3* requires different analytical approaches from the existing scholarship on video games and history which tend to base inquiry on turn-based historical strategy games and war reenactment shooters. Scholar Kurt Squire uses Sid Meier's *Civilization* series to explore the potential for games to teach critical thinking in the classroom.¹⁸ Players assume the role of a familiar historical group (e.g. Mongolians) or famous historical person (e.g. Cleopatra), and anachronistically “rewrite” centuries of history by choosing alternate technological, cultural, and scientific development trajectories or paths of domination. Such games spark interesting thoughts regarding causality, temporality, and popular history, but are tempered by the other ideologies at work. Similarly, Kevin Schut finds Sid Meier's *Civilization* franchise guilty of perpetuating a “great men of history” bias and stereotypical Western notions of cultural progress and success.¹⁹ All too frequently, these games are dismissed for being historically inaccurate and encouraging a mass equalization of dates, events, and ancient civilizations.

The work on military battle shooters almost wholly revolves around World War II reenactment and idolization because such games saturate the market. Scholars analyze

¹⁷ Marita Sturken, *Tangled Memories: The Vietnam War, the AIDS Epidemic, and the Politics of Remembering* (Berkeley, CA: University of California Press, 1997), 8.

¹⁸ Kurt Squire, “Cultural Framing of Computer/Video Game,” *The International Journal of Computer Research* 2.1 (July 2002) <http://www.gamestudies.org/0102/squire>.

¹⁹ Schut, “Strategic Simulations and Our Past: The Bias of Computer Games in the Presentation of History.”

the desire and meaning generated when virtually fighting battles and wars already completed. Using *Medal of Honor: Rising Sun*, Aaron Hess considers how the game dually memorializes WWII while calling players to be a part of a past not their own.²⁰ This sort of “memory-making” with WWII history glorifies the war. Moreover, Hess finds that the reenactment creates a complicated play-performance of experiencing public memory in one’s private home.²¹ In a similar trajectory, Brian Rejack’s study of *Brothers in Arms*, another WWII shooter, argues history is used to garner “sympathetic identification” and emotional investment because the medium is unable to generate them.²² The game is caught between using primary historical sources to legitimize player experience and allowing historical “leaps” for entertainment purposes. Regardless of accuracy, Rejack points out players aren’t reenacting WWII itself so much as the prevailing media images of the war in films like *Saving Private Ryan* (1998).

Differently, *Fallout 3*’s historical engagement is not dependent on accuracy or reenactment of the past. Unlike the aforementioned turn-based strategy genre, *Fallout 3* does not change history for player pleasure, but has players enter a world where history has already been altered and must be investigated. Moreover, the game is not a reenactment or simulation of our past, but a speculative future. It also differs from WWII games—or perhaps a better comparison—from other Cold War-themed military shooter games like *Red Alert* and *Pacific Theater of Operations* because those games promote an “us-vs.-them” battle logic. Being an RPG, *Fallout 3* presents a wide morality spectrum

²⁰ Aaron Hess, “You Don’t Play, You Volunteer”: Narrative Public Memory Construction in *Medal of Honor: Rising Sun*,” *Critical Studies in Media Communication* 24.4 (October 2007): 339-356.

²¹ *Ibid.*, 341.

²² Brian Rejack, “Toward a Virtual Reenactment of History: Video Games and the Recreation of the Past,” *Rethinking History* 11.3 (Sept 2007): 418.

in game-play where players navigate through the morally grey Capital Wasteland.²³ While battles do take place, they are not the primary player engagement, avoiding the typical glorification or demonization of a particular side in battle games. Thus, *Fallout 3*'s game content and play bring new perspectives to the prevailing scholarship.

Contemporary game scholarship has incorporated elements of various interdisciplinary fields; however, there remain ongoing tensions within game studies about how the medium's theoretical and methodological foundations. Although video games have a rather young media history compared to film, television, and radio, many game scholars regard it as the descendant of *ludus* ("game") activities of play extending to ancient civilizations and far beyond the historical reach of fellow media forms.²⁴ The field has been torn between the narratological approach, studying how video games tell stories similarly or differently among established narrative forms, and the ludological approach, studying the makeup and limits of game mechanics, game-play, and interaction. For the most part, scholars attempt a mixed method and contend the two fields are not in opposition, but complicate our perceptions about what a game can do.²⁵ Yet more polemic ludologists like Espen Aarseth make strong arguments against applying theories used for film and television because doing so risks "academic colonization" that marginalizes the important *ludic* mechanics of gaming.²⁶ Likewise, Jesper Juul asserts narratives inhibit the gaming form and freedom of play which the

²³ Called "karma" within the game, every major player action garners good, evil, or neutral consequences on an ever-changing morality scale. This scale affects interactions with other characters and access to particular quests, locations, and objects.

²⁴ Jesper Juul, *Half-Real* (Cambridge, MA: MIT Press, 2005), 3-4.

²⁵ Gonzalo Frasca, "Ludology meets Narratology: Similitude and differences between (video)games and narrative," 1999, <http://www.ludology.org/articles/ludology.htm>.

²⁶ Espen Aarseth, "Genre Trouble: Narrativism and the Art of Simulation," in *First Person: New Media as Story, Performance, and Game*, eds. Noah Wardrip-Fruin and Pat Harrigan (Cambridge, MA: The MIT Press, 2004), 49. More on Aarseth's position can be read in his book *Cybertext: Perspective on Ergodic Literatur*. (Baltimore, MD: John Hopkins University Press, 1997).

narratological study of games seems to highlight.²⁷ However, the applicability of media studies should not be dismissed for a focus on game form, as Galloway poses, “Yes, games are about algorithms, but what exactly does that matter when it comes to cultural critique?”²⁸ Furthermore, media scholar Henry Jenkins argues that scholars must consider content and form simultaneously when examining games to understand its substantial contribution to storytelling.²⁹ While this is a very simplified, concise overview of contentions within game studies, it is important to acknowledge that the field is greatly divided about the suitable scholarly approaches and connections we should make between games and culture.

As a media studies scholar, I am devoted to bringing video gaming into ongoing scholarly discussions of media and history. Quite broadly, media can be seen as “devices that mediate experience by re-presenting messages originally in a different mode,” objects demanding critical inspection and historical contextualization.³⁰ The existing scholarship on media and history is rife with highly contentious debates about the politics of historical representation and the role of media in constructing history for public entertainment and consumption. On post-WWII collective memory and popular culture, George Lipsitz argues popular media simultaneously contributes to our fragmented connection to the past and remains one of the primary ways we engage with the past and

²⁷ Juul, Jesper. “A Clash between Game and Narrative.” Paper presented at the Digital Arts and Culture conference. Bergen, Norway, November 1998. http://www.jesperjuul.net/clash_between_game_and_narrative.html.

²⁸ Galloway, 95-99.

²⁹ Henry Jenkins, “Game Design as Narrative Architecture,” in *First Person: New Media as Story, Performance, and Game*, eds. Noah Wardrip-Fruin and Pat Harrigan (Cambridge, MA: The MIT Press, 2004), 120-121.

³⁰ Carolyn Marvin, *When Old technologies Were New: Thinking about Electric Communication in the Late Nineteenth Century* (New York: Oxford University Press, 1988), 152.

explore our very disconnection to it.³¹ The challenge, then, for media scholars is juggling the politics of representing history while considering film, television, and video games as important critical spaces to understand history. Cinema and television studies have grappled with this dichotomy. For scholar Robert Burgoyne, the historical film has been underdeveloped theoretically because of the tension between history studies and film studies. Because cinema is such a pervasive form of popular entertainment, Burgoyne argues we need to explore the meaning and interaction of history on film.³² Similarly, TV scholars Steve Anderson and Gary R. Edgerton explore the problematic and enriching ways TV showcases history and acts as a historian in our living rooms. While it might be simple to dismiss TV as a “bad” history, Anderson and Edgerton investigate TV’s unique potential to access and question the past because its form and structure plays with traditional methodologies.³³ Edgerton clarifies that television shouldn’t be taken as the “last word” on history, but as a means of inspiring further research while considering alternate modes of confronting historical events.³⁴ Marita Sturken’s work in memory studies examines how popular entertainment blurs the lines between memory and history for the public. Our cultural memories of war, for instance, include primary accounts and mediated experiences with TV news and fictional representations of battles.³⁵ Sturken insists we must consider how media become part of cultural memory and “entangled” with, rather than in opposition to, history. Media forms are always products of and

³¹ George Lipsitz, *Time Passages: Collective Memory and American Popular Culture* (Minneapolis, MN: University of Minnesota Press, 1990), 12.

³² Robert Burgoyne, “The Balcony of History,” *Rethinking History* 11.4 (December 2007): 547 – 554.

³³ Steve Anderson, “History TV and Popular Memory,” 19-35, and Gary R. Edgerton, “Television as Historian: A Different Kind of History Altogether,” 1-16, can be found in *Television Histories: Shaping Collective Memory in the Media Age*, eds. Gary R. Edgerton and Peter C. Rollins (University of Kentucky, 2001).

³⁴ Edgerton, 10.

representations of culture, as well as ways of interrogating culture. Therefore, scholars must recognize and reconcile these statuses when researching film, TV, and video games.

For other scholars, however, media are a central reason our society cannot adequately access the past and, therefore, not a viable platform to connect meaningfully with history. Most notably, Frederic Jameson's highly-quoted essay "Postmodernism, or the Cultural Logic of Late Capitalism" explores the incompatibility between contemporary media and "genuine historicity" due to postmodernism.³⁶ Postmodernism, both as a formal mode and contemporary condition, has thrust the public into crises of identity, memory, and history and should not be celebrated. The mode is characterized by a superficial invocation of the history: "With the collapse of the high-modernist ideology of style...the producers of culture have nowhere to turn but to the past: the imitation of dead styles, speech through all the masks and voices stored up in the imaginary museum of a now global culture."³⁷ Here, the past no longer has historical or contextual meaning and sentimental nostalgia provides empty connections to the past. Meaningful access to history is no longer possible. Likewise, scholar Philip Hammond critiques postmodernism for its equalization of all histories to elevate the insignificant to the important, fostering a cultural loss of meaning. Hammond links postmodernity to the post-Cold War period because every war and media representation since have strived to recapture the "sense of meaning and purpose" that characterized America's capitalistic fight against communism.³⁸ Considering these thoughts, a game like *Fallout 3* would not

³⁵ Sturken (1997), 86.

³⁶ Frederic Jameson, "Postmodernism, or the Cultural Logic of Late Capitalism," in *Media and Cultural Studies Keywords*, eds. Meenakshi Gigi Durham and Douglas M. Kellner (Malden, MA: Blackwell Publishing Ltd., 2006), 495.

³⁷ Jameson (2006), 494.

³⁸ Philip Hammond, *Media, War & Postmodernity* (New York City, NY: Routledge, 2007), 11.

be a space for significant critical exploration of history, but an ideal example of postmodern, schizophrenic nostalgia as entertainment.

Can we gain anything from a postmodern exploration of history? Postmodernist scholars and critics of Jameson argue the form provides a complex, but substantial engagement with history and grapples with critical limitations. Among scholars, Linda Hutcheon counters that postmodernism does not erase history and the past, but makes us aware of their human construction and fallibility: “[Postmodernism] does question whether we can ever *know* that past other than through its textualized remains.”³⁹ She further argues postmodern self-reflexivity assumes a transparent position rather than one of total authority, offering both its content and form up for critique.⁴⁰ Likewise, Sturken finds postmodernism is not “ahistorical or amnesiac,” as contemporary cultural memory and its fluctuations do not deny history, but require more complex inquiry and understanding of our relationship to the past.⁴¹ Paul Grainge questions what critics really mean by a “postmodern crisis of memory”:

Whose memory crises are we dealing with? By what measure is it possible, and in whose interests does it serve, to call a culture amnesiac? Does the “loss” of memory really mean the loss of a particular kind of memory or way of remembering?⁴²

Rather than dismiss postmodernism as empty sentimentality, Grainge suggests we explore the cultural negotiation of memory and history to understand what meaningfully

³⁹ Linda Hutcheon, “Beginning to Theorize Postmodernism,” *Textual Practice* 1.1 (1987): 25.

⁴⁰ Linda Hutcheon, “The Politics of Postmodernism: Parody and History,” *Cultural Critique* 5 (Winter 1986-1987): 183.

⁴¹ Sturken (1997), 17.

⁴² Paul Grainge, *Monochrome Memories: Nostalgia and Style in Retro America* (Westport, CT: Praeger Publishers, 2002), 7.

results from the exchange.⁴³ Unlike Hammond, Steven Best and Douglas Kellner see postmodernity arising from WWII because of cultural shifts from modernist optimistic views on science, technology, and human nature from the Enlightenment period.⁴⁴ Best and Kellner see the two fields overlapping rather than in opposition to each other. For their investigations, postmodernism provides an important “multi-perspectivist” position, opening spaces to “better to theorize and deal with contingency, paradox, ambiguity, particularity, multiplicity, and relationships.”⁴⁵ Such explorations allow scholars to consider the complexity of history against the constraints of more traditional narrative forms.⁴⁶ Ultimately, postmodernism can raise critical questions about our social, historical, and ideological constructions for future thought.⁴⁷ The problematic nature of representational media like video gaming should not prevent substantial analyses and discussions. But it does push us to pursue more complex research of the seemingly contradictory messages involved in representing the past.

Much like film and television, video games present medium-specific challenges to studying and analyzing its contents. First and foremost, games are not all alike and different games demand different levels of critical attention and interrogation. In particular, *Fallout 3* does not have concrete, one-way paths to complete the game. Managing these outcomes allows significantly layered experiences that are challenging to encapsulate, outline, and analyze as a whole. Game scholars must be especially mindful of a game’s form and content and how these work together while researching. As a

⁴³ Grainge, 6.

⁴⁴ Steven Best and Douglas Kellner, *The Postmodern Adventure: Science, Technology, and Cultural Studies at the Third Millennium* (New York: The Guilford Press, 2001), 6.

⁴⁵ Best and Kellner (2001), 275.

⁴⁶ Ayers, “The Pasts and Futures of Digital History.”

cultural product, *Fallout 3* is not objectively apart from these chapter conversations—nor does the game attempt to be, as my analysis will present. It is both a space for critical thought about genre, memory, and technology and an “always-already” participant in these discourses. Acknowledging this duality allows a more layered understanding of media’s complicated relationship with history.

This study does not attempt to encompass everything the game does in play, but rather illuminate three spaces of meaningful, rewarding interaction. The following chapters will provide three analyses of *Fallout 3*’s commentary on genre, memory, and technology and their relationships with history. In “History in Genre: *Fallout 3*’s Cultural Mediation of the Past,” I analyze the game’s use of science fiction, alternate history, and post-apocalyptic narratives and iconography involving the Cold War and nuclear fallout. The work of Paul S. Boyer on the past representations of the atomic bomb and the genre scholarship of Jerome F. Shapiro, James Berger, and Karen Helleckson support the idea that these genres are as much about our troubled Cold War past as they are about contemporary anxieties. I argue that the game is not just postmodern intertextual pastiche, but a meta-collection of the historical, mediated ways we have culturally negotiated and worked through our fears and curiosities about a nuclear future. Moreover, the game’s interactive form moves beyond clever “shout outs” by forcing players to confront and engage with these prevailing icons and narratives in varied quests. In doing so, *Fallout 3* allows us to explore how these genres reveal historical attitudes along with their stylistic, thematic categorizations.

⁴⁷ Hutcheon (1987): 26.

In “History and Memory: Navigating *Fallout 3* and Historicity,” I argue the game offers distinctive critical explorations of memory through its focus on uncovering the past and engaging with sites and objects of American history. As a post-WWII alternate history and future, the game invites players to occupy a dual position of both knowing and not-knowing history, questioning the security and fallibility of memory itself. Likewise, my analysis of play within the post-apocalyptic Washington Mall and its memorials questions our symbolic use of the past in the present when memory is forgotten. Marita Sturken’s studies on memory and Charles Griswold’s work on cultural negotiations in Washington Mall provide foundation for my consideration that *Fallout 3* presents an engaging self-awareness of our preoccupation with authenticating history through memory.

Finally, the “History of Technology: Fear and Fascination in *Fallout 3*” chapter considers how the game as a whole highlights our tangled cultural attitudes about technology and progressive narratives of history. This analysis relies on histories of technology, particularly Carolyn Marvin and Jeffrey Sconce’s study of electronic technology histories and Joseph J. Corn’s work on the American representations of the future, to reveal that the seeming contradictory fear and fascination with technological possibilities pre-dates the atomic bomb and continues to influence contemporary narratives. The game’s alternate technological history provides the speculative foundation to question our assumptions about which technologies are “good” or “bad,” and which ones create utopian and dystopian futures. Close readings of interactions with the game’s military-industrial complex and issues of accessibility spark deeper considerations of the power and possibilities our society invests in the technological fix.

History in Genre: *Fallout 3's* Cultural Mediation of the Past

The collapse of the Soviet Union in 1991 often marks the end of the Cold War though our culture's preoccupation with the nuclear menace, radioactive fallout, and dangers of Communism has yet to cease. Since 1947, the Doomsday Clock still "runs" to symbolically remind us how far or close we may be to total world destruction or "midnight." The clock, run by the University of Chicago's Bulletin of Atomic Scientists, is currently set at six minutes to midnight.⁴⁸ The possibilities arising from the Cold War era still inspire contemporary media: the now-cancelled TV show *Jericho* (2006-2008) depicted the aftermath of nuclear attacks in a small Kansas town, the timeline in *Lost's* final season (2004-2010) ruptured into a diverging, "sideways reality" resulting from a radioactive bomb explosion, and the remake of the 1984 cult hit *Red Dawn* is set to premiere in 2010 with Chinese communists replacing the original Cuban infiltrators into the midwestern United States. While *Fallout 3* is a product of these popular cultural speculations, it also engages with the science fiction genre and its alternate history and post-apocalyptic subgenres. *Fallout 3* is not only a post-nuclear game, but an exploration of the mediated ways we have dealt with our past and lingering Cold War anxieties and fascinations to this day.

Paul Boyer's research on Cold War culture provides an extensive overview of American mood following the Hiroshima and Nagasaki atomic bombings. As a historian, Boyer grapples with capturing cultural moments that defy simple narrative description

⁴⁸ "Timeline," Bulletin of the Atomic Scientists Online, <http://thebulletin.org/content/doomsday-clock/timeline>. Note: The clock has been changed nineteen times. The years representing the best and worst probability for total nuclear annihilation were (respectively)

and understanding. Such broad strokes inevitably neglect detail and alternative voices, yet more than most scholars, Boyer admits the difficulties of painting a decades-long conflict retrospectively and from a personal perspective with firsthand accounts of the Cold War. He identifies and traces Cold War themes and anxieties when they initially arose and the more contemporary “residuum” of these moods.⁴⁹ On the American mindset, the cultural fallout of nuclear energy is just as potent as physical radioactive fallout because popular culture pervades every facet of life.⁵⁰ Thus, “fallout” from nuclear bombing and its meaning in *Fallout 3* goes beyond the scientific to reference everything that comes afterwards. For Boyer, this is crucial to understanding our cultural history and Cold War’s continued cultural legacy: “Except for a post-holocaust ‘Nuclear Winter,’ every theme and image by which we express our nuclear fear today has its counterpart in the immediate post-Hiroshima period.”⁵¹ While these fears present, treatment of the bomb varies intensity from its initial beginnings in the 1940s. In *By the Bomb’s Early Light*, Boyer focuses on the five emotionally-heightened years directly following the Japanese atomic bombs explosions, but finds the societal nuclear concentration and discourse eventually ebb towards the end of the decade.⁵² However, the cultural representations of the bomb, nuclear energy, and the Cold War continued, albeit shifting to reflect their cultural moment as well as the lingering residuals of the 1940s. For instance, he argues that a Cold War-influenced film of the 1950s would be

1991 at seventeen minutes to midnight due to the fall of the Soviet Union and 1953 at two minutes to midnight after successful hydrogen bomb testing by the U.S. and Soviet Union.

⁴⁹ Paul Boyer, *By the Bomb’s Early Light: American Thought and Culture at the Dawn of the Atomic Age* (Chapel Hill, NC: The University of North Carolina Press, 1994), 366.

⁵⁰ Paul Boyer, *Fallout: A Historian Reflects on America’s Half-Century Encounter with Nuclear Weapons* (Columbus, OH: Ohio State University Press, 1998), xiii.

⁵¹ Boyer (1994), 364.

⁵² *Ibid.*, 334.

different in convention or structure than those eventually produced in the 1980s, though they all share a foundational history.⁵³ Curiously, Boyer finds more value and integrity in earlier representations of the bomb than later offerings like Dr. Seuss's *The Butter Battle Book* which is trivial and reductive, because Seuss turned the Cold War into "another advertising gimmick."⁵⁴ With respect to Boyer, I find such opinions equally reductive because he previously describes that the years following the bomb were filled with atomic-inspired advertising campaigns, household products, and entertainment. Thus, he paradoxically neglects to connect more recent gimmicks with this cultural past, a theme equally as instructive and reflective of our culture as more serious media representations.

For Boyer, the science fiction genre played a key historical role in representing the nuclear curiosities and fears and initially confronting the material. As a genre, Boyer reads science fiction as mirroring "the preoccupations of the larger culture,"⁵⁵ which explains its popular attention to the bomb in the 1940s and 1950s. He finds that science fiction writers were the first to visit the subject matter after the Hiroshima and Nagasaki bombings. In the minority, the authors focus on potential atomic horrors rather than the larger contingent emphasizing atomic energy as "a great blessing to mankind" when under American control.⁵⁶ While these writings tended to lean towards dystopian fallout, they provided "countervisions" to the military and U.S. government's optimistic praise of nuclear power's potential for new world relations. Boyer notes that the atomic bomb's appearance in science fiction was not new ground, however, the realities at Hiroshima

⁵³ Boyer (1998), 224.

⁵⁴ Boyer (1994), 362.

⁵⁵ *Ibid.*, 354.

⁵⁶ *Ibid.*, 264-265

“ended the luxury of detachment” and made the “fiction” aspect all the more bleak and connected intentionally to ongoing cultural concerns.⁵⁷ It is chilling to consider that atomic energy and the atomic bomb were once just science fiction, first written about in H.G. Wells’ *The World Set Free* (1914), nearly twenty years before the reality was initially pursued by scientists. In the novel, Wells conceives of a radioactive bomb with worldwide biological and ecological destructive capabilities to be created in 1933, an eerily correct prediction. Thus, science fiction’s involvement with nuclear energy is not merely an effect of real scientific progress, but a negotiation of fiction and reality.

For Karen Hellekson, science fiction always starts with the question “What if the world were somehow different?”⁵⁸ Grounded in speculative fiction, the genre investigates scientific and technological progress and their effects on humanity, from the most simple to the universal ruminations of life. Science fiction fans, as scholars Kurt Squire and Henry Jenkins find, use the genre for “thought experiments,” a method of examining current and future prospective and the “ethical and moral consequences of potential future developments.”⁵⁹ Simply put, science fiction provides a means of working through questions and worries prevalent in culture through its genre conventions. Alternate history and the post-apocalypse, two sub-genres of science fiction, provide such foundation for *Fallout 3*—as well as the game’s exploration of past. Alternate histories and post-apocalypses are not confined to science fiction, but lend themselves to the genre’s contemplations. Like science fiction, these genres work through contemporary issues as much as those set in the past or future speculation. In

⁵⁷ Ibid., 257-258

⁵⁸ Karen Hellekson, *The Alternate History: Refiguring Historical Time* (Kent, OH: The Kent State University Press, 2001), 3.

addition, both genres have heavily influenced Cold War fiction and, specifically, the *Fallout* franchise. Researching alternate history, Helleckson finds the earliest example in science fiction as “Sideways in Time” (1934), written by Murray Leinster for *Amazing Stories* magazine.⁶⁰ Although often disdained in academic circles, an alternate history offers a unique approach to rethinking the past:

Alternate histories question the nature of history and of causality; they question accepted notions of time and space; they rupture linear movement; and they make readers rethink their world and how it has become what it is. They are a critique of the metaphors we use to discuss history. And they foreground the “constructedness” of history and the role narrative plays in this construction.⁶¹

We can use this form to ponder how society might change if particular events, actions, and people had been different by tracing chains of events and contrasting these new fictional worlds with our own. Although *Fallout 3*’s world is futuristic, its post-WWII alternate history is the catalyst for the differences between contemporary Washington D.C. and the post-apocalyptic Capital Wasteland game world. Moreover, the genre allows players to directly engage with questions about American history and issues of memory as explored in Chapter 2.

Though apocalyptic accounts have very ancient roots in religious literature and storytelling, Steven Best and Douglas Kellner argue that science fiction flourished around and after WWII with the emergence of a new apocalyptic mindset forever aware of the Holocaust and atomic fallout.⁶² For James Berger, the post-apocalyptic fictions are “simultaneously symptoms of historical traumas and attempts to work through them,”

⁵⁹ Kurt Squire and Henry Jenkins, “Harnessing the Power of Games in Education,” *Insight 3* (2003): 9-10.

⁶⁰Helleckson, 18.

⁶¹Ibid., 4-5.

trying to represent what cannot be explained or easily grasped.⁶³ Typically set in the future, the post-apocalyptic genre deals with the aftermath of a catastrophic event and is not strictly limited to nuclear-related disasters. As such, it focuses primarily on survival as both a narrative thrust for characters and background contrast for readers against contemporary society. Like alternate history, media depicting post-apocalypses are consciously aware of and connected to history. Berger's analysis of post-apocalyptic films explores how the genre interrogates "historical transmission, historical trauma, and the representation of all events and objects that in some sense resist representation."⁶⁴ For Jerome Shapiro, this is a strong foundation for much of atomic bomb cinema because nuclear fallout is difficult to explain and understand, and therefore feared.⁶⁵ The genre can encapsulate cultural anxieties through speculative representation while allowing readers and viewers to confront them. For *Fallout 3*, the post-nuclear apocalyptic landscape has players navigating a world familiar to media culture: a United States ravaged by atomic bombs and radiation. While the game represents both genres as an alternate history, post-apocalyptic game, it also engages with their past representations in film, television, comics, and literature.

Susan Sontag and Frederic Jameson raise objections to science fiction as a representation of culture and as potential critical platform. Sontag and Jameson offer two perspectives interrogating the genre's ability to work through trauma or future optimism. Examining cinema examples, Sontag argues that science fiction essentially depicts

⁶² Steven Best and Douglas Kellner, "The Apocalyptic Vision of Philip K. Dick," *Cultural Studies, Critical Methodologies* 3.2 (May 2003): 3

⁶³ James Berger, *After the End: Representations of Post-Apocalypse* (Minneapolis, MN: University of Minnesota Press, 1999), 19.

⁶⁴ *Ibid.*, xx.

⁶⁵ Jerome F. Shapiro, *Atomic Bomb Cinema: The Apocalyptic Imagination on Film* (New York: Routledge, 2002), 5.

disaster to invoke affective responses and subsequently emphasizes extremes rather than realism.⁶⁶ She does not find science fiction films provide a space to work through cultural apprehensions. Instead, these representations mirror and exaggerate fears while posing as the cure as Sontag opines, “They inculcate a strange apathy concerning the processes of radiation, contamination, and destruction that I for one find haunting and depressing.”⁶⁷ Therefore, science fiction films perpetuate those traumas in an endless cycle because our culture accepts them as *the* response to potential nuclear fallout for instance, rather than as a means of confronting and interrogating the sociopolitical factors and effects of the disaster. Sontag dismisses the grandiose disaster representations as “inadequate,” merely reflective of our cultural inability to deal with real terrors.⁶⁸ Similarly, Jameson argues that science fiction’s concern about the future and its moral and ethical possibilities actually prevent us from examining present-day issues. These images do not work to reveal the future, as Jameson reveals, but to “defamiliarize and restructure our experience of our own present, and to do so in specific ways distinct from all other forms of defamiliarization.”⁶⁹ The genre skillfully obstructs the critical eye to our present by projecting issues to the future. Moreover, science fiction no longer prepares us for potential futures, which Jameson believes to be the “canonical defense of the genre,” because contemporary predictions just recycle past images of dystopia.⁷⁰ In effect, science fiction does not offer original possibilities, nor does it stray from the bleak repetitive representations of a world gone awry. Sontag and Jameson are equally

⁶⁶ Susan Sontag, “The Imagination of Disaster,” in *Hibakusha Cinema: Hiroshima, Nagasaki, and the Nuclear Image in Japanese Film*, ed. Mick Broderick (London, UK: Kegan Paul International, 1996), 44

⁶⁷ *Ibid.*, 42.

⁶⁸ *Ibid.*, 48.

⁶⁹ Fredric Jameson, “Progress versus Utopia; Or, Can We Imagine the Future?” *Science Fiction Studies* 9.2 (July 1982): 151.

invested in separating the theoretical possibilities for science fiction from the genre's problematic role in society.

While Sontag and Jameson's concerns are valid, their opinions do not complicate science fiction as a mutable cultural form. Science fiction writer Philip K. Dick argues that the genre is deeply connected with societal issues, but is equally influenced by them. Regarding changing themes in Cold War literature, Dick claims, "This loss in faith in the idea of progress, in a 'brighter tomorrow,' extends over our whole cultural milieu; the dour tone of recent science fiction is an effect, not a cause."⁷¹ The relationship between the genre and culture is not easily untangled. Likewise, Berger contends that "cultural artifacts" like science fiction media function as symptoms of trauma and spaces to explore cultural concerns.⁷² They do not counteract each other, but complicate their reception and more broadly, notions of cause-and-effect between media and culture. A given cultural moment influences the content, tone, and thematic explorations of speculative fiction. And as aforementioned with H.G. Wells' novel, these fictions have even become reality. Shapiro specifically finds Sontag's reduction of "science fiction as disaster" problematic because she equates the word "apocalyptic" with "destruction" when, historically, it means "revelation."⁷³ Shapiro argues we must refocus our examination of science fiction beyond its disaster tropes because what survives in the aftermath or "rebirth" is an important space of ideological critique and compelling

⁷⁰ Ibid., 151.

⁷¹ Steven Best and Douglas Kellner, "The Apocalyptic Vision of Philip K. Dick," *Cultural Studies, Critical Methodologies* 3.2 (May 2003), 2.

⁷² Berger, 28.

⁷³ Shapiro, 25-26.

speculation.⁷⁴ Finally, many science fiction artists and fans would disagree that the genre's main purpose is to equip society for potential futures. Science fiction scholar Tom Moylan finds the genre is often reduced to a fanciful representation of the current day or a prediction of the future, as Jameson observes.⁷⁵ While there are clear examples of such science fiction, the genre is also capable of nuanced investigations of history. For Moylan, science fiction can expose the intricacies of particular moments in time by negotiating "the historical tension between what was, what is, and what is coming to be."⁷⁶ In essence, the genre can help us muddle through causality, temporality, and the processes that shape the future. As Boyer illuminates, there is a historical tradition of dealing with the bomb in this way that allows such investigations to take on historical precedent and meaning. Thus, examining science fiction is not about solving these anxieties as if to assume they can be solved. Rather, we can use science fiction to trace a history of cultural mediation at a given time to understanding the prevailing moods and opinions as reflected through media.

The game medium provides unique formal explorations of genre while negotiating other media forms. Gaming scholars Laurie N. Taylor and Zach Whalen observe that games have been influenced by film, television, and the novel in terms of storyline content and experimentation with game-play linearity.⁷⁷ In doing so, gaming engages an existing history of representation while showcasing distinctive *ludic* storytelling like interactive quests and integrated cut scenes. This recalling of form

⁷⁴ Ibid., 33.

⁷⁵ Tom Moylan, *Scraps of the Untainted Sky: Science Fiction, Utopia, Dystopia* (Boulder, CO: Westview Press, 2000), 25-26.

⁷⁶ Ibid., 25-26.

⁷⁷ Laurie N. Taylor and Zach Whalen, "Playing the Past: An Introduction," in *Playing the Past: History and Nostalgia in Video Games*, eds. Zach Whalen and Laurie N. Taylor (Nashville, TN: Vanderbilt University Press, 2008), 13.

prompts players to remember previous gaming experiences and invites comparisons with other media. When games utilize recognizable genres from film and literature, they are referencing familiar territory for players while showcasing how the game form can interpret such genres differently. Henry Jenkins argues that genres like science fiction and horror are uniquely suited for gaming because “world-making” or “spatial storytelling” is especially crucial to both. He opines, “Games, in turn, may more fully realized the spatiality of these stories, giving a much more immersive and compelling representation of their narrative worlds.”⁷⁸ This is especially important for both the post-apocalyptic and alternate history genres because they rely on a changed world to inform readers and viewers of the shifts from our own reality. For example, Berger writes of post-apocalyptic literature, “The writer and reader must be both places at once, imagining the post-apocalyptic world and then paradoxically “remembering” the world as it was, as it is.”⁷⁹ This duality works well for video games, especially *Fallout 3*, where players navigate through a post-apocalyptic U.S. as a character while sitting in their living room playing the game. Likewise, gaming can approach alternate histories more dynamically than other forms, as Kevin Schut discovers: “the genre of historical fiction is full of “what if?” questions—but only digital games ask their users to enter historical situations and start interfering with them.”⁸⁰ Many games have players asking these “what if?” questions repeatedly through game-play. The very structure of gaming is conducive to alternate histories because players can often explore multiple paths and conclusions through game-

⁷⁸ Henry Jenkins, “Game Design as Narrative Architecture,” in *First Person: New Media as Story, Performance, and Game*, eds. Noah Wardrip-Fruin and Pat Harrigan (Cambridge, MA: The MIT Press, 2004), 122.

⁷⁹ Berger, 6.

⁸⁰ Kevin Schut, “Strategic Simulations and Our Past: The Bias of Computer Games in the Presentation of History,” *Games and Culture* 2.3 (2007), 229.

play, especially with RPGs like *Fallout 3*. Some game scholars like Jesper Juul have argued game adaptations of popular media or novels may not be suitable or enjoyable because players already know the ending because he emphasizes the rules-and-goal aspect of gaming.⁸¹ However, it's a game's ability to play with history and genre that allows this play to be an experimental and potentially thought-provoking investigation instead of one-to-one reenactment of familiar narratives.

By engaging with recognizable alternate history and post-apocalyptic conventions and works, players can read *Fallout 3* as a meta-collection of past mediated ways we have culturally negotiated and confronted fears and curiosities about a nuclear future. The game taps into these genres through its setting, intertextual references, and the surviving remnants of Capital Wasteland culture. Researching previous genre studies, Lincoln Geraghty conducts a similar analysis of the animated science fiction TV show *Futurama* (1999-2003).⁸² The show centers on Fry, a twentieth-century man unfrozen in the year 3000, and his humorous life adjustments to the future as a space-ship delivery boy. Geraghty argues *Futurama* is not only a science fiction animated comedy, but a program about our cultural past through genre:

Futurama plays with form and genre for comic effect, yet its intertextual referencing of previous science fiction and animation highlights a fundamental interest in history. Genres, by their very nature, “are related to the processes of remembering and forgetting...[they] operate to produce a sense of the past” as they cross between different forms of visual media.⁸³

⁸¹ Juul (2005), 161.

⁸² Though cancelled in 2003, new episodes of *Futurama* have been produced and featured in 2010.

⁸³ Lincoln Geraghty, “Animating Science Fiction of the Past and Present in *Futurama*,” in *Channeling the Future: Essays on Science Fiction and Fantasy Television*, ed. Lincoln Geraghty (Lanham, MD: The Scarecrow Press Inc., 2009), 151. Geraghty is referencing an earlier article written with Mark Jancovich entitled, “Introduction: Generic Canons,” in *The Shifting Definitions of Genre: Essays on Labeling Films, Television Shows and Media*, eds. Lincoln Geraghty and Mark Jancovich (Jefferson, NC: McFarland Publishers, 2008), 12. (Citation provided by Geraghty in the endnotes of “Animating Science Fiction of the Past and Present in *Futurama*.”)

For Geraghty, the show's content taps into histories of mediation that I find *Fallout 3* also pursues—though not strictly for comedic purposes. Moreover, such genre exploration reflects a history of cultural interaction and considers the ways we remember the past. *Fallout 3*'s interactive space provides players the opportunity to both play with an alternate history and play a “history” of the science fiction genre as the key lens of nuclear speculation. The following examples are not all-encompassing of the game's references, but provide a sense of the interaction players can have remembering familiar genre icons and tropes in the game.

The setting of Capital Wasteland recalls the post-apocalyptic wastelands of the American cultural mindset: crumbling buildings, broken telephone lines, and material leftovers of the institutions and institutional practices that guided society. Stop signs riddle the landscape and the D.C. subway tunnels can only be navigated by foot. The game world is riddled with obsolete technology as well as futuristic technology and weaponry only previously conceived within science fiction like laser guns, atomic armor, and advanced biometric tracking systems. In the alternate history timeline, robots were invented prior to the Great War to aid in corporate, militaristic, and domestic needs for the public. Of these robots created by General Atomics International, a pre-War technology corporation, the most recognizable is the Protectron, an all-purpose security guard with voice modules and defense systems. It bears a striking resemblance to Robby the Robotron from the classic science fiction film *Forbidden Planet* (1956), who has also been featured in subsequent science fiction media like TV episodes of *The Twilight Zone* (1959-1964) and *Futurama*. Players confront varieties of dangers while exploring the Capital Wasteland, all of which corresponds to familiar science fiction enemies and

hindrances: out-of-control robots; feral, mutated creatures spawned by nuclear fallout; irradiated water supplies, and renegade military factions. Within the game, the raiders are predominant antagonists, violent leather and chains-wearing gangs who have returned to a state of primitivism and chaos without law and order to restrict their activities. Here, the game seems to be explicitly referencing enemies in the *Mad Max* trilogy (1979-1985), the popular post-apocalyptic films set in a similarly devastated civilization post-WWIII. This societal breakdown is characteristic of many dystopian post-apocalypses, yet the game presents the raiders as one of many groups to arise from the nuclear aftermath. The Capital Wasteland has not completely descended into violent anarchy, but players can confront groups that have long abandoned moral and humane standards since the atomic rupture. All of this works to situate players in an environment by invoking recognizable themes while placing these attributes into deviating interactions from their original source.

Player interactions with two particular *Fallout 3* characters provide unique exploratory mediations between reference and shifting integration into the game world. During the final quest, “Take It Back!,” players can accompany the Brotherhood of Steel to reclaim the enemy-occupied Jefferson Memorial and activate Project Purity, the scientific water purifier to clean the waters of Washington D.C. This battle is won due to Liberty Prime, a huge, towering military robot originally built to aid the U.S. in liberating Anchorage, Alaska, from Communist Chinese occupiers prior to the Great War. At the time, the U.S. military had insufficient energy sources to power the robot’s major offensive and defensive weaponry though this is finally rectified more than 200 years after its creation. Liberty Prime is programmed to be a very patriotic, pro-American

lethal force spouting such lines as “Death is a preferable alternative to Communism” and “I die, so that democracy may live”—clearly reflecting historical Cold War propaganda and anti-communism. Liberty Prime provides a stark contrast to its visual counterpart the Iron Giant, the large robotic protagonist from Brad Bird’s *The Iron Giant* (1999). The animated film was inspired by Ted Hughes’ novel *Iron Man* (1968) whose critical anti-warfare and anti-conflict themes were integrated into the film. *The Iron Giant* is set against the height of Cold War in 1957 and focuses on a young boy finding, befriending, and eventually defending a large military robot from the U.S. military and FBI. The film itself is filled with intertextual references to Cold War media like the classroom film *Atomic Holocaust* mimicking the iconic *Duck and Cover* (1951) public service announcement film for the Civil Defense. Through friendship, the Iron Giant learns he can be more than just a weapon in the squabbles between the U.S. and U.S.S.R. By contrast, players are quite aware that Liberty Prime is not a robot to be reformed through the love and innocence of a child because his sole unwavering mission is to defeat enemies of the United States. Within the context of the game, robots are not capable of anthropomorphic feelings or humanity without being programmed that way.

Meanwhile, player interaction with the self-appointed President John Henry Eden explores science and science fiction’s speculations about artificial intelligence. Throughout the game, players can hear President Eden on the Enclave radio station sharing anecdotes about America’s great pre-war past and his presidential goals of cleaning up the “riff-raff” of the Capital Wasteland. In the quest “The American Dream,” players are apprehended to Raven Rock, a hidden military fortress housing the Enclave and its weaponry. Raven Rock is a small reference to the real highly classified Raven

Rock Mountain Complex in Pennsylvania meant to be used as a back-up military center and nuclear fallout shelter. Here, it is revealed that President Eden is not a man, but an AI supercomputer that has become self-aware. The reveal mirrors the twist ending of the *Twilight Zone* episode “The Old Man in the Cave,”⁸⁴ wherein nuclear war survivors learn that the wise man detecting irradiated foods was nothing more than an analytical computer. Similarly, Robert A Heinlein’s novel *The Moon is a Harsh Mistress* (1966) features an AI computer impersonating the U.S. president. Eden is not, however, the typical evil mastermind AI like HAL 9000 in Arthur C. Clarke’s *Space Odyssey* series and Stanley Kubrick’s *2001: A Space Odyssey* (1968). Instead, the supercomputer is a victim of its own propaganda, believing it is a true American patriot helping the Capital Wasteland return to the good old days. As such, players have several options in dealing with Eden including aiding Eden’s quest to eliminate all irradiated life forms from Washington D.C., exposing its programming and causing a malfunction, and urging Eden to question its logic reasoning for the good of the surviving U.S. In doing so, the game counters many totalitarian images of AI by reinstating its limitations as a product of human engineering and control.

Through exploration, players also get a sense of how the divergent American culture dealt with the atomic bomb and nuclear fears through surviving artifacts. While television and films are non-existent since the war, faded billboards advertise the TV program *The Adventures of Captain Cosmos*, co-starring Jangles “The Moon Monkey,” a Buck Rogers-inspired space show. Likewise, peeling posters for Sugar Bombs cereal in the shape of little nukes recalls the atomic influence on advertising and domestic products

⁸⁴ Original airdate November 8, 1963

like the cereal prize atomic bomb rings offered by General Mills cereal in 1946.⁸⁵ The presence of comic books nods the medium's significant reemergence during our Cold War period. Players can find comics throughout the Wasteland and stumble upon the Hubris Publishing headquarters, home of Hubris Comics since 2021. The Hubris Comic's computer terminals reveal marketing strategies and upcoming titles like *Captain Cosmos: Truth, Justice, and the Space-American Way*, an allusion to DC Comics' *Superman* in addition to the war-inspired comic series *Tales from the Front: Alaska Unbowed, Liberated Canada, and The Red Terror*. For our Cold War history, comics, like *Splitting the Atom—Starring Dagwood and Blondie* (1948) sponsored by General Electric and the U.S. government, were also used to educate the public about atomic energy and stir up support.⁸⁶ Reflexively, players can consider how this reality's culture used comic books as a way to confront Cold War issues in comparison to our own. Though these comics are not available to read, players can find the following press release from the Hubris and Vault-Tec Corporation comic book collaboration:

The five-part miniseries will feature an alternate future in which Chinese Communists have invaded America. Vault Boy and Hell's Chain Gang are the last, best hope for America to break free from the shackles of Communism in this cautionary tale of vigilance. "It has always been Vault-Tec's mission to educate and protect our Countrymen from the Communist threat," commented Vault-Tec Public Relations Executive Joanne Strausser, "This exciting project is a perfect opportunity to thrill young Americans while sending home an important message for us all: Every good American must help shoulder the burden of freedom, and always be wary of the Communist threat.

This highlights several significant links between the cultural mediation of our Cold War and the diverging timeline of the *Fallout 3* universe. First, the use of an alternate future

⁸⁵ Boyer (1994), 88.

⁸⁶ *Ibid.*, 309.

self-reflexively points to the game itself because this America was invaded by the Chinese through Alaska. Likewise, the collaboration between Hubris and Vault-Tec to educate the masses channels the aforementioned Dagwood atomic energy comic. Finally, the communist, nuclear presence in these comics speaks to our own explorations in comic books. The Cold War era is considered the Silver Age of comics because there was a reemergence of a definite hero and villain, which had faltered during the horrors of the Holocaust, Hiroshima, and Nagasaki. Moreover, speculation of nuclear radiation inspired the origin stories of the Fantastic Four (space radiation), Spiderman (radioactive spider bite), and the Hulk (gamma radiation). Alternate Cold War trajectories have likewise inspired more critical comic book explorations like *Super Man: Red Son* (2003), which reimagines the fallout of Superman landing in the U.S.S.R. versus Smallville, Kansas, and Alan Moore's critically acclaimed *Watchman* (1986) and *V for Vendetta* (1982-1989), both concerned with alternate dystopian histories against the backdrop of nuclear war. With these artifacts, players can "read" the game's world culture and draw conclusions about that America's pre-war cultural moment. Their concerns and fascinations with atomic energy, technological advancement, and war trickled into various media and daily products just as did our post-WWII cultural fallout from Hiroshima and Nagasaki.

Critics of postmodernism, however, would argue these references exemplify our inability to engage legitimately with the past. For Jameson, postmodernism turns history into an aesthetic style through "random cannibalization of all the styles of the past."⁸⁷

⁸⁷ Frederic Jameson, "Postmodernism, or the Cultural Logic of Late Capitalism," in *Media and Cultural Studies Keywords*, eds. Meenakshi Gigi Durham and Douglas M. Kellner (Malden, MA: Blackwell Publishing Ltd., 2006), 494.

These forms are taken out of their historical contexts, yet used to represent a link to the past—or perhaps more apt, a feeling of pastness. Inevitably, such forms do not spark critical engagement but self-gratifying “pats on the back” for viewers who understand the reference or irony. For example, the Cold War nostalgia film *Blast from the Past* (1999) uses our atomic past for comedic effect, allowing contemporary audiences to remain distant from the material to contrast how odd the past was in retrospect. The opening credits overlay the song “Accentuate the Positive” against real archival footage of people in lead suits, Civil Defense check-lists for shelters, blue prints for vaults, and bomb tests, marking the past with kitsch and humor so we can feel good about how far we’ve come. Likewise, a one-liner about never getting tired of *The Honeymooners* (1955-1956) is meant to elicit a knowing chuckle because of TV syndication. Moreover, the film’s intertextual references to actual Cold War history and media are decidedly postmodern characteristics for Jameson. Here, intertextuality acts as “the operator of a new connotation of “pastness” and pseudo-historical depth, in which the history of aesthetic styles displaces “real” history,” a key tool in postmodernism displacement of our connection to the past.⁸⁸ Jameson would assert the use of intertextuality can only give a false, superficial sense of history and prevents meaningfulness to take place. Undoubtedly, *Fallout 3* invocation of other science fiction forms would be seen as empty references to paint a mood of “Cold War-ness” rather than potentially being a site of our past cultural mediation. However, postmodern critics would object to Jameson’s application of “real history” because postmodernism theory interrogates whether such an authentic history has ever truly existed outside of textuality.

⁸⁸ Jameson (2006), 495.

The game's use of intertextuality accomplishes several different goals, each of which require negotiation between the game and the player. As Jameson argues, the references can better familiarize players with the game surroundings and the genres in play. However, this is dependent upon player participation in understanding genre, as Juul finds in games that, "we fill in the missing pieces by using a combination of knowledge of the real world and knowledge of genre conventions."⁸⁹ The meaningfulness of these references are not in the references themselves, but in their ability to initiate player memories and prompt considerations of the greater cultural relationship between science fiction and our Cold War past. *Fallout 3* also integrates its concerns and content into the existing genre categories of alternate history and post-apocalypse. The game isn't randomly digging into the past for ideas and icons, but very specifically trying to invoke and interrogate this Cold War past. Researching *Futurama*, Geraghty argues the show is a space to "revisit the science fictions of the past" for the purpose of exploring "the cultural processes through which generic definitions and iconic representations are made."⁹⁰ Likewise, *Fallout 3* allows players to survey a history of generic representations throughout interactive quests. This exploration considers how genre is connected with history. It is a formal way to respond culturally to our world, as well as a gateway to understanding the mutability of moods, societal concerns, and shifting popularity as a reflection of the times.

It would be possibly simpler to reduce the game to empty nostalgia and emblematic of postmodern style, but we might complicate this judgment because of

⁸⁹ Juul (2005), 123.

⁹⁰ Geraghty, 150-151.

gaming interactivity. Players must enter this world and guide the thrust of the game movement. Within a game, the intertextual references are not just clever “shout outs” meant to elicit recognition. *Fallout 3* requires players to interact with these remembrances, confront past representations and subsequently, the anxieties they were meant to reflect. Players are not distanced from the intertextual references to past narratives, characters, icons, and settings but heavily involved with them and figuratively working through them in quests. While there are no guarantees that this “working through” will translate to the real world, the game provides players with a different approach to these themes. Thus, the players can use the game as more than just a history of mediating the past though the content reflects this possibility. In the game, we can play through familiar narratives in different ways and change the outcome and its impact through interaction. The question “what if?” is changed to “what if I was there?” in a game environment. As such, the game is not asking “Do you remember this?”; instead, it is prompting players to self-reflexively consider “What am I going to do now?” This interactive capability sets video games apart from other media because players can interrogate the finality of past science fiction media and conventions by playing through various quests on their own terms and choices.

The quests “Those!” and “The Replicated Man” offer players the opportunity to play familiar narratives in significantly new ways and explore different possible endings as a role-playing game. Players enter these quests through detective-like investigations which function on a game-play level and as a recall to the original stories. For instance, in the quest “Those!”, players are asked by the young Bryan Wilks to find his missing father and the rest of the missing settlement. “Those!” is a clear reference to *Them!*

(1954), the classic science fiction film that similarly commences with an investigation, police tracking recent mysterious disappearances. Watching *Them!*, viewers are prompted to be curious and questioning especially after watching the memorable scene of a young, traumatized girl screaming “Them!” repeatedly when asked what happened. For players however, the question “What happened to the settlement of Grayditch?” is one they must answer while pursuing the quest to the end. In both *Them!* and “Those!” large radioactive ants are to blame for the disappearances and myriad deaths, reflecting the concerns with nuclear fallout’s effect on animal life and irresponsible government actions. *Them!* ends rather bleakly by declaring the future unknowable and unpredictable of horrors like radioactive ants can be possible. In contrast, player choices in “Those!” range from ignoring Wilks request, preserving the ants for science, and obliterating the ant colonies of Capital Wasteland for safety. Then players explore how these choices have rippling effects on their future character connections and alternate quests. “Those!” is not a game adaptation of *Them!* but an acknowledgement of its thematic tensions, radioactive fallout, within a new world space and interactive engagement.

In the same way, the quest “The Replicated Man” has players attempting to track down a runaway “humanoid robotic prototype” that has changed his face and been implanted with new memories to have a free life. The quest draws inspiration from the Ridley Scott film *Bladerunner* (1982) set in a post-apocalyptic world where humanoid replicants are engineered for labor and hunted down if they run away. Additionally, the film is adapted from Philip K. Dick’s science fiction novel *Do Androids Dream of Electric Sheep?* (1968). Both feature protagonist Rick Deckard, a retired cop tasked with capturing escaped androids and “retiring” them permanently. While not specifically

about nuclear bombs, these stories all share a post-nuclear war history and mirror the cultural anxieties about technology and notions of self-identity. Both the film and novel leave the final judgment on humans and androids ambiguous and up to readers. Within the game, players assume the role of Rick Deckard in a way as they trace android A3-21 through the Wasteland. Through finding A3-21's notes and recordings, players learn the android was also a Rick Deckard, programmed to hunt down fellow replicated humanoids and eliminate them. These recordings are meant for Dr. Zimmer, the owner and creator of A3-21 and other androids. The recordings echo themes of humanism as A3-21 argues "self-determination is not a malfunction" and enslavement of androids is morally wrong. Ultimately, players learn A3-21 is Harkness, a security guard at the familiar Rivet City. From here, players can significantly alter Harkness' future several ways—including letting him escape, revealing his humanoid nature through a memory code, or selling Harkness out to Dr. Zimmer, all of which spark different consequences. The choice allows players to contemplate the gratification of helping Harkness against the financial gain of helping Zimmer. These multiple possibilities play with linear narrative closures and genre expectations.

As a role-playing game, *Fallout 3* is a platform for players to twist typical post-apocalyptic genre conventions, particularly the black-and-white moral dichotomy. About the post-apocalyptic genre, Berger argues this world view clearly distinguishes "good from evil, true from false," creating a sharp contrast to the moral ambiguity that plagues contemporary time.⁹¹ An apocalypse ruptures societal connections and creates opposing sides so that we can truly see the right way. His study works through this trope in post-

apocalyptic films like *Mad Max*. For Boyer, the Cold War “us-vs.-them” narrative perpetuates this moral dichotomy, which continues to play out in post-nuclear war media. Boyer specifically mentions video games replicating the Cold War “absolutist moral framework” as a nostalgic recapturing of a time when we “knew” good from bad regardless whether these “good” or “bad” categories were cultural constructions.⁹² Among Boyer’s list of the first-person military shooters, he also implicates the first *Fallout* game as problematically offering a “post-nuclear adventure.” However, Boyer is taking such labeling at face value arguably without playing the game or considering the *ludic* differences between a shooter and RPG, the latter of which characterizes the *Fallout* franchise. The *Fallout* games, *Fallout 3* most specifically, use the RPG form to create a morally grey world dependent upon player decisions, objective routes, and individual goals. Counter to Berger’s argument, this post-apocalyptic world is not a simple black-and-white split because players determine their virtual morality on a fluctuating spectrum of good, bad, and neutral choices and consequences. The *Fallout 3* showcases the reverberating effects of player choices against an environment filled with morally indefinite quests and characters. The game plays with the genre and blurs the lines between good and bad. Depending on players’ paths, the game can come to several different conclusions, but these ending are not unalterable because the game’s replayability and ongoing game world avoid satisfactory closure.

⁹¹ Berger, 8.

⁹² Boyer, 208-209.

Fallout 3 lets us play through a collection of mediated forms, icons, and narratives dealing with the Cold War and anxieties, but it is also a product of the same concerns. Games are not just entertainment, but another form we use to deal with questions, curiosities, and worries in daily life. As Jesper Juul notes, “It would be a misunderstanding to see a game as an expression of the players wanting to perform the in-game actions in reality. Games—like stories—are things we use to relate to death and disaster.”⁹³ As such, we must consider the significance of *Fallout 3*’s content in relationship to contemporary anxieties regarding terrorism, government control and surveillance, and the lingering threat of world conflict. I hesitate to invoke “post-9/11 context,” because this categorization overshadows the deeper connections the game has to generic conventions and histories even predating the Cold War. However, reducing the game’s relevance to only historical atomic fears ignores the modern negotiations of these genres and their relationship to current anxieties. Studying futuristic narratives, Joseph Corn asserts, “Visions of the future always reflect the experience of the moment as well as memories of the past. They are imaginative constructs that have more to say about the times in which they were made than about the real future, which is, ultimately, unknowable.”⁹⁴ Therefore, we may question how many of these game’s mediations, nuclear-related or otherwise, have not completely disappeared from our world political reality. Yet, as Best and Kellner observe, we are still living in a world where nuclear bombs exist, tensions between world powers prevail, and technology-based military

⁹³ Juul (2005), 193.

⁹⁴ Joseph Corn, *Imagining Tomorrow: History, Technology, and the American Future* (The MIT Press: Cambridge, MA, 1986), 219.

defense is well-funded and supported.⁹⁵ We should not disregard historical context because these events are not parallel to the established Cold War period. We are forced, however, to remember that there are historical, perhaps lingering precedents to our contemporary concerns through the game's exploration of our mediated past.

⁹⁵ Steven Best and Douglas Kellner, *The Postmodern Adventure: Science, Technology, and Cultural Studies at the Third Millennium* (New York: The Guilford Press, 2001), 3.

History and Memory: Navigating *Fallout 3* and Historicity

Observing a cultural embracing of history over memory, Pierre Nora remarks, “The task of remembering makes everyone his own historian.”⁹⁶ For Nora, this is not a celebratory gesture, but symptomatic of our cultural loss of memory and identity. For *Fallout 3*, the game’s storylines and form tasks players with remembering and tracing memory. The unwitting role of investigative historian falls on player’s shoulders as no official history has survived the 200 years fallout from the Great War. Assuming the role of Vault 101 dweller, players share their character’s obliviousness about this damaged world and past events. This inquisitive thrust is emphasized when merging an emergent game structure, the sandbox world, with embedded game narratives, quests concerned with understanding and piecing together past events.⁹⁷ Importantly, the game places players in a dual role of knowing and not knowing the game world by invoking the shared American history, showcasing tourist sites of memory, and inviting comparisons between our reality and the alternate history of the Capitol Wasteland. By tasking players with historical investigation, the game raises inquiries about the construction of history, the meaning of memory, and the inherent permanence we invest in the historical sites and objects.

Scholars Pierre Nora and Marita Sturken’s work on memory studies offer different perceptions about cultural memory. Nora’s article “Between Memory and History: *Les Lieux de Mémoire*” laments the societal loss of memory and its replacement

⁹⁶ Pierre Nora, “Between Memory and History: *Les Lieux de Mémoire*,” *Representations* 26 (Spring 1989): 15.

⁹⁷ Henry Jenkins, “Game Design as Narrative Architecture,” in *First Person: New Media as Story, Performance, and Game*, eds. Noah Wardrip-Fruin and Pat Harrigan (Cambridge, MA: The MIT Press, 2004), 128.

with constructed history.⁹⁸ For Nora, there was a point in time where we could meaningfully access the past, but it is no longer possible in our fragmented society, the potential implication being a postmodern society. He creates the term *lieux de mémoire* or sites of memory to describe physical locations, objects, symbols, and even events that stand-in for real memory so we can remember and feel linked to the past, with the *lieux* purposefully imbued with auras of importance.⁹⁹ This disconnection ultimately creates a loss of identity and continuity with the preceding generations. Nora's privileging of memory as the real runs counter to Sturken's position that it is "a narrative rather than a replica of an experience that can be retrieved and relived."¹⁰⁰ For Sturken, this means memory is not unifying abstract, but a constant private and public negotiation within our collective memories and conceptions of history. Analyzing cultural memory and the Vietnam War Memorial and AIDS quilt, she finds the boundaries between memory and history are entangled because they foster meaning by invoking and overlapping each other.¹⁰¹ Most notably, she calls scholars to reconsider memory as not "standing for the truth," but an ongoing process of meaning-making that involves "remembrance, fantasy, and invention."¹⁰² Memory then becomes a dynamic cultural engagement of history with fellow citizens rather than a comparative marker for truth or authenticity, problematic labels that fail to grasp the complexity of memory-making and exchange. *Fallout 3* has players navigate these theoretical tensions while trying to recover a sense of the past while confronting recognizable sites of history.

⁹⁸ Nora, 8.

⁹⁹ Nora, 7, 19.

¹⁰⁰ Marita Sturken, *Tangled Memories: The Vietnam War, the AIDS Epidemic, and the Politics of Remembering* (Berkeley, CA: University of California Press, 1997), 7.

¹⁰¹ Sturken (1997), 5-6.

Before approaching the game, it is important to explore the use of historicity in the title. Like history and memory, historicity is a particularly ambiguous term used quite interchangeably with authenticity. However, the word also connotes being a part of history, having historic attributes, and describing how we categorize events, persons, and places as history—all of which complicate the definition. Frederic Jameson invokes the word to represent our meaningful connection to and understanding of the past, which postmodernism has thrust it into crisis. Like Nora, Jameson states we had legitimate access to real History, what he terms “genuine historicity,” but now we are limited to superficial use of the past through postmodernism’s nostalgia, pastiche, and empty reference.¹⁰³ Of course, proponents of postmodernism argue the movement does not erase the connections to the past, but considers those historical associations tenuous, inauthentic, and unreliable.¹⁰⁴ This is illustrated in the alternate history novel *The Man in the High Castle* (1962) by popular science-fiction writer Philip K. Dick and its use of “historicity.” Dick’s work has been considered exemplary postmodernism because he utilizes form and content like multiple points of view in an alternate history to interrogate cultural foundations like why and how history becomes consequential.¹⁰⁵ Winner of a Hugo Award,¹⁰⁶ the novel is set in a post-WWII 1962 after Imperial Japan and Nazi Germany successfully defeated the Allies, resulting in redistribution of the U.S. Pre-War American artifacts are hot commodities among Japanese collectors and counterfeit

¹⁰² Sturken (1997), 259.

¹⁰³ Frederic Jameson, “Postmodernism, or the Cultural Logic of Late Capitalism,” in *Media and Cultural Studies Keywords*, eds. Meenakshi Gigi Durham and Douglas M. Kellner (Malden, MA: Blackwell Publishing Ltd., 2006), 495-499.

¹⁰⁴ Linda Hutcheon, “Beginning to Theorize Postmodernism,” *Textual Practice* 1.1 (1987): 25.

¹⁰⁵ Steven Best and Douglas Kellner, “The Apocalyptic Vision of Philip K. Dick,” *Cultural Studies, Critical Methodologies* 3.2 (May 2003): 186-202.

¹⁰⁶ Annual awards given to outstanding science fiction, non-fiction, and fantasy literature and graphic novels.

reproductions are booming business. In the following excerpt, antique company owner Wyndam-Matson conducts a history lesson with Rita, his mistress, after being accused of reproducing “genuine” historical American pieces:

“Don’t you feel it?” he kidded her. “The historicity?...Listen. One of those two Zippo lighters was in Franklin D. Roosevelt’s pocket when he was assassinated. And one wasn’t. One has historicity, a hell of a lot of it. As much as any object ever had. And one has nothing. Can you feel it?” He nudged her. “You can’t. You can’t tell which is which. There’s no ‘mystical plasmic presence,’ no ‘aura’ around it...I know which it is. You see my point. It’s all a big racket; they’re playing it on themselves. I mean, a gun goes through a famous battle, like Meuse-Argonne, and it’s the same as if it hadn’t, *unless you know*. It’s in here.” He tapped his head. “In the mind, not the gun.”¹⁰⁷

Here, Dick questions our relationship to history and memory, suggesting historicity is not innate, but something we individually and collectively create, though we might be unwilling to acknowledge it. When an ignorant Rita presses for real proof, Wyndam-Matson unproductively tries to show her “fake” and “authentic” labels mean nothing without our active investment in an expensive Smithsonian Institute certificate, for instance, to legitimize the “real.”¹⁰⁸ Throughout the novel, Dick repeats this questioning of fake and authentic and prompts readers to consider their own assurances in reality and what signifies true and false history. In the same vein, *Fallout 3* allows players to explore the uncertainty that history and memory are ever objectively accessible and separate from the perspectives shaping and remembering it.

The push to uncover the past and integrate player memories with the world of the Capital Wasteland occurs both on a game-play and story level. With any game, players must become acclimated with world rules to identify play limitations and objectives.

¹⁰⁷ Philip K. Dick, *Man in the High Castle* (New York: First Vintage Books, 1992), 63-64.

¹⁰⁸ Dick, 64.

Players who completed *Fallout* and *Fallout 2* might have a broad understanding of the timeline, but lack the specific background history *Fallout 3*. As a role-playing game, this pursuit is complicated by the multiple paths to complete individual quests as well as finish the game, all providing different levels of access while preventing complete encapsulation of a grand narrative. Players must piece together the past and reconcile memories beginning with the main quest: tracking down their scientist father who escaped Vault 101 to complete Project Purity, his breakthrough work to purify the radiated waters of Washington D.C. Players find their father by progressively acquiring evidence in conversations, old notes, and voice recordings, yet also uncover their fabricated family history of being born in Vault 101. Likewise, this exposes the vault's popular narrative that no one ever gets in or out since it was sealed in 2077. Gaining access to the Vault Overseer's personal computer further reveals countless scouting missions outside the vault have been hidden from its residents so they'd never leave. We discover history can be twisted and edited to suit the purposes of those in power.

On a wider scale, the game is deeply concerned with what has happened and how we can understand the aftermath of total destructive nuclear war. The atomic bomb has figuratively represented a rupture in time whose lingering impact affects the act of remembering and reconciling the past with the present. Though quite literally, the atomic bomb stopped time, halting the clocks in Hiroshima and Nagasaki at the moment of impact.¹⁰⁹ Post-apocalyptic genre scholar James Berger sees the Holocaust and the atomic bombing of Hiroshima and Nagasaki as temporal schisms: "They function as definitive historical divides, as ruptures, pivots, fulcrums separating what came before

from what came after...Previous historical narratives are shattered; new understandings of the world are generated.”¹¹⁰ We struggle to make sense of these events in part because no description or narrative seems adequate or encompassing enough. In *By the Bomb’s Early Light*, Paul Boyer struggles to fully grasp the mood following the atomic bombings because the nation experienced contradicting, opposing reactions—all accurate recollections the period.¹¹¹ Historians must juggle these seeming tensions when attempting to follow or interrogate a historical event or period. Similarly, *Fallout 3* players must shape history through scraps of clashing information discovered through sandbox game-play.

Notably, the game’s alternate history and future provide a generic convention of reader/player as investigator because their memories bear little resemblance to the Capital Wasteland. As illustrated in chapter one, the alternate history genre prompts us to compare and contrast our world and historical trajectory with the altered one. Considering *The Man in the High Castle*, Karen Helleckson observes, “Alternate histories play with history, saying that things we know to be true are not true. Because everyone relies on the past to make sense of the present, when the past is changed, the present may be treacherous to negotiate.”¹¹² Indeed, this “treacherousness” manifests in two ways: the dangerous hindrances in accessing particular historical information and trying to make sense of a fragmented past through our own perspective of historical significance. As such, we construct the context and meaning of conventional primary

¹⁰⁹ Similarly, most of the clocks in the Capital Wasteland are frozen at 9:47, marking the moment of nuclear impact.

¹¹⁰ James Berger, *After the End: Representations of Post-Apocalypse* (Minneapolis, MN: University of Minnesota Press, 1999), 5

¹¹¹ Paul S. Boyer, *By the Bomb’s Early Light: American Thought and Culture at the Dawn of the Atomic Age* (Chapel Hill, NC: The University of North Carolina Press, 1994), 24.

¹¹² Helleckson, 67.

sources found throughout the game. Checking mailboxes, players can find numerous rejection letters to citizens from the Vault-Tec Corporation and U.S. Government about limited vault space, perhaps revealing the military unpreparedness of potential nuclear fallout. The pre-war economic environment is briefly alluded to in the personal business emails and marketing strategies found on the working computer terminals at still-standing RobCo and Nuka-Cola corporate factories, but fail to sketch a the greater national perspective. Likewise, snippets of military history are somewhat preserved at the Citadel, built upon the ruins of the Pentagon, but many documents have restricted access. The Citadel functions as the headquarters for Brotherhood of Steel, the descendants of the U.S. military. And frustratingly, this post-nuclear society has very limited media to provide information. Films aren't being made, televisions are present, but basically obsolete since no one has maintained TV or electrical power stations, and the internet does not exist. The two working radio stations, the Enclave and Galaxy News Radio, only provide nationalistic propaganda and public service announcements about contemporary events respectively.

The most enriching historical resources to be found are six surviving archived newspaper articles, but they are not readily available or easily reached. Players can find the access terminals in the former *Capitol Post Newspaper* building which is not located on the main map. While informative, these articles only cover three separate dates: July 27, 2052, June 3, 2072, and January 11, 2077, limiting the scope of our research. However, the articles together provide the international events and American cultural mood leading up to the Great War and provide contrast between our reality and Wasteland's alternate one. Here, the United Nations disbanded due to conflict between

the European Commonwealth and the Middle East during the Resource Wars, though the article does not further elaborate.¹¹³ On June 3, two articles, “U.S. to Annex Canada” by Dorothy Proud and “Development of Super Weapon” by Walter “Street Beat” Munroe, reveal Communist China had occupied Anchorage, Alaska since 2066 and the U.S. government invested great funds in liberating the state by any means necessary. Furthermore, Proud’s article describes the United States using Canada’s natural resources in their war with China, partly explaining the aforementioned Resources Wars. Finally, the two January 11th articles reveal an emotionally mixed American mood months before the Great War. In “Communists Crushed, Alaska Liberated!” the United States obliterated Chinese occupation on late January 10th, undoubtedly a cause for celebration. Yet the same paper features “Federalists Enraged about Food Riots,” describing nationwide starvation with a less than supportive and diplomatic government response:

In a recent public statement, White House spokesman Warren Eccleston said: "Okay, Americans are hungry. We get it. Well I've got news for you - things are tough all over, people. The President himself has been forced to substitute cube steak for his nightly prime rib, and the only wine available is a detestable Chateau Montrose 2043. But does he whine? Does he take to the streets like a rabid Red? So please, good people, please. Wait in line. Get your food. And then go home. We're Americans! We do not solve our problems with violence."

Since the date precedes the Great War, players may presuppose such food issues were the result of diverted government spending to defense technology. Personally when reading the article in game-play, my inclination was to make sense of the “food lines” with my learned memories about the Great Depression, though the game does not provide adequate information to compare. Since we treat newspapers as primary sources, crucial factual representations of history, we prone to have grander claims despite the limited

¹¹³ Dated July 27, 2052, the article “United Nations Disbanded!” was written by Staff writer Dorothy Proud.

scope. The game relies on players to believe in the legitimacy of the *Capitol Post* articles based on our own cultural attachment to the print media. Regardless, though these materials shed some light on pre-war events, they give little information about the 200 years following the Great War to the game's present day.

A player's interaction with other characters fills in gaps while thrusting more conflicting perspectives into the mix. Conversational interaction is an important *ludic* component of role-playing games because they prompt different quests as well as provide information about the game world. However, very few characters have any historical knowledge beyond the day-to-day dangers in the Capital Wasteland. Most are many generations removed from the Great War and did not inherit or pass down their descendant's memories. Those individuals invested in maintain history use it suit their own purposes. The radio broadcasts of President John Henry Eden, the self-appointed president of the U.S., invoke America's rich Pre-War history for propaganda, aligning America's past with the renegade Enclave military. In doing so, the group's violent, prejudice actions are painted as carrying on America's traditions of conflict for the greater good. Interestingly, only players would understand Eden's allusions to baseball and presidential elections because these no longer exist in 2277. Upon finally meeting President Eden, he explains most people never question a "reassuring voice of authority," an astute political observation from an AI supercomputer. Reversely, players who access the Republic of Dave will find the self-appointed president Dave uses the loss of memory to writing himself into the most exciting and prestigious roles and events in history. This is made all more "authentic" with the Museum of Dave and daily history lessons written

from his personal accounts taught to the community children. Players can inform the Republic's residents of the discrepancies in Dave's history and the ongoing events outside, but such opinions fall on deaf ears.

The only firsthand oral accounts of the Great War come from ghouls, mutated humans exposed to high levels of radiation. The ghoul existence is a lasting, living connection to the past because many lived before the Great War, receiving longer life spans due to radiation exposure. Throughout the game, these individuals are shunned from society and ridiculed by healthy humans because they are tainted, their bodies living memories of nuclear fallout. In this sense, other characters reject the embodied reminders of the past as a ghoul's body acts as "a vehicle for remembrance"—physical and psychological nuclear trauma manifested in undetectable and visible scars.¹¹⁴ Fittingly, the largest ghoul collective is located in the D.C. Museum of History. Here, players can ask Carol, a Pre-War ghoul born in 2051, to share her story as a survivor of the Great War witnessing the violent societal breakdown and the eventual physical breakdown of her body. Her oral history reveals U.S. West Coast was hit before D.C., but the warning didn't help many low-income citizens denied access to vaults, raising suspicion about the aforementioned Vault-Tec/U.S. Government rejection letters. Also, she explains the drawn-out mutation process from human to ghoul and the unhappy reality of the hundreds who died or become dangerously feral due to exposure. Carol's story offers a different sort of historic authority because she offers a primary account though hesitant and emotionally reluctant to do so. Steve Anderson sees oral histories as providing information outside standing histories and allowing "marginalized voices" to

be heard.¹¹⁵ Moreover, Nora would perhaps argue this secluded society maintains “real memory—social and unviolated”¹¹⁶ because the ghouls have maintained a collective lineage of memories amongst themselves. Carol herself admits sharing her memories with other ghouls for 200 years. This is a sharp contrast to communities scattered throughout the Capital Wasteland who have little tangible memories of the past or generational exchange of such experiences. Arguably, *Fallout 3* seems to connect her personal account with meaningful history because the game pushes us to question the intention behind sharing histories.

The post-apocalyptic ruins of the National Mall in D.C are a crucial exploratory space because the Mall is the most familiar, visible link between our reality and the game’s alternate history. For *Fallout 3*, players can most affectively grasp the difference between both realities and the present condition of Capital Wasteland by navigating through the physical changes of the Mall and examining the structural integrity of its monuments and memorials which act as anchors of memory. Importantly, the absence of the Vietnam Veterans Memorial and other post WWII dedications reminds players the war never took place in the *Fallout 3* game world. Notably, the game creators dedicated months to virtually mapping the space into code as closely aligned with the Mall’s actual spatial relationships to spark a “visceral response” from players of its destruction.¹¹⁷ Significantly, other popular alternate futures like *Minority Report* (2002) and the

¹¹⁴ Sturken (1997), 220.

¹¹⁵ Steve Anderson, “History TV and Popular Memory,” in *Television Histories*, eds. Edgerton and Collins (University of Kentucky, 2001), 21.

¹¹⁶ Nora, 8.

reimagined *Planet of the Apes* (2001) have cinematically featured a visibly different National Mall to emphasize historical change from our reality, counting on our cultural memory to provide contrast. The site has also been completely obliterated in sci-fi and disaster films, signally a total erasure of history and American identity. In *Fallout 3* however, players are meant to negotiate their cultural memories of the National Mall with the meanings and memories now generated in the Capital Wasteland's Mall. Symbolically, if the structures still stand, then our nation's history will live on for future generations, but the game complicates this a bit. A Bethesda advertising short¹¹⁸ for *Fallout 3* entitled "That's Right Abe!" has Lincoln, the Washington Monument, and the Jefferson Memorial encouraging a young boy to check out the Mall.¹¹⁹ Significantly, the Washington Monument states, "Oh yes, we've seen so much over the years and there's more to come, but one thing's for sure, we'll always be here, no matter what happens." However, *Fallout 3* prompts player to consider what happens when no one remembers the memorialized history but the player themselves? Thus, on one hand, this dichotomy provides an interesting consideration of the meanings and history attached to particular sites and national icons like the Washington Monument. But on the other hand, our interaction within the space creates another set of meaning, exploring how historical connotations only exist if we collectively and culturally perpetuate them.

¹¹⁷ Martin McEachern, "Back to the Retro Future: Bethesda Turns the 1950s World of Tomorrow into a Radioactive Wasteland in *Fallout 3*." *Computer Graphics World* 32.3 (March 2009): 7.

¹¹⁸ I downloaded the video via Xbox Live, but it is also accessible on the *Fallout 3* advertising website www.prepareforthefuture.com or YouTube.

¹¹⁹ Humorously, while Lincoln's head is featured and speaks, the Jefferson Memorial and Washington Monument's roofs move up and down to signify talking, an important, subtle commentary on the lasting image of Lincoln the man versus the more iconic and abstract attachments to Washington and Jefferson, respectively.

The National Mall has always been a central site of negotiation of America's history. Foremost, the American government uses the Mall to "write" the history meant to be physically and symbolically permanent through its monuments, memorials, and intangibly, those histories and persons excluded. Charles and Stephen S. Griswold analysis of the National Mall space finds it is "the place where the nation conserves its past in this particular way, simultaneously recollecting it (albeit rather selectively), honoring it, and practicing it (in the White House and Capitol)."¹²⁰ Here is where our nation and other countries can clearly see what and who is meant to be forever remembered with America. Therefore, the cultural negotiation of the site is about American identity, ideology, and those contentious, opposing narratives that threaten the patriotic aura of the Mall. Sturken's study of the Vietnam Memorial intimately grapples with these tensions, noting: "The Washington Mall is the site of a particularly circumscribed narrative of nationalism in its white monuments, yet it is also the primary location of national protest."¹²¹ As such, we are forced to constantly juggle the ongoing narratives and connections to the Mall to understand the figurative struggles over visibility on this national stage. For Sturken, this cultural memory struggle gives meaning to a contested space, object, or event because of our collective investment in their importance which the Mall is undoubtedly representative.¹²² In *Fallout 3*, these contentions are embodied into the landscape as the Mall now stands as a literal battleground with trenches, battle posts, and non-stop skirmishes between the

¹²⁰ Charles Griswold and Stephen S. Griswold. "The Vietnam Veterans Memorial and the Washington Mall: Philosophical Thoughts on Political Iconography." *Critical Inquiry* 12.4 (Summer 1986): 691.

¹²¹ Sturken (1997), 13.

¹²² *Ibid.*, 257.

Brotherhood of Steel, Enclave military forces, super mutants, and the Talon Company, a for-profit mercenary group. These opposing militias fight daily for total control over the space with the Capitol building as the most chaotic, violent site of power disagreements—the parallel to our government’s legislature not lost in symbolic translation. Fittingly, players cannot avoid being thrust into these conflicts in this historically saturated space, reflecting their participation in the understanding the Capital Wasteland’s history.

“What is the memory produced by a national memorial?”¹²³—this question underscores our personal and public negotiations of the National Mall as well as its presence in the game. The relationship between memory and memorials is wrapped up in the act of forgetting as Paul Connerton observes, “the threat of forgetting begets memorials and the construction of memorials begets forgetting.”¹²⁴ While seeming contradictory, this theme of forgetting is crucial to players’ interactions within the Mall, because the majority of Capital Wasteland inhabitants do not know the significance of these structures. Thus, players must reconcile their personal cultural memories and meanings of the Lincoln Memorial, Washington Monument, and Jefferson Memorial against their shifted significance in the Capital Wasteland. We must negotiate several thoughts: what the memorials intended to signify, our own inscriptions through personal or media memories of D.C., and how the game and game characters repurpose and imbue the sites with new connections. These negotiations speak to the very nature of memory as Sturken finds “memories and memory objects can move from one realm to another,

¹²³ Ibid., 83.

¹²⁴ Paul Connerton, *How Modernity Forgets* (Cambridge, UK: Cambridge University Press, 2009), 29.

shifting meaning and context.”¹²⁵ These shifts already occur within the designs of the Mall’s memorials and monuments because they purposely use architectural forms from antiquity to invoke specific connotations: Classical Greek styles in the Lincoln and Jefferson Memorials recall democracy, wisdom, and reason while the Washington Monument’s Egyptian-inspired obelisk signifies both preserved death and structural permanence. Additionally, Nora explains *lieux de mémoire*, sites of memory, only function culturally because the public can constantly redefine and “recycle” their meanings to fit whatever historical connection is needed.¹²⁶ In the game, interactive quests allow players to actively negotiate the meanings of the Lincoln Memorial, Washington Monument, and Jefferson Memorial by taking part in repurposing these structures for other uses than historical remembrance. Such redefining might be construed as erasing history and aiding in the disconnection to the American past. However, it is the repurposing of these structures, not the structures themselves, which reflects the abstract principles and pursuits of these former presidents, though players may be the only Capital Wasteland inhabitant who can recognize it.

Out of the three, the Lincoln memorial retains the clearest connection to its intended significance, attesting to the almost mythic, lasting power of our sixteenth president’s image. Completed in May 30, 1922, the statue insider considerably resembles Phidias’ Statue of Zeus at Olympia circa 432 BC from the lost Temple at Olympia, a purposeful connection. Charles and Stephen S. Griswold find the memorial was meant to be aligned with religious iconography and Lincoln’s statue as “a god awaiting offerings”

¹²⁵ Sturken (1997), 5-6.

¹²⁶ Nora, 19.

like Athena's presence in the Parthenon.¹²⁷ Furthermore, the Memorial's theme throughout is overcoming adversity from the speeches etched into the wall to Lincoln's face, "etched with the lessons taught by destructive war."¹²⁸ And historically, the memorial has been used to invoke power over adversity, linking more contemporary American events with Lincoln's emancipation of slaves. Most familiar, Martin Luther King Jr. recited his "I have a dream" speech August 28, 1963 on the memorial steps. These cultural memories allow players to see the warped irony of the post-apocalyptic Lincoln Memorial which is controlled by slavers to prevent the wall inscriptions bearing messages of human equality and a united nation to be read. In symbolic fashion, Lincoln's expressive face is also missing from the memorial.

In part, the Lincoln Memorial's intended identity and history has been preserved because of the lasting inscriptions of the Gettysburg Address and Second Inaugural Address on the walls of the memorial. In the quest "Head of State," players can participate in making the Lincoln Memorial as a safe haven for runaway slaves or permanent bastion for Wasteland slavers, either way redefining the meaning of site on the Mall. But at a deeper level, the game calls us to either follow Lincoln's footsteps and attributed principles of equality or forever taint the Memorial's intended remembrance. Fascinatingly, our culture's adoration of Lincoln is reflected and exaggerated in the near worship of the former president by runaway slaves. The runaway slave leader claimed to find the statue's head in a refuge and subsequently know they must carry on Lincoln's work. This refuge is renamed the "Temple of the Union" from the Memorial inscription

¹²⁷ Griswold and Griswold, 696.

¹²⁸ Ibid., 697.

also found here: “In this temple as in the hearts of the people for whom he save the union the memory of Abraham Lincoln is enshrined forever.” For the slaves, invoking Lincoln’s work gives their efforts historical precedent as well as meaning on a national scale. But when asked to describe Lincoln himself, the slaves know very little beyond “The great emancipator” and “he freed slaves hundreds of years ago,” a self-reflexive commentary on how our culture has similarly written Lincoln’s presidency as a one-liner factoid. However, the runaway slaves intend to use the Memorial as a new refuge and a symbol of hope for struggling slaves across the Wasteland. In a way, their desires insure at least one aspect of Lincoln’s memory is forever salient. Players participate in the reconstruction the memorial and restoration of Lincoln’s head to the statue body by tracking down a surviving photograph in the D.C. Museum of History. Additionally, players must find a way to clear out the slavers through trickery or through battle.

Unlike the Lincoln and Jefferson Memorials, the Washington Monument does not preserve the man it’s attributed, but turns him into a symbol of America’s strength, longevity, and stature.¹²⁹ Completed in 1884, this symbol is somewhat maintained in *Fallout 3* where the Brotherhood of Steel have set up a permanent military position among the Mall battleground, reflecting Washington’s background as a military leader. However, there is little sense that the Monument retains its connection to Washington the president in the same way the slaves associate Lincoln and his work with his memorial. But perhaps abstractly, the Monument’s new use can echo the memorable work of Washington as a founding father and fighter in the American Revolution. In the quest “Galaxy News Radio,” DJ Three Dog tasks players with boosting the signal of Galaxy

News Radio, an alternative radio station to the Enclave's non-stop cycle of patriotic music and propaganda messages. To do so, players must repurpose a satellite dish from the Virgo II Moon Lander, the "Apollo 11" of the *Fallout 3* universe, preserved and on display in the Mall's Museum of Technology¹³⁰ and attach it to the top of the Washington Monument. Essentially, the structure gets turned into a radio tower because of its height and location. However, strengthening the GNR signal allows Three Dog's messages of resistance and "Fighting the good fight" against the Enclave, Talon Company, and super mutants to be spread throughout the Capital Wasteland. This recalls Washington's tireless fight against the British as the lead military voice of the new America, reinserting the man himself in the Monument's iconic meaning.

Out of the three, players navigate the Jefferson Memorial the most because it has been repurposed as the physical site for Project Purity and thus crucial to completing the game. The Memorial was completed 1939-1943 and the bronze statue of Thomas Jefferson in 1947. For the Griswolds, the memorials for Lincoln and Jefferson are quite distinct, noting, "[The Jefferson memorial] is not a shrine in the sense that the Lincoln Memorial is, and it does not convey a clear moral principle as Lincoln's does...It recalls abstract principles and arguments rather than bitter deeds or exhausting foundings."¹³¹ This description is apt because Jefferson is cemented in American history for his philosophy and writings. In fact, excerpts of his work are etched into the walls of the Jefferson Memorial, most notably the Declaration of Independence, though these etchings

¹²⁹ Griswold and Griswold, 694.

¹³⁰ The accompanying museum plaque reads: "On July 16, 1969, the Virgo II Lunar Lander "Valiant 11" became the very first manned space vehicle to touch down on the moon. The Valiant 11's crew consisted of Captain Richard Wade, Captain Mark Garris, and Captain Michael Hagen of the USSA [United States Space Administration]. We salute these brave and noble men who took the very first steps on a planetary body other than our own."

do not remain on the walls of the post-apocalyptic memorial. The quests “Scientific Pursuits,” “The Waters of Life,” and “Take It Back!”—all part of the main overarching objective—have players learning about Project Purity, helping their father and fellow scientists complete the purifier, and finally implementing it to provide fresh clean water to the Capital Wasteland. Fittingly, the Griswolds describe Jefferson as symbolically a “life-giver” versus Lincoln’s “healer,”¹³² here made literal as the purifier hopes to eradicate future radiation sickness. The memorial itself had already been repurposed as a purifier years ago because of its location next to the Potomac, but remained useless without the G.E.C.K. It physically encompasses Jefferson’s statue as water tunnels in and out of the Memorial. The repurposing of the Memorial for Project Purity invokes Jefferson’s “We hold these truths to be self-evident, that all men are created equal” because the Brotherhood of Steel, Enclave, and players themselves struggle over determining who should be able to access to clean water. Players can support the Brotherhood of Steel and make clean water available to all or support the Enclave and John Henry Eden by placing a virus in the purifier that will clean the water and also kill any person with radiation sickness. Much like the Lincoln Memorial quest, players must decide whether to follow in the philosophical principles of Jefferson or draw a distinct line between who is and is not equal. These interactions become another mediated experience of the National Mall and the cultural meanings we attach to these structures.

In contrast, players can only speculate about whom or what is meant to be permanently remembered in the Anchorage War Memorial, which players only know

¹³¹ Griswold and Griswold, 699-700.

¹³² Ibid., 698.

through other sources. Set along the Potomac River, it is only memorialized war from the alternate historical trajectory, presumably marking the struggle against the Communist Chinese occupation in Alaska. Sturken writes a war memorial “achieves its status by enacting closure on a specific conflict.”¹³³ However, it is difficult to interpret the “closure” of the Anchorage War Memorial without the memories of conflict, placing players in a reverse position of not-knowing historical context. The memorial is surrounded by unlit street lamps with only a small plaque entitled “Anchorage War Memorial” cueing players to its historical ties. The memorial itself is an upraised foundation with 3 male soldier statues: one bent on a knee holding a rocket launcher, one with his left arm cranked back to throw a grenade, and the last in a fighting stance with a flame thrower. Without cultural memory of the war or the memorial, players are left with questions about its significance like “Is the memorial honoring the dead, the Anchorage war survivors, the war itself, or all of the above?” By featuring this memorial, the game further emphasizes the dependent relationship between these architectural sites of memory and memory itself. To note, the *Operation: Anchorage* downloadable expansion for *Fallout 3* provides the sought-for significance of the memorial. *Operation: Anchorage* is a training simulation of the Anchorage battle ground where players join fellow American soldiers to play through a possible Alaskan battle. This expansion pack ends by revealing the memorial’s three posed statues were modeled after a popular Anchorage war photograph much like the iconic WWII Iwo Jima image.

¹³³ Sturken (1997), 51.

Finally, players explore the emotional investments in authentic American history and the act of preserving through interactions by amateur archivists and self-appointed historians. While navigating through the Wasteland, players can come across other characters concerned with preserving America's history but not necessarily for a deeper understanding of the past. For instance, the Brotherhood of Steel occupy the Arlington Library to collect all the surviving Pre-War books because they believe they should be in possession of that knowledge rather than anyone else. This desire to preserve an already-forgotten history is best illustrated in the quest "Stealing Independence." Private curator and self-named Abraham Washington tasks players to steal the Declaration of Independence from the National Archives. A shut-in, Washington maintains the Capitol Preservation Society, a small museum dedicated to preserving and archiving American history. For Nora, the archive is emblematic of "lost memory" and can only give us a shadowed connection to what we are trying to preserve.¹³⁴ Archives themselves cannot preserve history or memory without the meaningful connections people can provide. Telling, the Capitol Preservation Society's archive efforts include several dog houses, American flags with 13 stars, and baseball equipment, fractured representatives of an American past. However, Washington believes owning the Declaration of Independence will "give this place the patriotic feeling it deserves," legitimizing his museum. His interest in American history is genuine as far as he wants to be a collector of American cultural objects. Washington's push to preserve history is essentially a self-gratifying feeling of connectedness to Pre-War American past he deems more meaningful than his own city's history which he neither cares about nor includes in his museum. Like the

¹³⁴ Nora, 14.

Japanese collectors in Philip K. Dick's *The Man in the High Castle*, Washington translates ownership of historical objects as standing-in for connection to history and these connections can be bought and sold. More disturbingly, Washington asserts "Sacrifices must be made to preserve history," sending several people to people to fetch the Declaration, presumably to their deaths, to claim ownership of the document.

Dick's ruminations about historicity and meaning are particularly enlightening here as Washington imbues the document with deep historicity and authenticity. In fact, players can present Washington with the National Archives' Declaration or an exact forged replica; Washington accepts either document as the true original. The game seems to support Wyndam-Matson's opinion that "fake" and "authentic" mean nothing unless we invest in them. However, the game puts players in a telling position of potentially contrasting their knowledge of American history with Washington's fractured assumptions. When asked about the Declaration's significance, Washington explains:

In 1776, 2nd Judgmental Congress got together at Fort McHarry in Maryland...There was a ceremony with Paul Revere singing the Battle Hymn known as the Natural Anthem, then [the Declaration of Independence] was signed, sent to England by plane presumably to King George himself, thus beginning the Evolutionary War.

The self-reflexive moment is meant to be humorous because players, presumably with a working knowledge of American history, know Washington has constructed his own history from dates and people. However, players cannot question the validity of Washington's history lesson in-game because our character would not have that knowledge. While players may laugh, the moment allows us to question how much of our own historical knowledge is misinterpretation or elaboration of what truly happened then taken as authority. Furthermore, we must equally consider how much of our in-

game construction of the Capital Wasteland past could be as off-base and riddled with errors. Clearly Washington is mistaken about names, events, and 18th century level of technology, but he is also dealing with 501 years of distance and a breakdown of institutionalized education. The incorrect historical recount sparks an immediate inclination to dismiss the cultural meaning Washington attaches to the Declaration. Yet, it is only a player's knowledge, ingrained memories of high school or middle school American history classes, which allows a privileged position to determine what is authentic history and what is fake, a distinction only as important as our emotional investment in their realness. Thus, this quest most uniquely forces players to confront their own attachments to history, memory, and the meaningfulness they provide in our lives.

Ultimately, these negotiations between history and memory are not easily reconciled because they are the crucial means by which we derive cultural meaning. As Sturken writes, the authenticity of cultural memory is not through historical fact, but fostered through “its role in providing continuity to a culture, the stakes in creating values in that culture, and the fundamental materiality by which that culture is defined,”¹³⁵ These qualities are always in transition and redefinition because cultural memory is always negotiated. *Fallout 3* interactions with memory-making and history allow players to explore and question how memory engages with the past and create meaning. While *Fallout 3* provides players the game space to contemplate these issues, the act of playing on a video game system presents applicable considerations of memory. On a technical

level, Laurie N. Taylor and Zach Whalen argue players record and preserve their game histories with saved game-play, but this memory is fallible.¹³⁶ Moreover, these accumulated saves do not provide a cohesive history of play, but a jumbled collection of anticipatory moments, replayed quests, and often arbitrary save points. The game history is fractured and does not account for lost play time due to unexpected shut downs. Looking through my 534 saves over 100 hours of play can give someone a sense of my time investment and overall statistical progression, but they do not provide access to the memories created in the experience of play. The meaningfulness of playing cannot be found in the saves themselves, but in my repeated engagement with them. Indeed, the medium itself adds an important layer to understand how we construct meaning from history and memory.

¹³⁵ Sturken (1997), 259.

¹³⁶ Laurie N. Taylor and Zach Whalen, "Playing the Past: An Introduction," in *Playing the Past: History and Nostalgia in Video Games*, eds. Zach Whalen and Laurie N. Taylor (Nashville, TN: Vanderbilt University Press, 2008), 6.

History of Technology: Fear and Fascination in *Fallout 3*

Imagine if, after World War II, the timeline has split. Our world forked into one branch, the *Fallout* universe the other. In that other branch, technology progressed at a much more impressive rate...It was an idyllic “world of tomorrow,” filled with servant robots, beehive hairdos, and fusion-powered cars.¹³⁷

In American history, technology is intricately tied to the forward motion of progress and national milestones like landing on the moon, but what does technology tell us about history? As described above, the alternate history of *Fallout 3* is deeply connected to technological innovations and their effect on the divergent American society. There is no internet or mass global communication, televisions are obsolete, and the most advanced computer technologies are quite bulky because nothing is miniaturized.¹³⁸ The game avoids painting a black-and-white relationship with technology by showcasing themes of fear and fascination about atomic energy and technology as a whole. Because *Fallout 3* is an alternate history, players can “read” the technological timeline to contrast to our own historical developments in technology. By interacting and using technology within the game, players rethink the dichotomy of good and bad, utopian or dystopian often attached to the atomic bomb, the military industrial complex, and games themselves. Being in an open world RPG, *Fallout 3* provides a broad moral spectrum of technology and their consequences for players to explore. The game repositions player engagement to highlight the dynamic connotations of technology between cultural disdain and favor.

¹³⁷ Description from the Vault Dweller’s Survival Guide, the *Fallout 3* Xbox 360 game manual.

¹³⁸ Martin McEachern, “Back to the Retro Future: Bethesda Turns the 1950s World of Tomorrow into a Radioactive Wasteland in *Fallout 3*” *Computer Graphics World* 32.3 (March 2009): 8.

Looking at history through the lens of technological development illuminates larger ideological and cultural investments in mechanization and prosperous futures. The history of technology field strives to understand the cultural, socioeconomic, and anthropological lineage of technologies alongside their historical contexts and uses. The field is quite broad in scope and not easily summarized, but it has brought key themes to light through research. For my purposes, the field offers important critical inquiries about how we position technology in our lives and the meanings we apply to them. For instance, Maria Sturken and Douglas Thomas believe our cultural relationship with technology is equal parts idealism and anxiety because we imbue technologies with notions of change and newness while simultaneously worrying over the impending loss of the status quo.¹³⁹ We long for change while fearing the unknown and technology appears as a physical manifestation to project these tensions. This seemingly contradictory relationship feeds into the ambiguous nature of technology as inherently positive or negative. In a different perspective, Joseph Corn and Brian Horrigan's find technology often circumvents meaningful engagement with social activism and perpetuated as society's salvation. This has fostered a public investment in technology rather than one focused on changing our economy, gender politics, or race relations to better culture.¹⁴⁰ Corn and Horrigan study the history of speculative American futures, yet this investment in technology is still quite evident in contemporary society, exposing the influential power and attraction of such narratives.

¹³⁹ Marita Sturken and Douglas Thomas, "Introduction: Technological Visions and the Rhetoric of the New," in *Technological Visions: The Hopes and Fears that Shape New Technologies*, eds. Marita Sturken, Douglas Thomas, and Sandra J. Ball-Rokeach (Philadelphia, PA: Temple University Press, 2004), 4.

¹⁴⁰ Joseph J. Corn and Brian Horrigan, *Yesterday's Tomorrows: Past Visions of American Future* (New York: Summit Books, 1984), 11.

The notion of technology as progress is perhaps the most interrogated theme within the field of technology studies. Leo Marx poses a most thought-provoking question in his investigation of technocratic and social meanings of progress. Calling for more self-reflexive interrogations regarding our definitions of technology, Leo Marx asks the following:

Does improved technology mean progress? Yes, it certainly could mean just that. But only if we are willing and able to answer the next question: Progress towards what? What is it that we want our new technologies to accomplish?¹⁴¹

Marx calls technology scholars to breakdown the established assumptions of “progress” and “innovation” by tracing these theories back to their Enlightenment beginnings and shifts during the Industrial period and into the Cold War. Importantly, Marx is focused on the Western negotiations with technology with little regard to comparable Eastern attitudes at the same time. Marx observes the Enlightenment period considered technology and science as the means to further man’s triumph and rationality over nature. Technology could improve society but only under the guidance of learned gentlemen who knew what society needed to succeed.¹⁴² At the turn of the century, the public regarded technology and science as filled with possibilities and anxieties because of the growing fascination with innovation. As Sturken notes, “It was primarily through the experience of modern technologies that this sense of promise and fear was produced” because they became more commonplace and publically exposed.¹⁴³ Indeed, the Industrial Revolution fueled this dichotomy with grand advancements in transportation and production while

¹⁴¹ Leo Marx, “Does Improved Technology Mean Progress?” in *Technology and the Future*, Ninth Edition, ed. Albert H. Teich (Belmont, CA: Thomson and Wadsworth, 2003), 11-12.

¹⁴² *Ibid.*, 8.

drastically feeding fears of losing identity and meaning within the newly mechanized world.

The move to a technocratic society resulted in another shift in technological meaning, one which “valued improvements in power, efficiency, and rationality as ends in themselves.”¹⁴⁴ Much like Corn and Horrigan’s earlier claims, Marx finds this definition shift of progress and technology justifies our detachment to active social change, but it was not always this way. In fact, Marx contrasts the technocratic viewpoint with the early American Jeffersonian ideals of “justice, freedom, harmony, beauty, or self-fulfillment” as catalysts for social change, ideals that are overshadowed when technology itself stands in for progress.¹⁴⁵ At its core, Marx is describing when society embraces the concept of the “technological fix” rather than meaningful cultural engagement. For Corn, the technological fix is focused on notions of newness as progress, even though such technologies undoubtedly fit into old cultural standards of what a society needs or wants.¹⁴⁶ New technologies are merely substituted for obsolete ones in the desperate attempt to alleviate our cultural woes. Marx pinpoints the shift to the technocratic society during WWII though it was cemented during the Cold War and its treatment of nuclear weaponry as a technological fix for Communism and global world order. In particular, Marx finds the Strategic Defense Initiative epitomizes the technocratic defense of progress. Organized by Ronald Reagan, the infamously named “Star Wars” program was upheld as America’s defense against possible nuclear war by

¹⁴³ Marita Sturken, “Mobilities of Time and Space: Technologies of the Modern and the Postmodern,” on *Technological Visions: The Hopes and Fears that Shape New Technologies*, eds. Marita Sturken, Douglas Thomas, and Sandra J. Ball-Rokeach (Philadelphia, PA: Temple University Press, 2004), 72.

¹⁴⁴ Marx, 8.

¹⁴⁵ Ibid.

personally stockpiling nuclear warheads in the case of an attack. In Marx's opinion, Reagan used the SDI as the ultimate technological fix while ignoring "the ordinary but indispensable method of international negotiation and compromise."¹⁴⁷ Nuclear warheads became stand-ins for diplomacy and meaningful attempts at resolving the world conflict. *Fallout 3* presents the pervasive attraction of the technological fix and its shortcomings more transparently than our own society in many ways because the culture embraced military and corporate partnerships and technology to end their Cold War.

The media studies field has not often approached technology in this fashion unless specifically integrated into analyses of formal content. However, our scholarship can only be enriched by weaving in the technological narratives applied to film, television, and video games. These mediums should not be separated from the larger context of household or military developments because they are interwoven narratives which can reveal larger cultural motivations and perceptions. As Marvin argues, media is embedded within an "elaborate cultural code of communications" characterizing any discussion of technology.¹⁴⁸ For instance, when considering the electronic media history, such analysis reveals the power dynamics of media control, particularly "who is inside and outside, who may speak, who may not, and who has authority and may be believed," as Marvin observes.¹⁴⁹ Then our study goes beyond the object of analysis to consider the greater implications of its cultural space and influence on our society's perpetuating boundaries

¹⁴⁶ Joseph Corn, *Imagining Tomorrow: History, Technology, and the American Future* (The MIT Press: Cambridge, MA, 1986), 221.

¹⁴⁷ Marx, 11

¹⁴⁸ Carolyn Marvin, *When Old Technologies Were New: Thinking about Electric Communication in the Late Nineteenth Century* (New York: Oxford University Press, 1988), 8.

¹⁴⁹ *Ibid.*, 4.

of separation. For Jeffrey Sconce, the study of media technology history opens up more connections between film, radio, television, and even video games in terms of their cultural receptions and technology lineage. Focusing on television, Sconce observes postmodernism is inscribed onto TV and other subsequent electronic media because they “replace reality and displace subjectivity” through their aural and visual representations of liveness.¹⁵⁰ However, he traces similar feelings historically attached to the telephone, telegram, and radio, reinserting more contemporary technologies back into our technology timeline. This requires us to rethink our theoretical boundary lines and applicability as well as question particular biases for greater authenticities or histories assigned to earlier time period. For this project, we must see *Fallout 3* as both representing other technologies in its game content and as an object of study within a larger technological framework as a video game. As such, the historical connections occur both on an in-game level and our actual interaction with the medium itself.

Fallout 3 is ideally suited for investigating issues of technology and mixed cultural attitudes on several levels. Firstly, its science fiction genre roots taps into a established background of scientific and technological concerns in society. Lincoln Geraghty finds technology is a historical focus of science fiction and likely the chief influence on fictional worlds of the future.¹⁵¹ Such attention to technology attempts to grapple with its cultural role and power to change life as we know it. As such, futuristic science fiction films, TV shows, and even video games are equally speculating possible

¹⁵⁰ Jeffrey Sconce, *Haunted Media: Electronic Presence from Telegraphy to Television* (Durham, NC: Duke University Press, 2000), 196-197.

technological issues as well as providing commentary on our current attachments to the machines. Focusing on science fiction films, Vivian Sobchack concludes, “Most SF films not only dramatize but also visualize our subjective fears and desire about technology not as it might be in the future but as we experience it in the present.”¹⁵² Through analysis, she finds these narratives encapsulate the fears and fascinations with technology as a reflection of a given period. *Fallout 3* presents an interactive world where players can make connections and draw similar conclusions through game-play. As aforementioned, the game’s alternate history prompts players to compare and contrast the divergent technological trajectory to our own reality and test out the different machines. Moreover, there is a desire to investigate, to question and trace this society’s timeline, because we enter the game without significant background knowledge. When players explore this open world environment and converse with non-playable characters, they can also learn about this United States’ technology history. The background setting itself provides insight with whole rooms filled with large, cumbersome computers, microfilm stations, and reel-to-reel recording machines. Players will come across functioning robots and hackable computers to be mastered or manipulated. Various computer terminals in corporate technology buildings reveal manufacturing and testing plans for advanced projects long abandoned since the Great War. Players can fill significant historical gaps by navigating the Museum of Technology in the National Mall. The still-standing exhibits and visitor information terminals reveal the Pre-Great War

¹⁵¹ Lincoln Geraghty, “Animating Science Fiction of the Past and Present in Futurama,” in *Channeling the Future: Essays on Science Fiction and Fantasy Television*, ed. Lincoln Geraghty (Lanham, Maryland: The Scarecrow Press Inc., 2009), 155.

¹⁵² Vivian Sobchack, “Science Fiction Film and the Technological Imagination,” in *Technological Visions: The Hopes and Fears that Shape New Technologies*, eds. Marita Sturken, Douglas Thomas, and Sandra J. Ball-Rokeach (Philadelphia, PA: Temple University Press, 2004), 145.

America included AI robots courtesy of RobCo Corporation and General Atomics International, Chrysler Corporation's nuclear fusion car engines, and a completely different space race under the United States Space Administration (USSA) lasting well into the 21st century.

Access to technology is a central issue for players and the citizens of Capital Wasteland. It is impossible to avoid using or encountering various technologies to complete the game. Countless quests task players with acquiring technology for themselves or interested buyers, hacking into restricted computers for acquire necessary data, and even battling or overriding renegade security robots and turrets for safe exploration within buildings. Through interactivity, players are implicated in their use of technology. For the main quest, players must gain possession of the G.E.C.K. and implement Project Purity, but they can also decide who will have healthy access to the clean water. Players' use of weaponry is most immediately evident because they must constantly decide how these weapons will be used and against whom. The same plasma rifle can free kidnapped Wastelanders or shoot them down with subsequent effects of reward or punishment respectively. In doing so, the game suggests "good" or "bad" technology is not inherent, but associated with the control and decision-making of the people who use it. And even then, technologies that may be utopian to some usher in fears and anxieties for the future of mankind, a dichotomy heavily presented in *Fallout 3*. In doing so, players can grapple with the mixed, seeming contradictory uses and connotations of technology and interrogate established assumptions about the atomic bomb, the military industrial complex, and video games themselves.

We continue to negotiate the meaning of the bomb and atomic energy because the historical positive and negative narratives attached to it have survived. Moreover, this is the mixed nature of discourse regarding any technology modern or otherwise. Studying Cold War attitudes, Boyer observes the contemporary responses to nuclear energy have historical precedents from citizens fearful and lamenting the future to those with faith in the bomb's security and power.¹⁵³ Not only have these feelings persisted, they are evident of our continued rhetoric regarding our relationships with technology generally. For Douglas and Kellner, the bomb is a significant point because the bombings of Hiroshima and Nagasaki caused the public to question and fear scientific and technological progress.¹⁵⁴ The bomb ushered in a new post-apocalyptic, postmodern worldview unparalleled in its intensity when held against other potential world disasters like global warming.

In retrospect, a more negative view of the bomb is quite common, but the historical perspective was far more mixed: the wondrous potential of the bomb alongside the iconic images of its terrible devastation and aftermath on Hiroshima, Nagasaki, and government testing sites. In fact, some opinions in the 1940's held these images merely showed the negative side of atomic potential just as electrocution only revealed the lethal aspects of electricity.¹⁵⁵ Reflecting on personal memories, Langston Winner finds the atom was confusingly depicted as a friendly "Disney-esque" cartoon to children while as a terrifying vision of doom in films and science fiction literature. Quite succinctly,

¹⁵³ Paul Boyer, *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age* (Chapel Hill, NC: The University of North Carolina Press, 1994), xxi.

¹⁵⁴ Steven Best and Douglas Kellner, "The Apocalyptic Vision of Philip K. Dick," *Cultural Studies, Critical Methodologies* 3.2 (May 2003): 3.

¹⁵⁵ Boyer (1994), 124.

Winner stresses, “Splitting the atom, we were supposed to understand, had a very good side along with an obviously bad one.”¹⁵⁶ While images of Hiroshima and Nagasaki made atomic energy’s militaristic uses clear, there were many thoughts about its offerings to medical fields and the domestic sphere. From Joseph Corn’s research on futuristic technology, nuclear energy and innovation had been associated with American progress and prestige, via scientific advancement, while inspiring utilitarian hopes of cheap “nuclear-generated electricity” for the post-WWII society.¹⁵⁷ Atomic technology became yet another possible fix for the problems in America in multiple sectors of life, but such thinking is shared. According to historian Stephen L. Del Sesto, the positive investments in nuclear energy should not be dismissed as fanciful theories because a variety of supporters shaped these connotations. The government’s military investment joined corporate speculations about atomic energy’s economic monetary benefits and the society’s curiosities about any new technology and its effects.¹⁵⁸ These three worked together, consciously or not, to establish and perpetuate the notion atomic energy is progressive for America and therefore something good for the country and its citizens.

These feelings towards the atomic bomb weren’t especially new for cultural speculations. The historical context of nuclear energy offers the particularities to reveal how common narratives of technology were reused and tweaked for the bomb. But as Boyer points out, these cultural feelings of fears and fascinations pre-date the atomic bomb:

¹⁵⁶ Langston Winner, “Sow Ear’s from Silk Purses: The Strange Alchemy of Technological Visionaries,” in *Technological Visions: The Hopes and Fears that Shape New Technologies*, eds. Marita Sturken, Douglas Thomas, and Sandra J. Ball-Rokeach (Philadelphia, PA: Temple University Press, 2004), 36.

¹⁵⁷ Corn (1986), 223.

Indeed, practically every theme central to American social thought since the turn of the century figured at least implicitly in these [atomic] speculations: the fear of class conflict and racial unrest; concern over vast concentrations of power—whether corporate or political; forebodings about mass leisure; worry that the individual would be lost in an impersonal technocratic order; uneasiness about the rise of a technological elite; apprehension about the role of the military in a society that liked to think of itself as essentially pacific; even a long-standing uneasiness over the rise of great cities.¹⁵⁹

Within the *Fallout 3* world, players can explore all the themes Boyer outlines above to some degree through quests, conversations, and through the landscape. The game avoids the common inclination to demonize the atomic bomb by having players encounter multiple perspectives and uses of atomic energy. As a result, players can analyze this society, its contemporary attitudes about the bomb, and the past atomic remnants to discover the bomb defies single interpretation. Players are always made aware of the fallout of the Great War and nuclear destruction and not just because of the game's title. As explored in the previous chapters, players must navigate through a changed world, one filled with radiated waters, mutated individuals and animals, and the total breakdown of society due to the nuclear war. More immediately, players can become overexposed to radiation and possibly die if dwelling too long in several nuclear "hot spots" and eating and drinking too much irradiated food. Obviously, the game landscape shows players what atomic energy can do at its most devastating, affirmed through conversations with non-playable characters. However, the game offers up contrasting bomb images for players to grapple and judge. In broken buildings, players can find surviving boxes and advertisements for Sugar Bombs, a kids' cereal in the shape of mini nukes with an

¹⁵⁸ Stephen L. Del Sesto, "Wasn't the Future of Nuclear Energy Wonderful?" in *Imagining Tomorrow: History, Technology, and the American Future*, ed. Joseph Corn. (Cambridge, MA: MIT Press, 1986), 59.

¹⁵⁹ Boyer (1994), 149.

“Explosive Great Taste!” The cereal can also be eaten, but not without receiving minor radiation poisoning. The closest settlement to Vault 101 is Megaton, a town literally built around a functional, yet undetonated atomic bomb. Here, player might learn about the Church of the Atom, a religious group that worships the bomb. Confessor Cromwell is the most vocal follower and is seen baptizing himself in the irradiated water surrounding the bomb. While conversing, we learn the Church of the Atom doesn’t see the Great War as devastation, but the event of “creation and unification in Atom’s glow.” They pray for the next nuclear event because the bomb itself is divine representation of life and meaning. While seeming ridiculous, their reasoning is no more far-fetched than similar metaphysical thinking because Cromwell proclaims, “The bomb is us. The bomb is Atom. And thus, we are Atom—awaiting the day in which each of us gives birth to a trillion new lives.” For these followers, the atomic bomb truly brought about an apocalypse in its true definition, revelation. Such thinking is familiar territory as Joseph Corn finds the atomic bomb inspired fascination with genetic mutation and new bodies.¹⁶⁰ Furthermore, it is not difficult to find comparable opinions about the bomb as a great equalizer and an overwhelming, divine display of power and intensity.

Rather than present an either/or judgment of atomic energy, the game has players form their own conclusions through direct contact with nuclear power and its consequences. One of the more controversial atomic references is the Fat Man, a playable gun launcher with mini nuke ammunition, a reference to the nicknamed atomic bomb that struck Nagasaki on August 9, 1945 at 10:47 PM. Here, we must temper both the reference in the game and within the game world context. The game reference is

¹⁶⁰ Corn, 221.

easily construed as inappropriate glorification of America's nuclear history. Since *Fallout 3*'s alternate history diverges after the bombings of Hiroshima and Nagasaki, we must also read the name as an intentional reference made in this deviated America, reflecting a rather casual commodification of the event. This layered negotiation is compounded because players decide whether or not to use the actual weapon. With a variety of other weapons available, players do not have to own or use the Fat Man, but can choose to see its effects. Players must deal with the fallout of equipping Fat Man and using the gun because wherever its ammo hits, pockets of radiation will form potentially injuring players and the surrounding environment. However, it can be a very powerful defensive weapon against enemies. These interactions complicate any interpretations of the bomb's meaning as simply good or bad, preventing one overriding narrative to exist. In this way, the game presents the bomb like Boyer describes, as "*both* mankind's scourge and benefactor," a duality often unconsidered in descriptions of the nuclear energy.¹⁶¹

In the game, the military-industrial complex and its role on the technological trajectory are unraveled through investigating and interacting with the remnants of its influence on the Capital Wasteland. The military-industrial complex or MIC refers to the economic connection between corporate businesses, government, and military and the money and goods-exchanges funneled among them. The country's safety is represented through the corporate production and selling of military weaponry and the amount of

¹⁶¹ Original italics. Boyer (1994), 125-126.

government monies set aside for “defense spending.”¹⁶² In turn, these corporations economically support the government politically. While MICs are present in many countries, the term is typically used to label the workings of the United States. This relationship is strengthened and sustained during wartime or preparation for war to support high military contracts. Best and Kellner trace our contemporary MIC to WWII beginnings, particularly the war’s significant expenditures and funded science and technology experiments to win the war.¹⁶³ The success of the MIC flourished during the Cold War when corporate involvement became hugely profitable preparing for a war that never took place. The MIC and its intricacies are not well-known publically because of government classified restrictions and corporate control of media outlets like TV and newspaper. For instance, General Electric has been long involved with government contracts and manufacturing equipment used by the military and would not implicate itself in problematic war news on NBC. Nevertheless, the MIC is shaped and interpreted through the technology it produces. Regarding 1950’s cinema, Sobchack argues the frequent images of the rocket, the atomic bomb, the TV set, and Cray computer acted as signifiers of the ingenuity and power of government, corporation, and military business.¹⁶⁴ Of course, these images were not always positive in science fiction films and present the darker effects resulting from blurring the lines between safety and commodity. Whether conceived as a MIC, there was cultural speculation about the effects of military and corporate practices on the domestic sphere. Boyer observes the

¹⁶² Steven Best and Douglas Kellner, *The Postmodern Adventure: Science, Technology, and Cultural Studies at the Third Millennium* (New York: The Guilford Press, 2001), 58.

¹⁶³ Best and Kellner (2001), 57-61.

¹⁶⁴ Sobchack, 149.

Cold War public imagined atomic energy leading to a “highly complex technocratic economy” where government and industry reigned supreme.¹⁶⁵ This would ensure America’s technological power against Communist states, yet encouraged worries about the welfare of citizens caught in the crossfire. Such fears continue today because our MIC has only become more entangled with the nation’s economy here and abroad.

In *Fallout 3*’s Pre-Great War America, the MIC was a transparent, publically acknowledge system that singlehandedly shaped the diverging technological landscape in preparation for eventual nuclear war. Rather than foreboding, this reality embraced the MIC and its rewarding technology, evident at the National Mall’s Museum of Technology. The majority of the museum is an archive of government and corporately funded exhibits, though the Wright Brothers’ plane can be seen in pieces in the foyer. The MIC technology has been preserved and showcased in this official history of technology. Players can walk through the interactive Vault-Tec Vault of Tomorrow to see how vault life is just like life at home, clearly contradicted by a player’s own experiences in Vault 101. Moreover, military equipment and weaponry are put on display and meant to garner public support. As described by an information terminal, the West Tek Power Armor Demo was a combat demonstration of the T-51b Power Armor in action for museum visitors to behold. This society was aware of MIC connections as fascinating spectacle, but quite oblivious to the underside of such technological innovations.

As with the bomb, the game avoids depicting the MIC as merely wrong or right by providing complicated layers to unravel. Players must depend on MIC-created

¹⁶⁵ Boyer (1994), 142-143.

technology while also unraveling the inhumane experimentations done in the name of American progress and protection. In doing so, players might consider the ambiguous relationship our society has with the MIC through their exploration of the positive and negative effects of this America's MIC. Most of the weaponry and armor available was created through MIC developments. A player is particularly dependent on the Pipboy 3000, the all-in-one biometric wrist monitor which stores quest data, keeps track of equipment, contains maps, and maintains health. This necessary piece of technology was created by RobCo Industries and Vault-Tec, both heavily funded with government contracts. RobCo also manufactured all the computers found in the game which players use to learn valuable background history about the Capital Wasteland. And in a partnership with the U.S. government, Vault-Tec created V.A.T.S., the Vault-Tec Assisted Targeting System which players use to aim and shoot enemies. The main quest and the game itself cannot be completed without Liberty Prime, the MIC's most powerful contribution to the war effort. In a joint effort between the U.S. Government, General Atomics International and RobCo Industries, the massive robot was designed to infiltrate Chinese-occupied Anchorage, Alaska and obliterate all Communists. During the "Take It Back!" quest, Liberty Prime is used defensively against Enclave soldiers blocking the path to the Jefferson Memorial and Project Purity water filtration system. Due to hardwired programming, Liberty Prime believes it is still 2077 and it is in the battle for Anchorage. Again, its creation was widely known to the American public, presumably to boost morale and support for the ongoing war with China. An archived *Capitol Post* article entitled "Development of Super Weapon Confirmed," dated Friday, June 3, 2072, announces a Press conference at the Pentagon about the corporate-government operation.

Players are also privy to the military thoughts on Liberty Prime by exploring the computer terminals at the Citadel, the Brotherhood of Steel's headquarters and the former Pentagon. Here, an email from General Constantine Chase, the ranking officer on the Anchorage battle lines, contains the following:

The robot they create will be the very embodiment of American military might—a walking, talking, nuke-tossing hero who will remind the world what it means to be a super power. I am fully confident that the presence of Liberty Prime at the Anchorage front line will be to the Chinese what the Hiroshima bomb was to the Japanese in 1945.

While revealing a stereotypical nationalistic perspective, the link between Liberty Prime and Little Boy illuminates the MIC lineage at work in this divergent America. Likewise, Chase illustrates military technology as the stand-in for American power and a visible symbol conveying the nation's scientific and economic prowess. Thus, the MIC is not just providing defensive or offensive technology for American security, but helping define what America is to the rest of the world.

However, players learn the horrific underside to the MIC when exploring the various vaults across Capital Wasteland, created in a partnership between Vault-Tec and the U.S. Government. These vaults were marketed as the ultimate protection for U.S. citizens in a potential nuclear event, but players easily discover security was not the prime objective of any vault. The Citadel contains an archive computer revealing limited information about experiments done at each of the vaults with specifics restricted. However, players can venture to each individual vault, besides their former Vault 101 home, and learn the underground dwellings were actually long-range test sites for cloning, psychological drug response, posthypnotic combat suggestion, and virtual simulation on oblivious U.S. citizens. The computer terminals in each vault contain

sample data, test figures, and correspondence between the vaults and the U.S. Government/Vault-Tech representatives revealing the primary aim was to explore and test alternative military training and tactics for America's future security. The tests at Vault 87 are perhaps the most horrific and impacting because players find out all the super mutants antagonizing the Wasteland are victims of government-sanctioned Forced Evolution Virus or FEV testing. Vault 87's containment lab and computer reports explain the government was attempting to create a race of super soldiers by exposing residents to measured radiation. Not only did most residents die, but the changed super mutants broke out and continued experimentation with kidnapped Wastelanders. These findings epitomize the greatest cultural fears of science and government gone wrong. Yet the game further complicates our interpretation of the MIC because the G.E.C.K. was created with government monies and by Dr. Stainslaus Braun, a Vault-Tec researcher. In fact, players are lead to Vault 87 to retrieve the only remaining G.E.C.K. in the Capital Wasteland.

Players are caught between needing MIC technology to win the game and fighting against problems instigated by the MIC system in the first place. Of course, the real tension here reveals our own relationship to technology. Much of the advanced technology we enjoy on a daily basis, like the internet, was first pushed through for military communication. We might be inclined to declare all government-related technology as bad, but we'd be ignoring the very tensions the game attempts to uncover about the MIC. Best and Kellner highlight this conflict precisely:

Ultimately, it is difficult to make a distinction between a "good" and a "bad" rocket, since the difference between civilian and military uses of technologies frequently implodes, and there are always unintended consequences of

technological development. Just as radios and computer were originally used primarily by the military, so advancements in space travel and communication systems are unavoidably co-opted for warfare and “defense.”¹⁶⁶

Arguably, players of *Fallout 3* must grapple with this dichotomy because game-play is easier and more affective when using MIC weaponry and equipment like the computer terminals to progress throughout the game. But it is impossible to ignore the truly harmful effects of such power and control against unwitting American citizens. What players are left is the opportunity to form multifaceted engagement and opinion of the MIC and their technology, hopefully for further contemplation about our own MIC.

Finally, *Fallout 3*'s use of simulations provides a self-reflexive commentary on gaming history. Video games do not exist in the *Fallout* universe as we know them. Government monies invested in military battle simulations, a nod to gaming origin history as Cold War simulations. In the quest “Tranquility Lane,” players trace their father to Vault 112, the home of a permanent virtual simulation created by Dr. Stanislaus Braun, the creator of the G.E.C.K. Attempting to acquire information about the G.E.C.K., the father gets trapped in Tranquility Lane, a virtual reality depicting an idyllic 1950's suburban with white picket fences, friendly neighbors, and uniform houses in a sepia-tone filter. In addition, players are stripped of their inventory and forced to navigate the space without weapons, armor, or their trusty PipBoy. Entering the simulation, players learn Dr. Braun, in an avatar of a young girl, has complete and total control over the simulation and the fellow human subjects within it. Dr. Braun exemplifies the inhumane scientist obsessed with power and his simulation represents negative stereotypes about gaming. Dr. Braun manipulates the other participants to do

¹⁶⁶ Best and Kellner (2001), 256-257.

whatever he wants and when he gets bored, he “resets”: wiping their memories, killing their artificial bodies, and creating a new simulation to torture them. A conversation with Dr. Braun reveals he prefers virtual reality to real life because he gets to have total control, a self-aware moment reflecting gaming opinions. Vault 112 may be under Dr. Braun’s control, but the simulation is meant to test human response to a hypothetical Communist Chinese invasion, which players can learn reading correspondence on Braun’s computer from the military. Players can escape Tranquility Lane in several ways, but most startling is the activation of the Chinese Fail-Safe Terminal. This command triggers a Chinese invasion in the suburban neighborhood. While it traps Dr. Braun in the simulation, residents killed by the invaders will expire outside the game as well, an expected consequence of the test. The simulation is a stark contrast to exploration in the Capital Wasteland, prompting players to note the differences between the two game types and their freedoms of game-play. We see the capabilities and possibilities for open world gaming versus controlled, manipulated simulations.

In presenting a mixed stance on technology and the military, *Fallout 3* offers a complex game world for players to explore their own assumptions about the utopian and dystopian narratives of progress. These investigations connect technological development to the historical past while also linking these technology discourses to the continuing, contemporary narratives which shape our modern anxieties over innovation and progress. Investigating these issues through a game utilizes the interactivity and varied choices of the medium not found equally in film or television. Presenting such differing opinions on the atomic bomb or MIC might appear as a jumbled, puzzling

clutter of contradictory ideas in another form. But *Fallout 3* tasks players with juggling these assorted thoughts and images to draw their own conclusions and opinions about technology. As a part of this technological history, video games and *Fallout 3* specifically present new possibilities for gaming apart from its historical beginnings as military simulations or simple entertainment. Arguably, *Fallout 3* complicates the simplistic denouncements of video gaming because we can explore truly nuanced critical thoughts from playing within the game world and through the gaming medium. Consequently, playing the game explores our relationship with technologies as much as it makes aware gaming's potential for offering a quite different space to shape our cultural perspectives.

Conclusion

In their study of games and education, Kurt Squire and Henry Jenkins state, “At their best, games are imaginary worlds, hypothetical spaces where players can test ideas and experience their consequences.”¹⁶⁷ My examination hopes to illuminate *Fallout 3* as a rewarding site of inquiry for players to work through and gain layered perspectives approaching history, memory, and narratives of technological progress and anxiety. Games are a space to recognize cause and effect as well as the control, influence, and limitations of a given environment. What can *Fallout 3* and closer examinations of game offer on a scholarly level? Squire and Jenkins find the “what if?” foundations in games can spark meaningful conversation and reflection about how we live, the relationship between actions and events, and about the historical “roads not taken” in and outside the classroom.¹⁶⁸ For my intent, games can provide significant critical perspectives regardless of their frequently popular cultural position as low, superficial entertainment with little to offer beyond violence and troubling stereotypes.

Such research might be interpreted as biased celebration of gaming, but such analysis and critique can only come after we’ve acknowledged video games as culturally formed artifacts deserving of study. This work and others strive to uncover gaming’s engagement with history while working against prevailing assumptions about what games can do versus what they’ve stereotypically always done. The constant negotiations between player and game generate new and diverse interpretations much like polysemic

¹⁶⁷ Kurt Squire and Henry Jenkins, “Harnessing the Power of Games in Education,” *Insight 3* (2003): 8.

¹⁶⁸ Squire and Jenkins, 14.

readings of literature, film, and television. There are no guarantees all players will “transfer lessons from video games to the real world” as Squire puts it, but scholars and educators can utilize games constructively in their own educational inquiries.¹⁶⁹ Essentially, media scholars and historians can dually problematize games while pursuing their exploratory possibilities just as they would any valuable resource material and object of study. Edward L. Ayers argues we must “seize for ourselves the opportunities the medium offers, opportunities to touch the past, present, and future in new ways” rather than disregard the medium outright because of its lasting cultural connotations.¹⁷⁰ Of course, this requires an equal investment in interrogating video games on a ludological level to understand what the medium can and cannot do among other popular forms.

The inclusion of gaming and its limitations in critical discussions alongside their *ludic* or narrative content generates a more complex, self-reflexive investigation supported by Linda Hutcheon by “call[ing] attention both to what is being contested and what is being offered as a critical response to that.”¹⁷¹ Regarding *Fallout 3*, the game and this study illuminate how games might represent history, how other forms have explored the past, and finally how we can position all these media forms into our cultural history. Through interactivity, players can think through these multifaceted issues while simultaneously considering the implications and boundaries of gaming as a cultural form. By their very engagement, games will always be subjective because player interaction is inherently self-reflexive through play. Every push of a button is mirrored onscreen,

¹⁶⁹ Kurt Squire, “Cultural Framing of Computer/Video Game,” *The International Journal of Computer Research* 2.1 (July 2002) <http://www.gamestudies.org/0102/squire>.

¹⁷⁰ Edward L. Ayers, “The Pasts and Futures of Digital History,” 2009, <http://www.vcdh.virginia.edu/PastsFutures.html>

¹⁷¹ Linda Hutcheon, “Beginning to Theorize Postmodernism,” *Textual Practice* 1.1 (1987): 19.

⁶ Hutcheon (1987), 19.

reminding players of their state of play and ordered connection to the game, a space perhaps confining. Yet, we are also reminded a game is never merely the codes in a program or audiovisual information on a disk, but an experience of worlds and ideas rewarding for those who press start.

BIBLIOGRAPHY

- Aarseth, Espen. *Cybertext: Perspective on Ergodic Literature*. Baltimore, MD: John Hopkins University Press, 1997.
- Aarseth, Espen. "Genre Trouble: Narrativism and the Art of Simulation." In *First Person: New Media as Story, Performance, and Game*, edited by Noah Wardrip-Fruin and Pat Harrigan, 45-55. Cambridge, MA: The MIT Press, 2004.
- Anderson, Steve. "History TV and Popular Memory." In *Television Histories: Shaping Collective Memory in the Media Age*, edited by Gary R. Edgerton and Peter C. Rollins, 19-35. Kentucky: University of Kentucky, 2001.
- Ayers, Edward L. "The Pasts and Futures of Digital History." 2009. <http://www.vcdh.virginia.edu/PastsFutures.html>.
- Berger, James. *After the End: Representations of Post-Apocalypse*. Minneapolis, MN: University of Minnesota Press, 1999.
- Best, Steven and Douglas Kellner. *The Postmodern Adventure: Science, Technology, and Cultural Studies at the Third Millennium*. New York: The Guilford Press, 2001.
- Best, Steven and Douglas Kellner. "The Apocalyptic Vision of Philip K. Dick." *Cultural Studies, Critical Methodologies* 3.2 (May 2003): 186-202.
- Boyer, Paul. *By The Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*. Chapel Hill, NC: The University of Caroline Press, 1994.
- Boyer, Paul. *Fallout: A Historian Reflects on America's Half-Century Encounter with Nuclear Weapons*. Columbus, OH: Ohio State University Press, 1998.
- Burgoyne, Robert. "The Balcony of History." *Rethinking History* 11.4 (December 2007): 547-554.
- Connerton, Paul. *How Modernity Forgets*. Cambridge, UK: Cambridge University Press, 2009.
- Corn, Joseph J and Brian Horrigan. *Yesterday's Tomorrows: Past Visions of American Future*. New York City, NY: Summit Books, 1984.
- Corn, Joseph. *Imagining Tomorrow: History, Technology, and the American Future*. The MIT Press: Cambridge, MA, 1986.

- Del Sesto, Stephen L. "Wasn't the Future of Nuclear Energy Wonderful?" In *Imagining Tomorrow: History, Technology, and the American Future*, edited by Joseph Corn, 58-76. Cambridge, MA: MIT Press, 1986.
- Dick, Philip K. *Man in the High Castle*. New York: First Vintage Books, 1992. Originally printed New York: G.P. Putnam's Sons, 1962.
- Edgerton, Gary R. "Television as Historian: A Different Kind of History Altogether." In *Television Histories: Shaping Collective Memory in the Media Age*, edited by Gary R. Edgerton and Peter C. Rollins, 1-16. Kentucky: University of Kentucky, 2001.
- Fallout 3*. Bethesda Softworks, LLC. ZeniMax Media Company, 2008.
- Fogu, Claudio. "Digitalizing Historical Consciousness." *History and Theory, Theme Issue 47* (May 2009): 103-121.
- Frasca, Gonzalo. "Ludology meets Narratology: Similitude and differences between (video)games and narrative." Originally printed in *Parnasso 3*, Helsinki, 1999. <http://www.ludology.org/articles/ludology.htm>.
- Galloway, Alexander R. *Gaming: Essays on Algorithmic Culture*. Minneapolis, MN: University of Minnesota Press, 2006.
- Geraghty, Lincoln. "Animating Science Fiction of the Past and Present in Futurama." In *Channeling the Future: Essays on Science Fiction and Fantasy Television*, edited by Lincoln Geraghty, 149-164. Lanham, MD: The Scarecrow Press Inc., 2009.
- Grainge, Paul. *Monochrome Memories: Nostalgia and Style in Retro America*. Westport, CT: Praeger Publishers, 2002.
- Griswold, Charles and Stephen S. Griswold. "The Vietnam Veterans Memorial and the Washington Mall: Philosophical Thoughts on Political Iconography." *Critical Inquiry* 12.4 (Summer 1986): 688-719. <http://www.jstor.org/stable/1343434>.
- Hammond, Philip. *Media, War & Postmodernity*. New York City, NY: Routledge, 2007.
- Helleckson, Karen. *The Alternate History: Refiguring Historical Time*. Kent, OH: The Kent State University Press, 2001.
- Hess, Aaron. "You Don't Play, You Volunteer": Narrative Public Memory Construction in Medal of Honor: Rising Sun." *Critical Studies in Media Communication* 24.4 (October 2007): 339-356.

- Hutcheon, Linda. "The Politics of Postmodernism: Parody and History." *Cultural Critique* 5 (Winter 1986-1987): 179-207. <http://www.jstor.org/stable/1354361>.
- Hutcheon, Linda. "Beginning to Theorize Postmodernism." *Textual Practice* 1.1 (1987): 10-31.
- Jameson, Frederic. "Postmodernism, or the Cultural Logic of Late Capitalism." In *Media and Cultural Studies Keywords*, edited by Meenakshi Gigi Durham and Douglas M. Kellner, 482-519. Malden, MA: Blackwell Publishing Ltd., 2006. Originally Published in *New Left Review* 146 (July-August 1984): 53-92.
- Jameson, Fredric. "Progress versus Utopia; Or, Can We Imagine the Future?" *Science Fiction Studies* 9.2 (July 1982): 147-158.
- Jenkins, Henry. "Game Design as Narrative Architecture." In *First Person: New Media as Story, Performance, and Game*, edited by Noah Wardrip-Fruin and Pat Harrigan, 118-130. Cambridge, MA: The MIT Press, 2004.
- Juul, Jesper. "A Clash between Game and Narrative." Paper presented at the Digital Arts and Culture conference, Bergen, Norway, November 1998. http://www.jesperjuul.net/clash_between_game_and_narrative.html.
- Juul, Jesper. *Half-Real*. Cambridge, MA: MIT Press, 2005.
- Juul, Jesper. "Without a goal: on open and expressive games." In *Videogame, Player, Text*, edited by Barry Atkins and Tanya Krzywinska, 191-203. Manchester, UK: Manchester University Press, 2007.
- Lipsitz, George. *Time Passages: Collective Memory and American Popular Culture*. Minneapolis, MN: University of Minnesota Press, 1990.
- Marvin, Carolyn. *When Old Technologies Were New: Thinking about Electric Communication in the Late Nineteenth Century*. New York: Oxford University Press, 1988.
- Marx, Leo. "Does Improved Technology Mean Progress?" In *Technology and the Future*, Ninth Edition, edited by Albert H. Teich, 3-12. Belmont, CA: Thomson and Wadsworth, 2003.
- McEachern, Martin. "Back to the Retro Future: Bethesda Turns the 1950s World of Tomorrow into a Radioactive Wasteland in *Fallout 3*." *Computer Graphics World* 32.3 (March 2009): 6-14.
- Nora, Pierre. "Between Memory and History: Les Lieux de Mémoire." *Representations* 26 (Spring 1989): 7-25.

- Rejack, Brian. "Toward a Virtual Reenactment of History: Video Games and the Recreation of the Past." *Rethinking History* 11.3 (Sept 2007): 411-425.
- Shapiro, Jerome F. *Atomic Bomb Cinema: The Apocalyptic Imagination on Film*. New York: Routledge, 2002.
- Schut, Kevin. "Strategic Simulations and Our Past: The Bias of Computer Games in the Presentation of History." *Games and Culture* 2.3 (July 2007): 213-235.
<http://gac.sagepub.com/cgi/content/abstract/2/3/213>.
- Sconce, Jeffrey. *Haunted Media: Electronic Presence from Telegraphy to Television*. Durham, NC: Duke University Press, 2000.
- Sobchack, Vivian. "Science Fiction Film and the Technological Imagination." In *Technological Visions: The Hopes and Fears that Shape New Technologies*, edited by Marita Sturken, Douglas Thomas, and Sandra J. Ball-Rokeach, 145-158. Philadelphia, PA: Temple University Press, 2004.
- Sontag, Susan. "The Imagination of Disaster." In *Hibakusha Cinema: Hiroshima, Nagasaki, and the Nuclear Image in Japanese Film*, edited by Mick Broderick, 38-53. London, UK: Kegan Paul International, 1996. Originally Published in Sontag, Susan. *Against Interpretation, and other essays* (New York: Farrar, Straus, & Giroux, 1966).
- Squire, Kurt. "Cultural Framing of Computer/Video Game." *The International Journal of Computer Research* 2.1 (July 2002). <http://www.gamestudies.org/0102/squire>.
- Squire, Kurt and Henry Jenkins. "Harnessing the Power of Games in Education." *Insight* 3 (2003): 5-33.
- Sturken, Marita. *Tangled Memories: The Vietnam War, the AIDS Epidemic, and the Politics of Remembering*. Berkeley, CA: University of California Press, 1997.
- Sturken, Marita and Douglas Thomas. "Introduction: Technological Visions and the Rhetoric of the New." In *Technological Visions: The Hopes and Fears that Shape New Technologies*, edited by Marita Sturken, Douglas Thomas, and Sandra J. Ball-Rokeach, 1-18. Philadelphia, PA: Temple University Press, 2004.
- Sturken, Marita. "Mobilities of Time and Space: Technologies of the Modern and the Postmodern." In *Technological Visions: The Hopes and Fears that Shape New Technologies*, edited by Marita Sturken, Douglas Thomas, and Sandra J. Ball-Rokeach, 71-91. Philadelphia, PA: Temple University Press, 2004.

Taylor, Laurie N. and Zach Whalen. "Playing the Past: An Introduction." In *Playing the Past: History and Nostalgia in Video Games*, edited by Zach Whalen and Laurie N. Taylor, 1-15. Nashville, TN: Vanderbilt University Press, 2008.

"Timeline." *Bulletin of the Atomic Scientists Online*. 2010. <http://thebulletin.org/content/duroomsday-clock/timeline>.

Winner, Langston. "Sow Ear's from Silk Purses: The Strange Alchemy of Technological Visionaries." In *Technological Visions: The Hopes and Fears that Shape New Technologies*, edited by Marita Sturken, Douglas Thomas, and Sandra J. Ball-Rokeach, 34-47. Philadelphia, PA: Temple University Press, 2004.

VITA

Racquel Maria Gonzales was born in Fort Worth, Texas. After completing her work at the School of Finance and Communications in Polytechnic High School, Fort Worth, Texas, she entered the University of Southern California in Los Angeles, California. During the spring of 2007, she attended the International Center for Hellenic and Mediterranean Studies in Athens, Greece. She received the degree of Bachelor of Arts from the University of Southern California in May, 2007. In August 2008, she entered the Graduate School at The University of Texas at Austin. She is continuing her graduate studies at the University of California, Irvine.

Permanent email: rmgonzal@alumni.usc.edu

This thesis was typed by the author.