

# Worlds To Win

The Politics of Transnational Audiences in  
*The Witcher 3, Fallout 4 and Freeman's Mind*

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## Introduction

### Videogames as Transnational Aesthetics

Videogames have become the largest single branch of the recorded media industry on the planet, with annual world sales exceeding \$100 billion in 2016.<sup>1</sup> Yet the importance of videogames far exceeds the metric of sales. They have become one of the key technological drivers of a vast infrastructure of computers, consoles, and smartphones. At the same time, they are structurally tied to new transnational audiences, to new forms of peer production, and to the institutions of the digital commons.<sup>2</sup> Above all, videogames are humanity's first truly planetary art-form. They tell interactive stories which enthrall billions of human beings, and their most realized works are some of the greatest aesthetic achievements of our time.

As a planetary art-form, videogames also embody some of the deepest economic, political and cultural contradictions of the contemporary era. Prime among these is the seismic clash between transnational capitalism and transnational labor, or more precisely, between the approximately two thousand billionaires who own the majority of the planet's wealth and the 7.6 billion of us who work for a living.<sup>3</sup> Given that videogames are produced and sold by some of the largest media corporations on the planet, it is not surprising that many videogame franchises celebrate the world-view of those billionaires, a.k.a. neoliberalism or transnational plutocracy.<sup>4</sup>

What needs to be explained, however, is why some of the most innovative and popular videogame franchises of the early 21<sup>st</sup> century uphold a set of beliefs and institutional practices diametrically opposed to plutocracy. These beliefs are those of transnational democracy, and these practices are those of the digital commons. What makes these beliefs and practices so powerful is that they are inherently planetary and thus not restricted to any single regional, national or even international culture or polity. Nor are they limited to tiny groups of privileged dissidents or elite code workers. They are produced and sustained by the daily labor of the billions of human beings with regular access to the internet.

This is why the greatest videogames and videogame-related digital media of the post-2008 period are both the purest products of transnational capitalism, as well as the purest embodiments of the transnational resistance to that capitalism.<sup>5</sup> This text will explore this contradiction in the context of three of the landmark works of the early 21<sup>st</sup> century. These works are CD Projekt's fantasy role-playing videogame *The Witcher 3: The Wild Hunt* (2015), referred to hereafter as *Witcher 3*; Bethesda Softworks' science fiction role-playing videogame *Fallout 4* (2015); and Ross Scott's machinima series *Freeman's Mind* (2007-2014).<sup>6</sup>

Whereas *Witcher 3* and *Freeman's Mind* are masterpieces of the genres of the fantasy role-playing videogame and the machinima series, respectively, *Fallout 4* is a lesser work of art, due to structural weaknesses in its story and quest design. Nonetheless, *Fallout 4* makes key contributions to the genre of open world science fiction which will be of interest to videogame fans, scholars of interactive media, videogame artists and ordinary citizens. Conversely, whereas *Witcher 3* and *Fallout 4* were produced by commercial videogame studios and achieved blockbuster sales success,<sup>7</sup> *Freeman's Mind* garnered smaller audiences and only minimal financial returns. This series nonetheless deserves the most careful study due to its extraordinary narrative quality and its audience-centered mode of production, which testifies to the fact that

transnational audiences are beginning to produce media of the highest quality outside of the control of the commercial culture-industry.

Before examining these three works more closely, however, it is necessary to put the emergence of transnational audiences in its proper historical context. As late as 2001, only one-third of the approximately 500 million internet users on the planet were citizens of the fully industrializing nations. By 2008, half of the world's 2 billion internet users were citizens of the industrializing nations, and by 2016, these latter comprised seventy percent of the world's 3.4 billion internet users.<sup>8</sup>

What makes today's transnational audiences so different from all previous audiences is not just their planetary size and their location in the industrializing nations, but the wide variety of digital tools at their disposal. These latter range from social media platforms and open source software to digital services increasingly run on the principles of egalitarian sharing rather than monopoly rent-seeking, e.g. Google's Android, Valve's Steam, and CD Projekt's GOG.com.

Indeed, the success or failure of videogames is increasingly determined not by corporate advertising campaigns or by oligopoly media pipelines, but by transnational audiences with exponentially increasing amounts of computing power at their disposal. This exponential increase can be subdivided into three smaller trends, namely the exponential rate of improvement in storage, in microprocessor power, and in internet connectivity in terms of cost per unit of data -- trends more popularly known as Kryder's Law, Moore's Law, and Nielsen's Law.<sup>9</sup>

Over time, the operation of these three laws has decreased the monopoly power of transnational media corporations and governments over the production and distribution of information, and increased the power of digital artists and transnational audiences.<sup>10</sup> Whereas a cinema fan might watch a two-hour film two or three times, videogame players routinely spend eight to ten hours on a single play-through of a top-tier videogame, while dedicated fans can spend hundreds of hours exploring open digital worlds.<sup>11</sup>

The rapid growth of these transnational audiences also help to explain why the greatest videogames of our time have been, without a single exception, stinging critics of plutocracy. The the greatest third-person shooter ever made, Remedy's *Max Payne* (2001), told the story of an ordinary New York City police detective battling a malevolent transnational corporation. Square Enix' *Final Fantasy 12* (2006), the greatest fantasy role-playing videogame prior to the release of *Witcher 3*, delivered a scathing critique of imperialism and neocolonial warfare. The single best fantasy-adventure videogame ever made, Sony Santa Monica's *God of War 3* (2010), infused the Greek-themed mythological epic with the subversive energies of the late 20<sup>th</sup> century neo-slave narrative. The two finest visual novel videogames of all time, Spike Chunsoft's *Dangan Ronpa* (2010) and *Super Dangan Ronpa 2* (2012), were scintillating denunciations of the plutocratic demolition of public education and the toxic identity-politics of transnational consumerism.

The planetary scale and burgeoning networks of today's transnational audiences present unique challenges to the critical interpretation of videogames and its associated digital media. Book reviewers are rarely required to understand the mechanics of mid-18th century book editing and publishing in the manner of Robert Darnton's *The Business of Enlightenment*,<sup>12</sup> while the vast majority of music critics need not familiarize themselves with the history of acoustic compression algorithms explored by Jonathan Sterne's "The MP3 as Cultural Artifact".<sup>13</sup> Yet even the most cursory analysis of a work of interactive media requires an in-depth understanding of the institutions of the digital commons, the structure and role of fan communities, and the

audience reception of the specific genre of interactive media in question.

We will suggest three interpretive concepts to help meet these challenges. These concepts are game-play, game balance, and replayability. The first, game-play, refers to the set of player inputs necessary to complete the game. At its simplest, this means the precise number, sequence and timing of button-presses, hand-motions, tablet swipes, mouse clicks, or other player actions. Just as alphabets and pictograms can generate an infinite variety of linguistic meaning in human languages, so too can the simplest sets of player inputs generate an inexhaustible variety of interactive experiences.

At its most complex, game-play encompasses the sum total of all actions which players can perform inside the videogame. This includes the interfaces which allow players to control their avatar or multiple avatars, the strategies players employ to master the challenges presented by the specific rules of the game, and player customization of in-game abilities, conditions and attributes. It also encompasses the interfaces which allow players to record their in-game actions, to save their in-game progress, to create and share player-created media (social avatars, screenshots, sound tracks, video clips and the like), and to interact with other fans in online and offline settings.

The second interpretive concept is game balance. The main metric of game balance is the subjective capacity of players to learn as they progress through the game. The central imperative of game balance is to maintain the equilibrium between the challenge of progression, and the rewards players earn for overcoming successive challenges. Creating and sustaining this equilibrium has always been one of the single most challenging tasks facing game designers, for the simple reason that videogame audiences are enormously diverse in terms of their individual playing styles, skills, and learning capacities. If the challenges are too difficult or increase in difficulty too quickly, the interactive experience breaks, i.e. players will feel frustrated and will not be motivated to improve their skills. If the challenges are too easy, players will feel boredom. Studios meet this dual challenge by means of extensive iteration and cross-disciplinary testing.<sup>14</sup>

The third interpretive concept, replayability, refers to the enduring appeal of the videogame to its audience over time. Replayability is based on the tension between the ability of players to learn and the ability of the game to teach. One of the most common forms of replayability is to replay a game on a higher difficulty setting, giving players a renewed challenge and allowing them to hone their game-play skills and refine their strategies. Other common forms include multiplayer gaming, as fans replay their favorite games in online and offline communities. While there are limited parallels between replayability and the ways in which fans of commercial franchises create fan art, or the ways fans create informal institutions around commercial sports industries, the interactive nature of videogames means that replayability is a core feature of the medium.

While game-play, game balance and replayability are all significant innovations in their own right, their true power is revealed only by their collective integration. The most successful videogames combine all three categories into a compelling whole, while the least successful do not. Achieving this integration is an extraordinarily difficult task, and has spurred the rise of the occupational specialization of the videogame designer.<sup>15</sup>

Videogame designers exercise some of the functions of a film director, e.g. overall responsibility for staffing and personnel, scriptwriting, editing, and post-production. They also administer many of the key functions of the franchise, e.g. continuous engagement with fan

communities, quality assurance and testing, and coordination between the globe-spanning networks of skilled workers.

Where videogame designers diverge from other media professionals, however, is their professional mandate to maximize the category of replayability. While the programming of serial media such as commercial radio and television are purely a means to sell advertisements, which encourages studios to prioritize short-term audience ratings above all else, there are no such constraints on videogames, where the time spent by players does not necessarily correlate with their financial investment in the videogame.

One of the challenges facing videogame designers is that the larger and more complex videogames have become, the greater the weight of systemic categories on the category of replayability. Simply, the totality of the player's interactive experiences and choices is greater than the sum of each visual detail, sound cue, character ability, item usage, or dialogue choice. This totality generates a semi-autonomous life of its own, or what players subjectively perceive as their immersion in the videogame.

To the extent videogames function as platforms for the player's experiences, achievements, successes and failures, they operate more like contemporary operating systems or social media platforms than as individual software programs. Just as operating systems and platforms allow users to access an exponentially increasing array of digital materials and tools, so too do contemporary videogames enable players to access exponentially increasing amounts of in-game items and external game modifications.

At a certain point, the sheer size and complexity of the in-game choices available to players propels videogames away from their status as commercial products or information commodities and towards a non-commercial zone of digital participation: the market of informatic scarcity accedes to the commons of informatic abundance.<sup>16</sup> It is no accident that the enabling role of open source software and non-commercial distribution vis-a-vis social media platforms mirrors the enabling role of non-commercial digital media production by modders and fan communities vis-a-vis videogames.

This is why videogames, to paraphrase Theodor Adorno, are among the most significant seismographs of historical experience in the age of transnational capitalism. We will argue that the popular appeal of videogames is best understood as a variant of the political concept of public credibility, that is to say, the mass legitimacy (or illegitimacy) of a given political order, a specific cultural practice, or an individual economic institution. Videogames with low credibility have limited mass appeal due to their tendency to generate player frustration (excessive challenges which result in insufficient rewards) or player boredom (insufficient challenges which result in meaningless rewards) for the audience. Conversely, videogames with high credibility are appealing because they reward new and unskilled players for exploring the game, while providing more experienced players with challenges and rewards appropriate to their increased skill level.

From the standpoint of game designers, credibility is where playability (the player's willingness to perform any given in-game action) converges with replayability (the player's desire to repeat those actions and improve their skills over time). Creating and maintaining this credibility is quite possibly one of the most difficult aesthetic challenges ever faced by human beings for three reasons.

The first reason is that transnational audiences are not a unified, homogenous mass. They

are subdivided by myriad languages, nationalities, ethnicities, occupations, income levels and technological platforms. Since videogames are a fundamentally interactive rather than passive media, game-worlds must establish their narrative credibility (a combination of their initial playability and their replayability over time) across an extraordinarily broad spectrum of players and cultures. This means contemporary videogames must tell stories which transcend the barriers of race, gender, class, national identity, linguistic heritage, occupation, age, and technological access which divide transnational audiences.

The second reason is that today's transnational audiences have significant and increasing power over several key aspects of interactive media. This includes power over the circuits of media reception (audiences can digitally mobilize to make or break even the biggest franchises), power over distribution (audiences actively select digital media from proliferating online platforms rather than from a few oligopoly media pipelines, reducing the power of advertising), and power over production (fan-created media can dramatically expand the narrative scope and density of game-worlds). Whereas 20th century national audiences primarily consumed their own media culture or imports of US film, television and popular music, today's transnational audiences routinely download media content as diverse as China's Hong Kong action films, India's Bollywood films, Japanese animation and Polish videogames.<sup>17</sup>

Thirdly, the demographic majority of today's transnational audiences are citizens of the industrializing nations. This audience is increasingly demanding videogames which acknowledge the searing historical experiences of empire, anti-colonial national revolutions, and postcolonial nation-state formation from the perspective of the colonized rather than the colonizers.

The most successful videogames of the early 21st century have resolved these three challenges in three ways. First, they created playable and non-playable characters which critique the market-based identity-politics of transnational capitalism. Second, they have invented modes of game-play which turn the energies of the digital commons against plutocracy. Third, they have created open worlds constructed from a planetary array of stories, by borrowing copiously from digital media all over the world, as well as from the mass media and literatures of the industrializing nations.

This did not occur overnight, of course, but required a lengthy process of artistic experimentation and community feedback. For example, Hideo Kojima's *Metal Gear* series began in 1987 as a straightforward pastiche of the James Bond thrillers and the Japanese mecha (giant robot) genre. However, its two most successful iterations in the early 21st century -- *Metal Gear Solid 3: Subsistence* (2004) and *Metal Gear Solid 4: Guns of the Patriots* (2008) -- drew on the materials of the postcolonial Vietnam war memoir (Bao Ninh's *The Sorrow of War* (1990)) and the postcolonial urban action thrillers of the industrializing nations (in particular, Timur Bekmambetov's *Nightwatch* (2004), Joon-ho Bong's *The Host* (2006) and Jode Padhila's *Elite Squad* (2007)) to create the transnational stealth espionage thriller.

Similarly, Sony Santa Monica's *God of War* franchise began as a straightforward Greek mythology epic, but reached its narrative peak by borrowing heavily from the transnational neo-slave novel (e.g. Toni Morrison's *Beloved* (1987) and Évelyne Trouillot's *The Infamous Rosalie* (2004)). The result was *God of War: Ghost of Sparta* (2010) and *God of War 3* (2010), earth-shattering spectacles of transnational slave insurrections.

Two other striking case studies of the power of transnational audiences include Square's role-playing fantasy *Final Fantasy 12* (2006) and Spike Chunsoft's *Danganronpa* (2010) and

*Danganronpa 2* (2012). *Final Fantasy 12* transformed J.R.R. Tolkien's *Lord of the Rings* trilogy, the Anglo-American pulp fantasy genre, and the neocolonial geopolitics of East Asia and Southeast Asia during the Cold War into an epic tale of anti-colonial insurrection against an energy-hungry empire, while the two *Danganronpa* games reappropriated the Japanese high school role-playing videogame typified by Atlus' *Persona* role-playing videogame series, the serial media of travel and food tourism exemplified by Anthony Bourdain's *No Reservations* (2005-2012), and the postcolonial historical novel incarnated in Amitav Ghosh' *Sea of Poppies* (2008) to create the first great anti-neoliberal interactive visual novel.

For all of the immense achievements of these artists and studios, they could never break free of the fundamental constraints of the commercial culture-industry, namely the corporate ownership of hardware and software platforms. The signal importance of *Witcher 3*, *Fallout 4* and *Freeman's Mind* is that they narrate the historical moment that videogame culture began to break free of these constraints, namely the conjuncture of 2013-2014 -- the first two from within the heart of the commercial culture-industry, and the third from a position at its margins.

All three works of art testify to the fact that transnational audiences are no longer passive recipients of media. They have become active digital citizens and cultural producers in their own right. In a world-system where two thousand billionaires relentlessly seek to transform play into digital labor, the 7.6 billion of us who work for a living just as relentlessly struggle to transform digital labor into play, and our greatest videogames are the anticipatory walk-throughs of transnational class struggles to come. Players of the world, unite -- we have worlds upon worlds to win!

1. Videogame sales data is from February 2017, Newzoo: <https://newzoo.com/insights/rankings/top-100-countries-by-game-revenues/>. This is significantly larger than Variety's estimate of world box office revenues for cinema (\$38 billion in 2016) or IFPI's estimate of world recorded music revenues (\$15 billion in 2014). Variety: <http://variety.com/2017/film/box-office/2016-global-box-office-1201968877/>. IFPI: <http://ifpi.org/news/IFPI-GLOBAL-MUSIC-REPORT-2016>. To keep these figures in perspective, ZenithOptimedia estimated the largest media market of them all, namely advertising expenditure, reached \$537 billion in 2014. <http://www.reuters.com/article/2014/04/06/advertising-media-idUSL5N0MW2JH20140406>.

2. Benkler, Yochai. (2003). "The Political Economy of Commons." Upgrade 4:3 (6-9). Web: <http://www.benkler.org/Upgrade-Novatica%20Commons.pdf>. Accessed October 31, 2010. Also see: Yochai Benkler. *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. New Haven: Yale University Press, 2006.

3. Forbes Billionaire List 2018. <http://www.forbes.com/billionaires/>.

4. The most useful critiques of neoliberalism as an economic system have been delivered by Ha-Joon Chang and Joseph Stiglitz. Ha-Joon Chang. *Bad Samaritans: the Myth of Free Trade and the Secret History of Capitalism*. New York: Bloomsbury Press, 2008. Joseph Stiglitz. *Freefall: America, Free Markets and the Sinking of the World Economy*. New York: W.W. Norton & Co., 2010. For useful overviews of the political economy of information under neoliberalism, see: Dan Schiller. *Digital Capitalism: Networking the Global Market System*. Cambridge: MIT Press, 1999. Also see: Nick Dyer-Witford. *Cyber-Marx: Cycles and Circuits of Struggle in High-tech Capitalism*. Chicago: University of Illinois, 1999.

5. This contradiction had its prehistory in the mainstream videogame franchises of the 1980s, 1990s and early 2000s. Since these franchises were aimed primarily at First World markets rather than today's transnational audiences, they either celebrated the US economic, political and cultural hegemony of that era, or else dissented from such. Dyer-Witford and de Peuter provide this lucid account of this earlier generation of videogames: "Virtual games are exemplary media of [US] Empire. They crystallize in a paradigmatic way its constitution and its conflicts. Just as the eighteenth-century novel was a textual apparatus generating the bourgeois personality required by mercantile colonialism (but also capable of criticizing it), and just as twentieth-century cinema and television were integral to industrial consumerism (yet screened some of its darkest depictions), so virtual games are media constitutive of twenty-first-century global hypercapitalism and, perhaps, also of lines of exodus from it...

...The game industry has pioneered methods of accumulation based on intellectual property rights, cognitive exploitation, cultural hybridization, transcontinentally subcontracted dirty work, and world-marketed commodities. Game making blurs the lines between work and play, production and consumption, voluntary activity and precarious exploitation, in a way that typifies the boundless exercise of biopower. At the same time, games themselves are an expensive consumer commodity that the global poor can access only illicitly, demonstrating the massive inequalities of this regime." Nick Dyer-Witford and Greig de Peuter. *Games of Empire: Global Capitalism and Video Games*. Minneapolis, MN: University of Minneapolis Press, 2009. Introduction, xxix.

6. Machinima are works of digital video or cinema created by using videogame rendering software.

7. Between 2015 and 2017, *Witcher 3* sold somewhere between 12 to 14 million copies and *Fallout 4* approximately 14 million copies across a variety of platforms. Jordan Sirani. “The Witcher Series Sales Pass 25 Million.” <http://www.ign.com/articles/2017/03/30/the-witcher-series-sales-pass-25-million>. Luke Villapaz. “Fallout 4' Sales Record Breaking: 12 Million Copies Worth \$750 Million Sold At Launch.” *International Business Times*. November 13, 2015. <http://www.ibtimes.com/fallout-4-sales-record-breaking-12-million-copies-worth-750-million-sold-launch-2183997>.

8. Internet World Statistics. <http://www.internetworldstats.com/>.

9. Kryder's Law states that the capacity of electronic storage doubles every 12 months, Moore's Law states that the capacity of data processing increases every 18 months, and Nielsen's Law states that the capacity of transporting data via the internet doubles every 21 months. The flip side of these exponential increases is a decrease in costs, i.e. the cost of storing data halves every 12 months, the cost of processing halves every 18 months, and the cost of transporting data halves every twenty-one months. While all three laws have been more or less accurate from 1971 until the early 2000s, there is strong evidence to suggest that all three rates have slowed down over the past decade. The reason is that all technological improvements generally follow an “S” pattern – slower short-term growth, rapid medium-term growth, and shorter long-term growth – rather than trending permanently upward (e.g. the average speed of trains, automobiles and airplanes does not increase to infinity). Data preservation specialist David Rosenthal provides this useful insight into the increasing physical and economic constraints facing continued exponential growth in data storage: <http://blog.dshr.org/2014/05/talk-at-seagate.html>.

10. Today's most successful videogame studios are not the ones which most ruthlessly exploit their employees or fleece their customers, but the ones which give their workers the most creative freedom and give customers access to the tools of the digital common. While Valve Software's egalitarian internal division of labor, exemplified in its legendary handbook for new employees, is the most famous example of this trend, similar tendencies are at work elsewhere in the industry, e.g. Sony's Naughty Dog and Santa Monica Studio, the creators of the world-class *Uncharted* and *God of War* franchises, respectively, are organized as flat hierarchies and cooperative production networks. See: Valve Employee Handbook. [www.valvesoftware.com/company/Valve\\_Handbook\\_LowRes.pdf](http://www.valvesoftware.com/company/Valve_Handbook_LowRes.pdf). Benson Russell. “Designing Combat Encounters in *Uncharted 2*, Part 2.” *Gamasutra*. July 1, 2010. [http://www.gamasutra.com/view/feature/134317/designing\\_combat\\_encounters\\_in\\_.php?print=1](http://www.gamasutra.com/view/feature/134317/designing_combat_encounters_in_.php?print=1).

11. This extensive time investment is antithetical to most 20<sup>th</sup> century business models of mass media. These latter are based on oligopoly control over the circuits of production and distribution (e.g. the ad-sponsored live sports broadcast, ad campaigns for blockbuster films which are shown only in specific theaters, and the seasonal cycle of fresh television programming designed to garner maximum advertising revenues). By contrast, videogame fans are increasingly able to download the interactive experience of their choice at a time and on a device of their own choosing.

12. Robert Darnton. *The Business of Enlightenment: A Publishing History of the Encyclopédie, 1775–1800*. Cambridge: Harvard University Press, 1979.

13. Jonathan Sterne (2006). “The MP3 As Cultural Artifact.” *New Media & Society* 8:5 (825-842). <http://sternetworks.org/mp3.pdf>.

14. Przemyslaw Wojcik describes the strategies employed by the quality assurance team at CD Projekt Red in order to maintain game balance as follows: “A good QA [quality assurance] team has to consist of different types of people. We have to have casuals and hardcores on board. If we have people that beat every game, get every achievement in it – then we have only one point of view. If you find a part of any game to be always absurdly difficult, be sure that it was tested only by hardcores. Dividing the team is important not only when it comes to setting the bar for game difficulty, but also other factors. In our current projects we allow only half of the team to read the whole story of the game, while the rest doesn’t know it at all; this second group can then give us feedback about the comprehension and presentation of the story. In *The Witcher 2* we gathered a team with people who had read Sapkowski’s novels and people who knew squat about Geralt. We’re creating a game, after all, for people who are unaware that these novels even exist. I say that if every tester who has beaten the game a hundred times (in terms of gameplay hours) says it’s easy, it means that everything is just as it should be.

When we are talking about balance in the game it’s not all about mechanics, but also about presentation. We analyze the game’s length and what happens in particular playthroughs. We can show the designers that a particular quest has too little or too much combat, dialog or cutscenes. There are a lot of things to check when analyzing the game, so we try to divide tasks so nobody gets bored doing the same thing over and over. We set two weeks as the maximum time a person works on one aspect: gameplay, performance etc. and then we let them switch tasks. It’s great when a person can rest from one part of the game and when he or she returns after some time to this fragment of the game they can approach an old job with new perspective and give valuable feedback.” CD Projekt Red Blog. <http://cdpred.com/divide-and-test-balance-your-qa-balance-the-game/#more-1506>. Accessed March 20, 2013.

15. “Every [videogame] designer I met seemed to come from a different background: physics, computer science, media studies, film studies, graphic arts, writing, or journalism just to name a few. More designers were 'self taught' than artists or engineers. Though they seemed to come from every disciplinary background imaginable, the common theme was: designers are gamers more than any other discipline within game development. Designers frequently had skills that seemed to transcend disciplinary boundaries. Designers must possess analytic skills, which allows them to deconstruct games, examine their core elements and mechanics, and determine the underlying rules and structure of a game.” Casey O'Donnell. *The Work/Play of the Interactive New Economy: Video Game Development in the United States and India*. Dissertation Thesis, Science and Technology Studies. Troy, NY: Rensselaer Polytechnic University, 2008. [http://digitool.rpi.edu:1801/webclient/DeliveryManager?application=DIGITool-3&owner=resourcediscovery&custom\\_att\\_2=simple\\_viewer&pid=11525](http://digitool.rpi.edu:1801/webclient/DeliveryManager?application=DIGITool-3&owner=resourcediscovery&custom_att_2=simple_viewer&pid=11525). Accessed May 21, 2011.

16. One of the most interesting features of videogames is their capacity to create in-game economic systems as tools of interactive story-telling. In many videogames of the 1970s and 1980s, this took the form of the “high score” which measured the player's in-game proficiency. More complex versions of this dynamic include the items and loot acquisition system of role-playing videogames, and the various online trophies and achievements awarded for specific player actions inside a videogame.

17. Social Science Research Council. (2010). *Media Piracy in Emerging Economies*. Joe Karaganis, Editor. Web: <http://piracy.ssrc.org>. Accessed April 15, 2011.

## Chapter 1

### *The Witcher 3 and Transnational Open Worlds*

CD Projekt's *The Witcher 3* (2015) marks a watershed in videogame culture. This is the moment when the digital studios of the industrializing nations began to produce open world videogames equal in both aesthetic quality as well as mass popularity to the leading works of studios located in the fully industrialized nations.<sup>1</sup> During its first year on the market, *Witcher 3* sold 10 million official copies and received 253 game of the year awards from a variety of media outlets.<sup>2</sup> To be sure, *Witcher 3* was not the first open world videogame created by the digital artists of an industrializing nation to achieve transnational blockbuster status. This was the signal achievement of Polish studio Techland's *Dead Island* (2011), a horror-survival videogame which sold 4.84 million copies over four years.<sup>3</sup>

Yet what *Witcher 3* achieved which no other fantasy role-playing videogame did before was to invent a new kind of open world for the transnational audiences of the post-2007 period. This open world is founded on an equilibrium between two antagonistic design principles, namely the principle of maximum audience access to the open world, and the principle of maximum player agency inside the open world. Creating this equilibrium is a challenge for the simple reason that transnational audiences are enormously diverse in terms of skill, capacity and cultural background. Each individual player not only brings a different level of skill and preparation to the videogame, but players improve their in-game skills at variable rates of speed.

*Witcher 3* succeeded in balancing audience access with player choice through an innovative narrative strategy. This strategy was to link the category of individual player choice to its opposite, namely the category of historical necessity. Every choice the player makes has consequences on the fates of other characters, on the destiny of various communities, and ultimately on the outcome of the entire videogame. What makes these player choices such a compelling interactive experience is that they are grounded in the historical realities of geopolitical closure.

While most fantasy role-playing videogames create fictional worlds based loosely on the real world histories of the American, British, French, Japanese, Portuguese and Spanish empires and the revolutions and rebellions of their maritime colonies, CD Projekt did something new by drawing on a rather different set of imperial and anti-colonial histories. *Witcher 3*'s open world portrays the empires and anti-colonial movements of Eastern Europe and Eurasia between 1795 and 1945, a.k.a. the period between the demise of the Polish-Lithuanian Commonwealth and the end of World War II.

This choice of venue and time-period had two beneficial effects on *Witcher 3*. First, it enabled CD Projekt to critique the past legacies of imperialism, colonialism and neocolonialism in ways no work of interactive media had ever done before.<sup>4</sup> Second, it enabled CD Projekt's writers and quest designers to showcase contemporary struggles for gender equality and diversity, racial justice, and economic justice through the convenient fiction of a medieval-fantasy setting. The result is an electrifying combination of the tools of transnational history together with the digital immediacy of contemporary citizen journalism.

The power of this combination is visible from the very beginning of *Witcher 3*, when the

player steps into the mud-spattered boots of Geralt of Rivia. Geralt is searching for Ciri, his vanished adoptive daughter, amidst the chaos of a titanic war between the rival empires of Nilfgaard and Redania. Both Nilfgaard and Redania are repressive autocracies, with little regard for the lives they sacrifice for their imperial expansion.

What makes things complicated is that Geralt is a member of a despised caste of monster-slayers called witchers, humans mutated through magical means to become fearsome warriors. These mutations alter the appearance and behavior of witchers, causing them to be feared and distrusted by nearly all communities in the open world.

For her part, Ciri is no damsel in distress, but wields formidable magical and martial powers in her own right. During key moments of *Witcher 3*, Ciri becomes a fully playable character, which makes her the structural equal of Geralt in terms of her importance to the overall storyline. Both playable characters battle against the everyday violence of 17<sup>th</sup> and 18<sup>th</sup> century dynastic expansionism, as well as the xenophobia, racism and misogyny of 19<sup>th</sup> and 20<sup>th</sup> century imperialism and colonialism.

CD Projekt's remarkable story-telling achievement had two historical preconditions. The first was the popularization of hardware platforms capable of depicting 3D open worlds with near-cinematic visual and acoustic fidelity. In terms of price, these platforms run the gamut from Microsoft's XboxOne and Sony's Playstation 4 videogame consoles, which cost \$350 in 2015 dollars, to midrange personal computers costing \$1,300 or less.<sup>5</sup>

Between 2013 and January 2016, the combined sales of the XboxOne and PS4 reached 55.6 million units. Gartner has estimated 1.635 billion personal computers were purchased worldwide between 2011 and 2015. On the conservative assumption that only one out of seven of these computers meet the technical requirements to run *Witcher 3*, and that at least half of all console owners are likely to have access to a videogame-capable personal computer, the potential audience for *Witcher 3* numbered a minimum of 289.2 million by the end of 2015.<sup>6</sup>

The second precondition for *Witcher 3* was the emergence of transnational digital audiences. By November 2015, the number of world internet users passed the 3.4 billion mark, comprising 46% of all human beings on the planet. Out of this 3.4 billion, 2.5 billion (three quarters of all users) are citizens of the industrializing nations. While many of these users rely on mobile devices with limited processing power, the continuing dissemination of personal computers, the expansion of broadband internet, and the spread of social media platforms throughout the industrializing world have combined to significantly increase the size of world videogame audiences.

This expansion of the audience has profoundly changed the field of videogame production. To understand this change, it is worth reflecting for a moment on the differences between *Witcher 3*'s production history and Square Enix's *Final Fantasy 12* (2006). At the time of *FF12*'s release, Square was one of Japan's largest videogame publishers, with revenues of \$1.38 billion in fiscal 2007.<sup>7</sup> Backed by the resources of a billion dollar company, Square's digital artists created one of the finest role-playing fantasy videogames of all time. To this day, *FF12* shines thanks to its combination of superlative voice acting, music, sound design and character development, and a compelling story deeply critical of colonialism and imperial war.<sup>8</sup>

However, Square's ability to reach audiences was limited by some fundamental constraints. *FF12* was published as a Sony Playstation 2 console exclusive, the best-selling console of its time, and sold an estimated 6.06 million official copies. However, 79% of the

PS2's lifetime sales – 122 million out of 155 million units – took place in Japan, North America and Europe.<sup>9</sup> In effect, sales of one of the most popular videogames of the 2006-2012 period were largely restricted to the one billion consumers of the fully industrialized nations.

By contrast, *Witcher 3* was created by a tiny start-up studio located in Poland, a middle-income industrializing nation. While the studio did not have the resources of a billion dollar corporation at its disposal, it did have an express mandate to appeal to all 3.4 billion consumers of the transnational audience, rather than to the 30% of these consumers (roughly 1 billion in number) who are residents of the fully industrialized nations. This mandate was not an accident, but is rooted in the circumstances of the company's foundation as one of the pioneering digital and interactive media firms of the industrializing nations.

In 1994, CD Projekt was founded as a videogame retailer by Marcin Iwiński and Michał Kiciński. The name is a reference to the compact disc, the leading personal computer storage media of the mid-1990s. The company's first major line of business was localization, i.e. the retail distribution of officially licensed videogames in the Polish market. This was challenging market, due Poland's painful transition away from an autarkic economy run by an unelected nomenklatura to a mixed open economy run by consumer demand and democratic elections. Since most Poles did not have the income to purchase legal copies of videogames, they bought cheaper, unlicensed copies from informal vendors.

Yet unlike most of their competitors, the founders of CD Projekt were motivated not by short-term profits, but by a long-term vision. Their goal was to create a legitimate channel of digital publishing and distribution in Poland, and eventually to become producers of videogames in their own right. The first step they took was to treat informal distribution not as a problem, but as a potential solution.<sup>10</sup>

Thanks to their biographical experiences as Polish gamers, the founders of CD Projekt understood that informal distribution flourished because of a fundamental disconnect between supply and demand. Audiences in Poland and other industrializing nations wanted to purchase software, but simply could not afford prices designed for consumers with US, Japanese or Western European income levels (e.g. \$30 to \$60 in 1995 dollars, the equivalent of \$47 to \$93 in 2016 dollars). Since additional copies of digital goods cost almost nothing to produce, these high prices were self-defeating, because they blocked legitimate sales in middle-income and low-income nations. In effect, informal distribution was providing an essential market function by lowering the cost of digital goods to what audiences could realistically afford.<sup>11</sup>

CD Projekt also understood from the beginning that any attempt to stop informal distribution through legal restrictions or copyright laws would fail. This is because every aspect of computing – storage, processing and communication – constantly becomes less expensive per unit of data at an exponential rate. As prices fall exponentially, the total amount of data being stored, processed and transmitted increases exponentially. Conversely, it becomes exponentially more difficult for any commercial entity or government authority to arbitrarily block the informal storage or transmission of data.<sup>12</sup>

The founders of CD Projekt concluded that the only effective way to deter consumers from obtaining digital goods through informal markets was to deliver something the informal sector could never deliver. This “something” was long-term value. Instead of offering the lowest possible price, CD Projekt would offer the highest level of quality at affordable prices. In a phrase, when customers pay more, they get more.

CD Projekt's first test of this strategy was a retail campaign for the licensed version of Bioware's best-selling fantasy role-playing videogame *Baldur's Gate* (1998). CD Projekt carefully localized the videogame for the Polish market, providing consumers with fully translated dialogue, a free audio compact disc containing the game's sound-track, high quality Polish voice acting, and other incentives to compensate for the higher price of a legitimate copy. While the costs of producing this additional content were significant, the strategy proved enormously successful. CD Projekt sold 100,000 official copies of *Baldur's Gate*, an unprecedented total for an authorized release on the Polish market.<sup>13</sup>

Capitalizing on this and other successful campaigns, CD Projekt established their own in-house studio, CD Projekt Red, in 2002. While the new studio did not have the benefit of a vast production budget or the experience of shipping a successful title under its belt, it did have one key advantage other studios did not. This was the literary franchise the studio chose as the basis for its first videogame, namely Polish fantasy writer Andrzej Sapkowski's *Witcher* novels and short stories.<sup>14</sup> Sapkowski's works were immensely popular in Poland during the 1990s and circulated widely elsewhere via unofficial fan translations, but were not officially published in English and German until 2007.<sup>15</sup>

It has always been difficult to translate popular literary or cinema franchises into popular videogames. Most spin-off videogames tend to be substandard due to time constraints, e.g. Hollywood studios generally operate on a twelve to eighteen month production cycle, whereas top-tier videogame studios operate on a three to four year cycle. Even when sufficient development time and resources are available, the skills required to create compelling interactive experiences diverge fundamentally from those required to create compelling literary or cinematic content.

What made CD Projekt's task even more challenging was the unusually high quality of Sapkowski's *Witcher* novels. These novels do borrow from some of the familiar conventions of mainstream 20<sup>th</sup> century Western European and US fantasy literature and cinema, e.g. the use of magical devices as a symbol of technology and the depiction of non-human or fantasy races as a metaphor of ethnic divisions and social inequalities. However, their content is the furthest thing from genre clichés imaginable. Sapkowski's novels deliver a gritty and compelling critique of imperialism, xenophobia and colonial war. They also deliver a nuanced critique of the imperial-colonial masculinity endemic to many fantasy narratives, by showcasing a number of strong and credible female characters.

When CD Projekt began production on the first *Witcher* videogame in 2002, they made a crucial decision which dramatically increased their short-term workload, but which ultimately catapulted the franchise into a top tier videogame franchise. This decision was to avoid copying Sapkowski's stories and dialogues wholesale into the videogame. Instead, the studio used the characters and major themes of the novels as templates for all-new interactive experiences. These experiences did not duplicate existing content, but leveraged Sapkowski's work to create a credible open world. The secret behind the narrative excellence of the *Witcher* videogames is that they are actually digital fan media of the very highest caliber.<sup>16</sup>

To understand why CD Projekt chose this strategy, it is helpful to understand the critical importance of digital fan media in contemporary videogame culture. While forms of fan media have flourished at the margins of all pre-digital generations of mass media, digital fan media has the unique capacity to leverage the power of transnational networks of digital producers and

consumers. The first moment this power started to become visible was when the *Half Life* fan community began to use Valve's open source software tools to produce and distribute game modifications ("mods") as free downloads to other fans. The result was a flood of astonishing creativity which culminated in the creation of Neil Manke's *They Hunger* trilogy (1999-2001). This three-part *Half Life* mod, produced by an all-volunteer team who worked without any commercial remuneration, still stands as one of the finest single-player videogame experiences of its epoch.<sup>17</sup>

The scale and productivity of digital fan media continued to grow after the turn of the century, thanks to the proliferation of open source production software and social media platforms. Whereas *They Hunger* was produced by less than fifteen volunteers for a modding community numbering in the tens of thousands, Sony's *Little Big Planet* franchise (founded in 2008) flourished by giving literally millions of fans a powerful set of creation tools to produce non-commercial fan media.<sup>18</sup> Between 2009 and 2011, Markus Persson co-created the single most celebrated digital creation tool of our time, *Minecraft*, in close concert with a fan community numbering in the hundreds of thousands and eventually in the millions. Whereas previous generations of videogames were commercial products before they generated a digital commons, *Minecraft* was a digital commons before it generated Mojang, Persson's commercial videogame studio (Mojang was purchased by Microsoft for \$2.5 billion dollars in 2014).<sup>19</sup>

Far from being a passive bystander of the rise of digital fan media, CD Projekt was one of its key participants as early as 2007. This is the moment the firm decided to launch its very own digital distribution system, called Good Old Games (<https://gog.com>). As a service developed by a gaming-centric company who knew how to succeed in an environment of informal vendors and almost no copyright enforcement, Gog.com did not try to impose 20<sup>th</sup> century copyright laws on consumers. Instead, it offered customers a fair trade. In exchange for purchasing legitimate copies of videogames at prices higher than those of informal vendors, GOG customers received three additional services which significantly increased the value of their purchase.

First, CD Projekt promised to never impose digital rights management (so-called "DRM") restrictions or software on legitimately purchased games. Once customers purchase and download a videogame from Gog.com, they can make as many additional copies on their own device as they wish. This no-DRM policy stands in sharp contrast to most other digital distribution services, which heavily restrict what users can do with downloaded content.

Second, CD Projekt provided customers with free digitized copies of game manuals, posters, soundtracks, concept art and other ancillary media content unique to each videogame. For many older videogames, these materials are often extremely rare and have become collector's items in their own right. Conversely, newer games are rich in multimedia content, making this a useful service for fans of older as well as newer games.

Third and most importantly, CD Projekt treated each purchase not as a one-time transaction, but as a permanent connection. Once customers purchase games, they can download as many additional copies of that game (as well as its ancillary media content) from their account as they wish. In addition, all videogames available on Gog.com receive regular bug fixes, patches and updates to ensure they can be played on a wide range of computer platforms and operating systems.

These three services transformed Gog.com into the cultural equivalent of a membership-owned credit cooperative. Just as each member of a credit cooperative owns a share of their

financial institution, each Gog.com customer owns a share of the entire Gog.com archive. Put another way, CD Projekt treated its customers not as a short-term economic resource to exploit, but as a long-term fan community.

What made this strategy work was CD Projekt's policy of continuous engagement with its customers via social media, combined with a genuine commitment to put the long-term interests of fans head of short-term profits. This commitment is expressed clearly in the company's 2016-2021 group strategy statement<sup>20</sup> as well as in significant policy decisions such as a planned change in CD Projekt's pricing policy, which was rescinded due to heavy criticism from the fan community.<sup>21</sup>

This commitment to the fan community paid dividends when CD Projekt delayed the release of *Witcher 3*, originally scheduled for late 2014, until May 19, 2015 in order to polish the game. The studio had garnered so much goodwill from its customers thanks to its solid track record of customer-friendly behavior that fans accepted the delay with minimal fuss. Conversely, CD Projekt listened closely to player feedback after *Witcher 3*'s 2015 release, issuing a number of patches which significantly improved the original release.<sup>22</sup>

One of the greatest benefits of the studio's close engagement with the fan community was the realization that the same principles of fan media responsible for *Half Life* mods and *Minecraft* could also be applied to the field of open world design. Between 2011 and 2015, CD Projekt applied these lessons to three existing practices of open world design. First, the studio transformed digital space into digital place. Second, the cut-scene (a.k.a. the in-game cinematic) was transformed into the interactive dialogue. Third, the fetch quest was transformed into the story quest. We will examine somewhat later how the simultaneous emergence of all three innovations drove an equally significant transformation of *Witcher 3*'s game-play, but for now it is worth analyzing each innovation in detail.

Digital representations of space have long been a hallmark of digital media, everywhere from the two-dimensional (2D) videogames of the 1970s to the three-dimensional (3D) videogames of the 1990s, all the way to the virtual-reality (VR) videogames of the 2010s.<sup>23</sup> However, digital space is not the same thing as the experience of digital place. Digital place consists of the player's lived experiences, actions and decisions associated with or related to a specific digital space. As such, digital place is one of the most powerful local expressions of the credibility of the open world to audiences. Popular social networking sites succeed in creating a sense of digital place, because they give users the tools to display, share and edit their own personal media, as well as media they gather from other internet users.

CD Projekt's strategy of continuous engagement with the fan community enabled the studio to construct credible forms of digital place, as well as to improve key aspects of this latter absent in the original game. For example, *Witcher 3*'s 1.07 patch enabled players to customize the movements of their player-character (the new version reduced Geralt's on-screen momentum). The same patch also added storage lockers with infinite capacity at various locations in the open world, enabling players to store as many items as they wish. These might seem to be minor additions, but their addition was a powerful boost to the player's sense of digital place. Numerous players found Geralt's new movement pattern to be more fluid and responsive than the original one, while the storage lockers allowed players to save equipment and items as a documentary archive of their past adventures. In a similar vein, various post-release patches significantly improved the player-character customization and inventory

management screens, upgrading the accessibility and ease of use of what amounts to significant digital spaces in their own right.

One of the most important reasons transnational audiences found *Witcher 3*'s open world to be credible was CD Projekt's unique approach to building digital place into their open world. Prior to *Witcher 3*, all open world games featured large amounts of repetitive content. As a result, players would routinely encounter the same terrain features, the same settlements, and the same non-player characters across multiple locations. By contrast, every geographic location, every settlement, and every character in *Witcher 3*'s open world is unique. In a conversation with *The Edge* magazine, CD Projekt's senior game-play designer Damien Monnier describes the design process as follows:

The first thing we did was create a Living World team to work closely with the Location guys. Location started by creating mountains and lakes in places that made sense. Then they'd look at where villages would go. They'd do their research, understand the criteria that peasants in medieval times would use to decide where to build villages and settlements. Then the Living World team kicks in, populating the village, then placing everything around it, and that's where things get tricky. When is it too much? When is it not enough? We knew we wanted a system that was organic, and that means you can't hard-script things. It took a lot of prototyping. We'd have people around the office playing and one would say, 'I haven't seen anything for 20 minutes,' and we'd know we had a problem.<sup>24</sup>

CD Projekt discovered a simple yet powerful solution to the challenge of creating immersive digital places. Instead of constructing an empty map and then filling it with content, each location was designed to be the center of contending forces, each of which players can influence to a certain degree. For natural areas, this means that each location has its own miniature ecosystem, that is to say, a unique balance of predators and prey, terrain features and weather, and flora and fauna. For settlements, this means that each location has a unique distribution of competing skills, occupations, professions and affiliations.

The main benefit of this system of dynamic balance is that it allows for endless local variation, while preserving the narrative coherence of the open world. If players hunt down the wolves in a forest, the population of herbivores which those wolves normally feed upon will increase. Conversely, player actions in settlements will enhance or diminish the status and power of specific social groups and communities.

This principle of dynamic balance also applies to the game's environmental settings. The world features an extraordinarily wide variety of vegetation, ranging from swamps and forests to snowbound mountains. It also includes a full day-to-night lighting cycle, randomized weather conditions ranging from bright sunshine to fierce thunderstorms, and a well-designed traversal system allowing players to walk, run, ride, swim or boat to almost every location in the open world (this system also includes a fast-travel mechanic enabling players to avoid tedious backtracking). This level of environmental detail adds to the immediate experience of player immersion as well as to the long-term prospect of replayability, since players rarely experience the same location in precisely the same way, due to variations in lighting, weather conditions, and the consequences of previous player actions.

One of the most compelling examples of this strategy of dynamic balance is *Witcher 3*'s

ambient sound-track, described by CD Projekt senior sound designer Pawel Daudzward as follows:

We put a lot of effort into this area, since it's a layer that is with the player at all times. We opted to base everything on dynamic, living systems rather than resorting to single tracks that would have the full set of ambient sounds burned into them. So we set everything up to respond dynamically to various parameters such as wind speed, rain/storm intensity, time of day, location... To work, everything had to be split into its individual components: wind characteristics, water components (wave intensities, water types), leaves rustling (a few different types and intensities), branches cracking or other elements breaking due to stormy conditions, rain, thunder, etc. Likewise, birds and other wildlife had to be assigned separate, clean sounds... Our most difficult job was to remove any unwanted noise from all those elements, all those components either we recorded ourselves or gathered from sound libraries. Each sound had to be fine-tuned to the system, to everything down- and upstream of it, so that the resulting mix of components was not muddy, instead, letting all the important gameplay sounds come through.

Having all those ingredients reacting independently to the various factors, then supplementing that with asset randomization, resulted in the soundscape you hear, a soundscape that is thoroughly dynamic and hardly ever identical in technical terms.<sup>25</sup>

The principle of dynamic balance is also at work in *Witcher 3*'s superlative musical score, created primarily by Mikolai Stroinski and Marcin Przybyłowicz with additional contributions by Polish folk punk band Percival.<sup>26</sup> Stroinski and Przybyłowicz created a series of memorable sound-tracks which accurately conveyed the identity of each major region of the open world, while providing enough local variation to keep players' ears intrigued. Velen is a war-ravaged marshland, and its ambient music track consists of mournful strings, while the countryside around the city of Novigrad, largely untouched by war, has a placid pastoral theme. The islands of Skellige, inspired by Norse mythology, have an austere, quietly heroic bardic-skaldic theme. Composer Mikolai Stroinski drew inspiration from a truly transnational array of European musical cultures, ranging from Ireland and Scotland to Bulgaria and the Balkans:

In order to nail the Slavic portion of the soundtrack I had to do some research and listen to a couple of folk bands from Poland but expand it with Balkan music as well. The pivotal point between the two styles is Bulgaria. The rest of my inspiration was folk music from Ireland and Scotland. I combined all this with everything else that resonates in my head after years of working on and listening to all kinds of music.<sup>27</sup>

*Witcher 3*'s second major innovation was the transformation of non-interactive cut-scenes into fully interactive dialogues. Aside from the opening and closing credits, almost every cut-scene presents players with a set of conversational dialogue options. Players must choose their responses wisely, because their dialogue choices will have significant effects on individual characters as well as on the development of the overall storyline. While most of these dialogue options are not timer-based, i.e. players may take as long as they wish to respond, there are a few which require players to make decisions within six to eight seconds.

The scale and sophistication of these interactive dialogues set a new qualitative as well as

quantitative standard for open world videogames. The voiced dialogue and in-game text of *Witcher 3* are slightly than 450,000 words in length, more than double the 216,000-word dialogue and text of *Final Fantasy 12*.<sup>28</sup> On an average play-through of *Witcher 3*, players experience approximately twenty hours of conversational dialogue. This is three times as long as the six hours of cut-scenes featured in Square's *Final Fantasy 12* (2006), and double the nine hours featured in Hideo Kojima's *Metal Gear Solid 4* (2008).

However, *Witcher 3*'s cut-scenes are not just longer than any previous videogame, they are also interactive. Most cut-scenes feature one or more moments when the onscreen conversation stops, and players are asked to choose from a set of dialogue options. Each choice elicits a slightly different response from the player-character, and different responses trigger different story-paths. Some of these paths converge over time, while others crystallize to form differing story outcomes. Over time, player choices have a decisive influence on the fates of numerous individual characters, as well as on the final outcome of the story. While the majority of these dialogue sequences halt the in-game clock, giving players as much time as they need to make a decision, there are a small number which are time-limited, i.e. players are given approximately five seconds to make a decision.

What makes these dialogue choices so compelling is that it is not obvious what the long-term consequences of any given decision will be. Whereas most videogames offer players simple, binary choices resulting in clear outcomes, *Witcher 3* presents players with complex, morally ambivalent choices which generate unpredictable outcomes. What may seem to be the right choice may turn out to have the most disastrous consequences, and vice versa. This adds significant replayability to the open world, since players have an incentive to go back and make different choices to see if things could turn out better (or in some cases, worse). Thanks to these optional dialogues, *Witcher 3*'s twenty hours of dialogue expands to approximately fifty hours of content across subsequent play-throughs.

Most remarkable of all, these dialogues maintain the highest level of aesthetic excellence throughout all fifty of these hours. In this respect, the conversational dialogues of *Witcher 3* function very much like the interactive version of the television serial. This structural similarity is no accident, but is rooted in the fact that television serials are, very much like videogames, an art-form sometimes (though not always) capable of combining the highest level of aesthetic quality with commercial mass popularity.<sup>29</sup> The table below lists some of these landmark television serials, along with their creators and approximate running time. Note that while most of these series are fiction-based, *City of Men* draws heavily from the documentary as a form, while *The Truth Will Prevail* is a documentary serial:

**Table 1.** Leading Broadcast Television Serials, 1967-2014.

Year(s)	Country of Original Broadcast	Title	Running Time	Creator(s)/Director(s)
1967	UK	<i>The Prisoner</i>	18 episodes (13 hours and 30 minutes)	Patrick McGoohan

1986	China	<i>Journey to the West</i>	25 episodes (21 hours and 24 minutes)	Wang Feng, Ruan Ruolin and Yang Jie (original novel by Wu Cheng'en)
1986-1987	India	<i>Malgudi Days</i>	54 episodes (19 hours and 44 minutes)	Shankar Nag (original stories by R.K. Narayan)
1989	Poland	<i>The Decalogue</i>	10 episodes (10 hours)	Krzysztof Kiesłowski
1995-1996	Japan	<i>Neon Genesis: Evangelion</i>	26 episodes (13 hours)	Hideaki Anno
2002-2005	Brazil	<i>City of Men</i>	19 episodes (9 hours and 30 minutes)	Kátia Lund and Fernando Meirelles
2003-2004	South Korea	<i>Dae Jang Geum [Jewel in the Palace]</i>	54 episodes (54 hours)	Byung-hoon Lee
2003-2008	US	<i>The Wire</i>	60 episodes (60 hours)	David Simon
2004	Japan	<i>Paranoia Agent</i>	13 episodes (13 hours)	Satoshi Kon
2012-2013	Tanzania	<i>Secrets of the Jug [Siri ya Mtungi]</i>	26 episodes (13 hours)	Jordan Riber and Karabani
2012-2014	India	<i>The Truth Shall Prevail</i>	25 episodes (25 hours)	Aamir Khan and Kiran Rao

As a Polish studio, CD Projekt was able to build on the legacy of Kiesłowski's *The Decalogue* in two ways. First, where *The Decalogue* successfully refunctioned forms as diverse as the telenovela, the murder mystery, the crime thriller, the young adult love story, the family origin melodrama, and the adult romance melodrama into a single unified narrative, *Witcher 3* remixes a wide range of formulaic role-playing videogame genre elements (cf. medieval combat, occult lore, the ghost story, the fetch quest) into its immersive open world.

Second, where *The Decalogue* integrated Zbigniew Preisner's scintillating musical score, the visual innovations of Kiesłowski's close-ups, exquisite visual framing, and semi-circular pans, and a taut script co-written by Kiesłowski and Krzysztof Piesiewicz into a breathtaking critique of Eastern European society under the final phase of Russo-imperial nomenklatura rule, *Witcher 3* similarly integrated the categories of voice acting, motion capture, ambient and diegetic music, animation, writing and quest design invented by the larger field of role-playing videogames into a devastating critique of post-1998 European euroliberalism, a.k.a. the eurozone's project of monetary unification through austerity.<sup>30</sup>

In essence, *Witcher 3* critiques contemporary euroliberalism as the continuation of past inter-European colonialisms and neocolonialisms. We will explore the function of geopolitical narratives and representations of Eastern European and Eurasian history in *Witcher 3* more fully in the next chapter, but for the remainder of this chapter, it is worth examining how CD Projekt successfully achieved the integration of so many different aesthetic categories into a playable open world.

To meet this challenge, the studio created one of the largest writing and quest design teams ever assembled for a single videogame. Lead writer Marcin Blacha and lead English writer Borys Pugacz-Muraszkiewicz, who both made key contributions to *The Witcher* and *The Witcher 2*, led a team of seven writers and twenty-three quest designers on *Witcher 3*. Each of these writers worked closely with a specific quest designer to create and then refine individual quests.<sup>31</sup> These writers and quest designers also worked closely with British voice acting firm Side and a host of extraordinarily talented voice actors, in order to ensure that every single conversational dialogue accompanying these quests remained true to the personalities and motivations of each in-game character. The main performers, staffers and writers are listed below:

**Table 2.** Creative staff responsible for *Witcher 3*'s dialogue sequences.

Category	Firm	Key Personnel
Voice acting <sup>32</sup>	Side (UK) <sup>33</sup>	Voice directors include Kate Saxon (lead performance director) and Damien Goodwin. The main voice actors include Doug Cockle as Geralt of Rivia, Denise Gough as voice of Yennefer, Jo Wyatt as voice of Ciri, Jaimi Barbakoff as Triss Merigold, Katie McGuinness as Keira Metz, William Roberts as Vesemir, James Clyde as Baron Phillip Strenger, John Schwab as Dandelion, Alexander Morton as Zoltan Chivay, Richard Hawley as Sigismund Dijkstra, Sarah Greene as Cerys an Craite, Allen Leech as Hjalmar an Craite, Gary Lilburn as Crach an Craite, Charles Dance as Emperor Emhyr var Emreis, Emma Hiddleston as Priscilla, Patrick Drury as Ermion, Tom Clarke Hill as Eskel, Christian Contreras as Lambert, and Michael Maloney as Avallac'h
Motion capture	Prime Fury (Poland) <sup>34</sup>	Slawomir Kurek, Maciej Kwiatkowski and Wojciech Roguski
Animation	CD Projekt (Poland)	Sebastian Kalemba (character animator and lead animator), Anna Plocica, Daniel Schmid and Piotr Tomsinski (technical director of animation)
Writers	CD Projekt (Poland)	Marcin Blacha (co-lead writer), Arkadiusz Borowik, Aleksandra Motyka, Bartosz Ochman, Borys Pugacz-Muraszkiewicz (co-lead writer), Karolina Stachyra and Jakub Szamałek
Quest designers	CD Projekt (Poland)	Main quest designers included Joanna Radomska, Jakub Rokosz, Paweł Sasko, Anish Antony, Karolina Kuzia, Dennis Zoetebier, Danisz Markiewicz, Nikolas Kolm, Patrick K. Mills, Grzegorz Sadziński, Sarah Grümmer, Stephen Rhodes, Philipp Weber, Antoni Strzałkowski, Błażej Augustynek and Maciej Duda. Additional quest designers included Michał Dobrowolski, Krzysztof Justyński, Hubert Kubit, Aleksander Lebedowicz, Maciej Mach, Małgorzata Napiontek and Maciej Szcześnik

The writers and quest designers also contributed significantly to the evolution of CD Projekt's in-house animation software tools. These tools were repeatedly fine-tuned in order to meet the specific needs of *Witcher 3*'s interactive dialogues, resulting in characters who acted, spoke and gestured with unprecedented visual realism. Technical director of animation Piotr Tomsinski describes how the team employed the speed and efficiency of automated design tools to enhance rather than detract from overall character development:

The 'algorithm' or 'generator' as we call it, was used only as a solid base for further development

of the scene. It was a shortcut, a tool, but never a goal. More of a production-related thing. It created a rough first pass through a scene, which was always tweaked and adjusted by hand – in all 1463 dialogues. In many, the algorithm wasn't used at all, as they demanded [a] custom approach from the very beginning.

Every cinematic dialogue was approached with the same care, attention and goal – to create the most compelling and emotional scene for [a] given quest and story. Only this way, the characters could ring true and players would want to invest in them, to understand them, to help or condemn them. When they act like humans, not voiceover-delivery machines. Achieving this is a deliberate, careful process. Procedural doesn't get you this. A designer with empathy does. Because you have to put your heart into something to move someone else's.<sup>35</sup>

*Witcher 3*'s third major innovation was the abolition of the fetch quest by the story quest. Fetch quests are simple, repetitive tasks which do not significantly alter the state of the open world or affect the storyline, but do generate useful in-game resources for players. Because fetch quests are simple to design and easy to implement, numerous role-playing videogames have used them to fill up the empty spaces of their open worlds, forcing players to engage in long periods of digital drudgery.

*Witcher 3* spares players this fate by integrating the resource-gathering aspect of fetch quests directly into story quests. This seemingly minor change necessitated a massive revolution in the design of the open world, simply because player access to resources can no longer be hived off in the form of the fetch quest, but must now be distributed across a wide variety of potential player actions. Put more concretely, every story quest must now fulfill an economic or resource-gathering function as well as a narrative function. The first step *Witcher 3* took towards solving this problem was to replace the standard fetch quest with recurrent player investments in time and in space. The main form of the first involves defeating roving bands of wild animals, or collecting herbs in the fields and forests (activities involving time). The main form of the second is reaching certain locations and completing certain quests (activities involving space).

This redistribution of economic functionality generated, in turn, some unique narrative challenges for *Witcher 3*'s lead director Konrad Tomaszkiewicz and secondary co-directors Mateusz Kanik and Sebastian Stępień.<sup>36</sup> The three co-directors had to maintain the narrative cohesion of a vast open world characterized by significant player decision-making, a script with almost half a million words, and story quests which were also resource-gathering quests. If players acquired too few resources from their travels and their quests, they would be frustrated, but if players acquired too many resources too quickly, they would experience boredom.

The strategy the three co-directors employed to solve this problem was as simple as it was audacious. *Witcher 3*'s story quests are not the side feature of a story which happens elsewhere. Rather, these quests *are* its story. The fetch quest is abolished by erasing the distinction between the main quest and the side quest: every single quest is now a story quest in its own right. This presented an additional challenge to CD Projekt's writers and quest designers, in the sense that even the smallest quest now had to have a unique story, a memorable setting, and characters with credible motivations.

The writers and designers met this challenge by design quests to be as variegated and diverse as the open world itself. While some story quests are as simple as hunting down a specific monster, others are complicated miniature adventures in their own right (e.g. the quest called “The Bloody Baron” contains more narrative content in its own right than many entire

fantasy videogames). Still other quests borrow from the literary form of the detective narrative, by requiring players to search for clues to past events, to evaluate forensic evidence using Geralt's superhuman witcher senses, and to interview bystanders who may or may not be reliable witnesses. Finally, quests such as "Broken Flowers" test players not just for their battlefield prowess, but also for their critical thinking skills and their capacity for empathy.

*Witcher 3*'s quests are organized into four main types. First, there are main quests required to advance the main story. While these main quests are broadly linear in nature, the designers gave players a great deal of freedom to complete many of them in the order the player wishes (e.g. conversational dialogues automatically adjust to fit the order that the player chooses to complete quests). Second, there are side quests which do not advance the main story, but which nonetheless exert a significant influence on the outcome of the story and the destiny of major characters and communities. Third, there are witcher contracts which do not affect the main story but enable players to earn money and acquire useful items. Fourth, there are treasure hunts which do not influence the story or affect character outcomes, but which allow players to find and craft uniquely powerful items. All in all, there are 39 main quests and 147 additional quests (side-quests, contracts, and treasure hunts) in the original game.

There is also a fifth category of routine activities and side-events, the most prominent of which are gathering herbs for potions and oils, and mini-games involving horse racing and boxing which yield prizes and other rewards. There is also a two-player competitive card game called *Gwent*, which Geralt can play with in-game vendors and various non-player characters.

In a stroke of genius, CD Projekt did not treat *Gwent* as just another disposable mini-game. Instead, the studio devoted significant time and resources into crafting a fully-featured, tactically balanced and strategically complex digital card game, albeit one which plays out entirely within *Witcher 3*. This functionality was a welcome surprise to that significant fraction of the videogame audience who enjoy the popular pastime of digital card games. Rather than charging fans extra for additional pieces of downloadable content, CD Projekt essentially delivered two full-fledged and fully-featured videogames to fans for the price of a single one.<sup>37</sup> The response of fans was so positive, CD Projekt to release an upgraded version of *Gwent* as a separate free-to-play game with optional in-game purchases in 2017.<sup>38</sup>

It should be emphasized that all of these mini-games, side quests, treasure hunts and card games are completely optional. Instead of forcing players to complete quests and activities in the order the designers intended, players are encouraged to make their own decisions, specialize in the activities they find most rewarding, and to follow their own path. Where other role-playing videogames offered players the prospect of a ride through someone else's adventure, *Witcher 3* encourages players to create their own personal adventure.

The transformation of digital space into digital place, the conversion of cut-scenes into interactive dialogues, and the democratization of quest design all put enormous pressure on *Witcher 3*'s game-play. Simply, the ensemble of short-term player actions during combat, the medium-term player choices during the crafting, acquisition and sale of goods and items, and the long-term player choices involved in developing character skills and completing quests had to be both narratively meaningful as well as enjoyable to play during every step of the player's journey through the game.

CD Projekt's solution to this problem was a strategy we will call eco-scripting. Eco-scripting means that every single player action is structured as a dynamic balance of short-term

player tactics and long-term player strategies. Just as each location in the open world is governed by a dynamic ecology of humans, monsters, communities and polities, so too does eco-scripting endow every player action with an ecological density of scripted challenges and opportunities, dangers and rewards.

To understand how eco-scripting functions, it is helpful to revisit the history of the role-playing videogame as a form. One of the perennial challenges facing designers of role-playing videogames is the tension between long-term player strategy and short-term player tactics, or more precisely, between the freedom of long-term player customization and the freedom of real-time player performance.

During the 1990s, leading fantasy role-playing videogame franchises such as *Final Fantasy* solved this problem via menu-based interfaces. These enabled players to customize the skills and equipment of their characters, while giving them precise control over their in-game actions. However, these menu-based systems also disrupted the player's sense of real-time immersion. Combat had to be organized into alternating turns (a technique borrowed from the world of pre-digital board games), and the need to constantly reissue the same menu commands generated player tedium. Conversely, the combat-based interfaces of occult thriller franchises such as *Devil May Cry* and science fiction videogame franchises such as *Mass Effect* succeeded in giving players a powerful sense of real-time immersion, but did not always provide an adequate framework for long-term player strategy.

The purpose of eco-scripting is to combine the best of both worlds, i.e. to fuse the extreme precision and customization of menu-based interfaces with the real-time immediacy and flexibility of combat interfaces. To do this, CD Projekt classified all possible player actions into two general categories. These categories were time-dependent activities such as combat, travel, exploration, and dialogue choices, and time-independent activities such as player-character skill and ability customization, item crafting and repair, the purchase and sale of items, and combat preparation.

Next, each time-dependent player action was balanced by an equivalent time-independent player action. This breaks the general rule that videogames are most successful when they focus on a specialized form of game-play, e.g. FromSoftware's well-received *Bloodborne's* (2015) operated almost entirely on time-dependent player actions, whereas Square Enix's *Final Fantasy 12* (2006) features a gambit system which operated primarily on time-independent player decisions. By contrast, the singular advantage of balancing time-dependent and time-independent actions is a dramatic increase in player freedom. Players are no longer limited to a purely action-based or strategy-based playing style, but can mix and match as many tactics and strategies as they wish.

CD Projekt rigorously applied the principles of eco-scripting to every aspect of player decision-making. For example, consider the category of player combat. In many role-playing videogames, combat is essentially a balance-sheet exercise in combining the most powerful attacks with the most effective defenses. By contrast, player movement and timing in *Witcher 3* are just as important in combat encounters as equipment and prior preparation (this latter includes knowledge of opponent strengths and weaknesses, as well as the player's toolkit of oils and potions).

In like manner, every monster or opponent in *Witcher 3* has a mixture of time-dependent abilities such as attack speed, agility and movement pattern, and time-independent abilities such

as magical immunities, and character level.<sup>39</sup> There is a similar logic at work in the player-character attribute system, which balances time-independent abilities such as health regeneration and defensive bonuses with time-dependent abilities such as swordplay or spell bonuses.<sup>40</sup> The same principle is at work in the mechanisms governing the passage of in-game time. Players can meditate for as long as they wish in order to select the time of day and the type of weather most conducive to their quest, without any consequences on quest completion or any other aspect of game-play. However, there are strict time limits on the duration of spells, the efficacy of oils, and on magic potions, e.g. if players imbibe too many potions at once, Geralt's health will suffer.<sup>41</sup>

Eco-scripting played an equally decisive role in shaping *Witcher 3*'s system of character progression. Players level up Geralt's attributes through exploration and by completing quests, rather than by defeating opponents on the battlefield. Conversely, the only other playable character in *Witcher 3*, Ciri, has no level progression whatsoever. At first glance this might seem to be an unnecessary restriction on player freedom. In reality, it is just the opposite. By tying level progression to exploration and quest completion rather than repetitive killing, and by providing vast numbers of quests and locations to explore, *Witcher 3* emancipates players from the necessity of “grinding”, a tactic endemic to role-playing videogames wherein players increase their skills and obtain needed supplies via repetitive battles against enemies in the same locations.<sup>42</sup> In effect, *Witcher 3* abolished the long-term drudgery of grinding as well as the short-term drudgery of the fetch quest.

Eco-scripting was also largely responsible for the design of *Witcher 3*'s crafting system. In the past, many role-playing videogames suffered from crafting systems which were either excessively complex or else overly simplistic. *Witcher 3* solved this problem by creating a crafting system which is simple to use but capable of almost infinite complexity. Every single piece of equipment usable by the player (e.g. weapons, pieces of armor, tools and items) has its own master diagram. Players can either purchase these diagrams from a non-player character or merchant, or else acquire it as loot while exploring the open world. Once they have this diagram, the next step is to collect the necessary components for its manufacture. Less powerful items require inexpensive components, while more powerful items require rare and expensive components. Lastly, a skilled craftsman must be located who has the requisite skill level to produce the item in question – the more powerful the item, the greater the skill level required.

In essence, crafting is formed by the conjunction of three instances of eco-scripting, each designed to function as part of a larger whole. This tripartite system not only provides credible incentives for players to complete side quests, treasure hunts and other optional activities, it also generates significant story-telling in its own right. Some of *Witcher 3*'s best-written text narratives are the documentary records or archeological traces of past treasure hunts gone awry, while the side quests involving craftsmen are some of the finest ever written for a role-playing videogame.<sup>43</sup>

Perhaps the single greatest design challenge CD Projekt faced in the practical implementation of this crafting system was coordinating *Witcher 3*'s in-game price system. This was not a trivial problem, since there are literally thousands of separate weapons, pieces of armor, tools, treasure items and crafting supplies in *Witcher 3*'s open world, and each of these items interacted with all others in complex ways.<sup>44</sup> To preserve the overall balance between player risk and quest rewards, CD Projekt's senior game-play designer Christopher Steinke wrote a program which calculates in-game prices dynamically:

Instead of setting a static value, prices were calculated at run-time, making every trade unique, a living economy where each item had a different value based on the type of merchant the player was interacting with, and the state of the world around them. This rewarded most ambitious players who might travel to distant lands to trade for different items at favorable rates.<sup>45</sup>

These dynamic prices governed, in turn, everything from the price of the loot dropped by defeated enemies to the cost of crafting specific items. This price mechanism is not a mechanism of player accumulation, but a means of enhancing the experience of digital place, increasing the impact of interactive dialogues, and adding to the narrative appeal of story quests.

Perhaps the single most counterintuitive effect of CD Projekt's strategy of eco-scripting was its reciprocal effect on *Witcher 3*'s open world. By transforming all player actions into a set of dynamic choices rather than a selection of predetermined conditions, eco-scripting transformed the foundational premise of the open world as a form, namely its mandate to maximize player choice. This mandate makes sense only in the context of that which cannot be chosen, namely the field of necessity against which players must struggle. To paraphrase Sartre, no matter how free our individual choices may seem to be, we are never free to *not* make a choice. The tens of thousands of choices players are called upon to make during any given play-through of *Witcher 3* recoil into the largest conceivable antipode of all choice, namely that closure otherwise called history. In the next chapter, we will explore how CD Projekt's mandate of maximizing player choice while also maximizing the meaningfulness of those choices drove *Witcher 3*'s open world towards the thinking of transnational history.

1. We will define the open world videogame as a work of interactive media which allows players to explore large-scale indoor and outdoor environments in a play-style and at a pace primarily of the players' own choosing. Contemporary large-budget open world videogames typically feature near-cinematic playable environments, realistic weather effects, day-night cycles, realistic sound and musical design, sophisticated voice acting and facial animation, and realistic in-game physics and character animation. While the first true open world videogame, Yu Suzuki's *Shenmue*, was released by Sega in 1999, open worlds did not become a dominant genre of the transnational media market until Rockstar's *Grand Theft Auto 5* (2013), which sold 53 million copies between September 2013 and February 2015. Take-Two Interactive. *Take-Two 2015 Financial Report*. <http://ir.take2games.com/phoenix.zhtml?c=86428&p=irol-reportsannual>. (2).
2. This sales data is from CD Projekt's March 16, 2016 press release: [https://www.cdprojekt.com/en/Press\\_Room/Aktualnosci\\_news\\_id,2623](https://www.cdprojekt.com/en/Press_Room/Aktualnosci_news_id,2623). Awards data is compiled at: <http://gotypicks.blogspot.com/2015/09/2015-game-of-year.html>.
3. This sales data is from VGChartz. <http://www.vgchartz.com/gamedb/?name=dead+island>.
4. For a fuller analysis of the imperial legacies of American, British, Japanese and Western European imperialism and colonialism in the fantasy role-playing videogame genre, see Chapter 5 of my dissertation: Dennis Redmond (2012). *Videogame Culture as Transnational Media: One Neoliberalism, Many Resistances*. Urbana-Champaign: University of Illinois. <http://hdl.handle.net/2142/42362>.
5. This definition of mid-range personal computers is based on trade publication PC Gamer's suggested builds for gaming PCs in mid-2015, available here: <http://www.pcgamer.com/best-gaming-pc/>.
6. CD Projekt released versions of *Witcher 3* for the XboxOne, PS4 and personal computer. PC Gamer has provided this list of the minimum system requirements to run *Witcher 3* on personal computers: <http://www.pcgamer.com/the-witcher-3-system-requirements-announced/>.
7. Square Enix 2007 Annual Report. [http://www.hd.square-enix.com/eng/pdf/ar\\_20070831\\_01.pdf](http://www.hd.square-enix.com/eng/pdf/ar_20070831_01.pdf).
8. For a fuller description of *FF12*'s contributions to the role-playing fantasy videogame, see Chapter 6 of my dissertation. Dennis Redmond (2012). *Videogame Culture as Transnational Media: One Neoliberalism, Many Resistances*. Urbana-Champaign: University of Illinois. <http://hdl.handle.net/2142/42362>.
9. Playstation 2 sales data is from Sony Computer Entertainment: [https://web.archive.org/web/20131101120621/www.scei.co.jp/corporate/data/bizdataps2\\_sale\\_e.html](https://web.archive.org/web/20131101120621/www.scei.co.jp/corporate/data/bizdataps2_sale_e.html). Sales data for Final Fantasy 12 is available here: <http://www.vgchartz.com/gamedb/?name=final+fantasy+xII&publisher=&platform=&genre=&minSales=0&results=200>.
10. We use the term "informal copying" because the sale of unlicensed videogames was not illegal under Polish law during most of the 1990s. For a useful account of CD Projekt's early history, see: Robert Purchase (2013). "Seeing Red: The Story of CD Projekt." November 6, 2013, *Eurogamer*. <http://www.eurogamer.net/articles/2013-11-06-seeing-red-the-story-of-cd-projekt>.
11. For additional insight into the origins of CD Projekt, see: Russ Pitts (2014). "How the team behind

The Witcher conquered Poland.” July 16, 2014, *Polygon*.

<http://www.polygon.com/features/2014/7/16/5884227/cd-projekt-the-witcher-3>.

12. The most famous example of this paradox is the inability of China’s government, despite the best-funded agenda of censorship in the world, to do more than block a minute fraction of China’s total internet traffic. For further background on this issue, see GreatFire.org: <https://en.greatfire.org/>.

13. Note that the distribution subsidiary of CD Projekt is named cdp.pl: “In 1996 CDP.pl (then known as CD Projekt) became the first Polish company to release games with Polish manuals and in localized Polish boxes. In 1999 it went a step further, releasing the Polish edition of the popular game *Baldur's Gate* with voice talent contributed by acclaimed actors, including Piotr Fronczewski and Wiktor Zborowski. The game sold over 100 thousand copies – a new company record.”

[https://www.cdprojekt.com/en/Capital\\_group/Our\\_history](https://www.cdprojekt.com/en/Capital_group/Our_history).

14. The *Witcher* literary series consists of six fantasy novels and one collection of short stories written between 1990 and 1999, and one novel and two short stories published in 2012 and 2013. Sapkowski’s biography and a description of his major works are available here: <http://culture.pl/en/artist/andrzej-sapkowski>.

15. The dates of publication for the German translations of Sapkowski’s *Witcher* novels begin in 2007: [http://www.amazon.de/Andrzej-Sapkowski/e/B001ICAMAW/ref=dp\\_byline\\_cont\\_book\\_1](http://www.amazon.de/Andrzej-Sapkowski/e/B001ICAMAW/ref=dp_byline_cont_book_1).

16. Sapkowski played no role in the production or development of the videogames. Robert Purchase (2012). “Ever wondered what the author of The Witcher books thinks about the games?”. November 11, 2012, *Eurogamer*. <http://www.eurogamer.net/articles/2012-11-06-ever-wondered-what-the-author-of-the-witcher-books-thinks-about-the-games>.

17. *They Hunger* can be downloaded here: <http://www.moddb.com/downloads/they-hunger-1-2-and-3>.

18. The various iterations of the *Little Big Planet* franchise sold 16.35 million official copies between 2008 and 2015. VGChartz.com. <http://www.vgchartz.com/gamedb/?name=littlebigplanet>.

19. Despite its change of ownership, Mojang continues to function more like a community-maximizing museum or non-profit platform than a profit-maximizing monopoly. See my own essay: “Minecraft: The Videogame Commons Remakes The Transnational Studio.” In: *Understanding Minecraft: Essays on Play, Community and Possibilities*. Edited by Nathan Garrelts. Jefferson: McFarland, 2014.

20. The CD Projekt group describes its philosophy in its 2016-2021 group strategy statement as follows:

“What guides our business activities:

- The Company is founded upon the principle of fair play. We treat our employees, our gamers, and our business partners fairly in everything we do.
- Our team is our greatest asset. We are always on the lookout for new solutions that can enhance our teamwork.
- We employ people who are passionate about videogames and about delivering top-quality products and services.
- We stand for tolerance. We combat all forms of racism, homophobia and xenophobia, as we believe tolerance is the foundation of creativity and innovation.

- We forge strong, direct contacts with our player base. We believe that only ongoing, open and honest customer relations matter.

How we perceive videogames:

- We believe that videogames are a form of art, rather than just an entertainment product. We want to leave a mark on the global gaming community by delivering outstanding, thoughtful digital experiences.

- We create games we would like to play ourselves: complex, nonlinear and focused on audiences appreciating deep storylines and genuine emotions.

- We have long ago decided to specialize in the role-playing game (RPG) genre. RPGs are among the most challenging videogame projects from the creative point of view and for many years we have been adding to our pool of knowledge and experience. Each new release gives us more ideas for future projects.

- We believe that hard work, attention to detail, and genuine affection towards the stories we tell resonates in gamers, who, upon finishing our games, feel that they've spent their money well."

On page three, the statement continues:

"How we want to develop our business:

- We are convinced that one can remain commercially successful without sacrificing the creative vision to business calculation.

- Quality is the foundation of our long-term strategy and development plans. We do not seek easy profit and are not interested in taking shortcuts. We focus on ambitious plans with the potential to achieve global impact, and we make no compromises in pursuing them.

- We love breaking the mold and proving that we can achieve what many would consider unachievable. We always try to set goals which seem just out of reach.

- In our attempts to achieve breakthroughs and innovation, we are not afraid to enter uncharted territory, undertake risks and make mistakes. Creative curiosity calls for courage if one is to go a step further than the rest of the pack."

CD Projekt (2016). <https://www.cdprojekt.com/resources/document/strategy-en-v2.pdf>.

21. For example, a planned policy change involving regional pricing in early 2014 was heavily criticized by the community. CD Projekt not only rescinded the new policy, but issued a public apology to its users. See: [http://www.gog.com/news/getting\\_back\\_to\\_our\\_roots](http://www.gog.com/news/getting_back_to_our_roots).

22. The most important of these patches was patch 1.07, released in mid-July 2015. This patch set the weight of crafting items to zero, and also gave players a chest in their hideouts which could hold infinite amounts of goods (previously, carry weight limits forced players to sell rare crafting items and equipment, an unnecessary restriction on player freedom). Books were marked as read or unread, and given a separate menu tab. The update also gave players an optional movement style for Geralt, allowing players to change directions more quickly. See: <http://en.cdprojektred.com/news/patch-1-07-changelog/>.

23. The exceptions would be purely audio-based rhythm or touch-based interactive media experiences, organized on non-visual principles. This is a fascinating branch of interactive media which deserves careful study in its own right. For a list of audio-based games, see: <https://www.audiogames.net/list-games/>.

24. Dom Reseigh-Lincoln. "The Witcher 3's world building and quest design explained by CD Projekt RED." GamesRadar.com. June 28, 2015. <http://www.gamesradar.com/witcher-3s-world-building-and-quest-design-explained-cd-projekt-red-2/>. In a video interview with a fan, Monnier noted that visual elements as small as patches of grass were hand-crafted: "We spent a lot of time in where we put..."

each bit of grass is hand-placed. Each tree, each everything, there's so much attention that goes into it so that it makes sense. We have this system actually that will simulate water falling, like rain, and it will tell you where the rain would gather, so that you know that a particular type of grass would grow there." Princess Castle (Youtube channel). "The Witcher 3: Wild Hunt - Entrevista a Damien Monnier, Senior Gameplay Designer [ENG]." Youtube.com. April 13, 2015. Video clip from 4:31 to 4:55, [https://www.youtube.com/watch?v=E0o\\_qoTVFOw](https://www.youtube.com/watch?v=E0o_qoTVFOw). Clip lightly edited for clarity.

25. Fred Pearson (personal blog). "Interview with the CD Projekt Red Audio Team on The Witcher III: The Wild Hunt." February 17, 2016. <https://fredpearson.wordpress.com/2016/02/17/interview-with-the-cd-projekt-red-audio-team-on-the-witcher-iii-the-wild-hunt/>.

26. The full playlist of *Witcher 3*'s sound track is available here: [https://www.youtube.com/playlist?list=PLgJZQv8L8x5nl1J0gvkIc5EKIaL\\_eaF0p](https://www.youtube.com/playlist?list=PLgJZQv8L8x5nl1J0gvkIc5EKIaL_eaF0p).

27. Cameron Koch. "Interview: 'The Witcher 3' Composer Mikolai Stroinski Talks About How Music Helps Bring The Game To Life". Tech Times. May 18, 2015. <http://www.techtimes.com/articles/53814/20150518/the-witcher-3-wild-hunt-composer-mikolai-stroinski.htm>.

28. The numbers for *Final Fantasy 12* were computed by electronic word counts of the transcripts of all spoken dialogue, plus all available in-game textual dialogue. For the original methodology, see Chapter 5, page 207 of my 2012 dissertation, *Videogame Culture as Transnational Media*, available from the University of Illinois in PDF format: <http://hdl.handle.net/2142/42362>. The numbers for *Witcher 3* are from Side, the British voice acting firm which handled voice production for the videogame. See: Zack Stein (2015). "This Is How Big the Script Was for *The Witcher 3: Wild Hunt*." May 29, 2015, IGN. <http://www.ign.com/articles/2015/05/29/this-is-how-big-the-script-was-for-the-witcher-3-wild-hunt>. Note that the two pieces of downloadable content for *The Witcher 3*, *Heart of Stone* (2016) and *Blood and Wine* (2016), feature 6,000 and 14,000 lines of dialogue respectively, or an additional 50,000-75,000 words. Matt Purslow (2016). "'We know you aren't stupid' – a quest design masterclass from CD Projekt Red." <http://www.pcgamesn.com/the-witcher-3-wild-hunt/the-witcher-quest-design-cd-projekt-masterclass>. PC Games N.

29. Other examples include digital popular music and the comic strip, genres where the barriers to entry are low, and where digital networks of production, distribution and reception give artists the freedom to innovate outside of the control of corporate media monopolies. As a general rule of thumb, the greater the capacity of videogame artists to access transnational audiences, the more creativity they enjoy and the more innovative their art-works have become.

30. Euroliberalism is best defined as the project of transnational financial speculation and national austerity exemplified by the eurozone. As of 2016, the eurozone is a European monetary union without a corresponding European fiscal union. The currency union thus functions like a deflationary gold standard, wherein weaker economies such as those of Greece and Spain are forced to compete head-on against Germany and Finland. Since these weaker economies can no longer rely on currency devaluation or run government deficits to grow their economies, they are trapped in a permanent recession. By contrast, the currency union of the fifty states which comprise the United States of America works precisely because the Federal government taxes richer states such as Massachusetts and California to subsidize less wealthy states such as Mississippi and Alabama.

31. "There are two teams who work closely together to develop quests for *The Witcher 3*: writers and

quest designers. First, a writer prepares an overview of what happens in the quest. Next, the document is handed over to a quest designer, who comes up with a more detailed description of what the player will actually do. From there, the two work in tandem to finalize everything.” Patrick Klepek. “The Personal Story Behind The Witcher 3’s Bloody Baron Quest.” Kotaku.com. October 12, 2015. <http://kotaku.com/the-story-behind-the-witcher-3s-bloody-baron-quest-1736090893>.

32. CD Projekt hired a number of other firms to ensure that *Witcher 3* was released with seven voice over languages and fourteen subtitled languages. The voice over languages in *Witcher 3*’s original 2015 release include English, French, German, Japanese, Polish, Portuguese and Russian, while the original subtitled languages include Arabic, Czech, Chinese, English, French, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian and Spanish.

33. In a press release describing its role in the production of *Witcher 3*, Side notes that the videogame contains over 950 characters with voice roles. Side.com (2016). <http://side.com/projects/the-witcher-3-wild-hunt/>.

34. Prime Fury (Facebook site). <https://www.facebook.com/PrimeFury>.

35. Wes Fenlon (2016). “Most of The Witcher 3’s dialogue scenes were animated by an algorithm.” [http://www.pcgamer.com/most-of-the-witcher-3s-dialogue-scenes-was-animated-by-an-algorithm/?utm\\_content=buffer039bb&utm\\_medium=social&utm\\_source=twitter&utm\\_campaign=buffer-pcgamer](http://www.pcgamer.com/most-of-the-witcher-3s-dialogue-scenes-was-animated-by-an-algorithm/?utm_content=buffer039bb&utm_medium=social&utm_source=twitter&utm_campaign=buffer-pcgamer). *PC Gamer*. March 18, 2016.

36. Before assuming their directorial duties of *Witcher 3*, all three had significant prior experience working on *The Witcher* and *The Witcher 2*, e.g. Tomaszkiwicz had previously worked as a lead quest designer, Stępień worked as a lead story and dialogue designer, and Kanik worked as a lead gameplay designer. Their deep engagement with the mechanics of crafting quests, stories and interactive dialogues is what enabled them to successfully coordinate the efforts of thirty writers and quest designers on *Witcher 3*.

37. This is a feat matched in recent videogame history only by Bethesda’s *Fallout 4*, which allowed players to role-play as either the husband or the wife of a pre-war family. These two protagonists were given separate conversational dialogues by two of the finest voice actors in the contemporary videogame industry, Brian T. Delaney and Courtenay Taylor – the equivalent of delivering two single-player experiences to fans instead of just one.

38. Additional information on Gwent is available here: <https://www.playgwent.com/en/faq>.

39. In the default setting of the game, monster levels remain fixed in order to reward players who invest significant amounts of time in leveling up their player-character. While exceptionally skilled players are free to take on even the most difficult quests, the majority of players are best served by seeking quests which are within two or three levels of their player-character’s current level. CD Projekt provided an optional setting to turn monster levels from fixed to scalable values, boosting the difficulty of enemy encounters.

40. Player-character abilities can be upgraded through a limited number of mutagens (these can be activated or deactivated between combat encounters), and by a skill tree of unlockable abilities. These mutagens are obtained by defeating and looting rare monsters, while skills are unlocked by leveling up the player-character (i.e. completing quests) and by meditating at Places of Power scattered throughout

the open world (each of these Places and every level increase yields a one-time increase of one ability point). Since mutagens can be activated and deactivated as the player sees fit, and since skill trees can be also be reset via a custom potion (after ingesting the potion, players retain their overall stockpile of ability points and can then reuse them to build a completely different skill tree), players have extraordinarily wide latitude to customize their playing style and character attributes.

41. Implementing this balance required the creation of a specialized visual user interface which was both respectful of the themes of Sapkowski's world, while also being transparent and accessible to players. This required the efforts of a five-person team consisting of Bartosz Bigaj, Fernando Forero, Yaroslav Getsevich, Vladimir Vilimovsky and Dan Marian Voinescu. An online archive of this visual interface is available on Fernando Forero's website: <http://fernandoforeroart.com/the-witcher-3-the-ui-visual-art>.

42. This emancipation through preclusion extends to otherwise puzzling game-play features such as mandatory wear and tear on Geralt's weapons and armor. This wear and tear reduces the power of Geralt's attacks and defenses, compelling players to have their equipment regularly repaired by expert craftspersons. What may seem to be an arbitrary constraint on players is a subtle but effective tax on excess violence, since it raises the cost of continuous combat, while rewarding players for interacting with merchants and craftspersons.

43. In the "Swords and Dumplings" side quest, for example, Geralt aids a reluctant elf named Hattori to reclaim his status as a master swordsmith. In the "Master Armorers" side quest, Geralt helps Yoana to become a master armorsmith, while battling medieval-era misogyny (Yoana is a woman in a male-dominated field). We will examine the political and ideological nature of these quests more closely in the next chapter.

44. Many of these items are listed online: <http://gwentcards.com/armor/>

45. Matthew Steinke (2015). "Inside *The Witcher 3*'s Crafting-Based Economy". (GDC Youtube channel). September 9, 2015 (runtime 23:38 to 24:06). <https://www.youtube.com/watch?v=SdYSRkXqhyk>.

## Chapter 2

### ***The Witcher 3 And The Digital Bloodlands***

*Only what is human can truly be alien.  
The rest is mixed forest, undermining moles [krecia robota], and wind.  
– Wislawa Szymborska, Psalm (1978)<sup>1</sup>*

*Witcher 3* embodies an extraordinary narrative paradox. On the one hand, the stories and characters of its open world teem with motifs from Polish folklore and Slavic mythology.<sup>2</sup> On the other hand, there is almost nothing exclusively Polish about *Witcher 3*'s storyline. Only two out of *Witcher 3*'s hundreds of quests, and two brief moments in the “Hearts of Stone” downloadable expansion for the original game, have specifically Polish national cultural referents – and even these have been significantly altered from their original contexts.<sup>3</sup> If *Witcher 3* appears to be one of the most Polish videogames ever made, this is only because it is one of the least Polish of all videogames.

The paradox can be explained by the fact that the *Witcher* franchise has always been deeply critical of mainstream Polish nationalism, namely the self-serving notion that a wholly benevolent Polish nation suffered from the machinations of utterly malevolent Austrian, German, Russian, and Soviet empires. Like all other nationalisms, Polish nationalism is deeply ambivalent, and its popular manifestation has been marked by everything from cosmopolitan anti-colonial solidarity to authoritarian xenophobia.<sup>4</sup>

In the first two *Witcher* games, CD Projekt critiqued Polish nationalism via the character of King Foltest and the kingdom of Temeria, fairly transparent allegories of Józef Piłsudski and the Second Polish Republic, respectively.<sup>5</sup> One of the single greatest achievements of *Witcher 3* was to move beyond the framework of national allegory, by weaving multiple national histories from the Eastern European and Eurasian region into a single framework.

This framework, or what we will call *Witcher 3*'s transnational regionalism, was especially productive because the overwhelming majority of American, Japanese and Western European fantasy role-playing videogames cite the legends, folklore and national allegories of their respective maritime or feudal empires. Prior to the *Witcher* series, the only symbol of Eastern European culture familiar to transnational audiences would have been Bram Stoker's Dracula.

Yet CD Projekt did more than simply introduce audiences to the richness and diversity of Polish folklore and Slavic mythology. Every single locality, institution and polity in *Witcher 3* references the factual polities and historical epochs of the Eastern European and Eurasian regions, without being limited by these polities or histories.<sup>6</sup> For example, the empire of Nilfgaard bears certain aspects of the Ottoman and Russian dynastic empires. Conversely, the empire of Redania displays aspects of the Polish-Lithuanian Commonwealth and the Prussian empire. Skellige is a composite of the loose confederations of the Ukrainian Cossacks and the Viking raiders of Denmark-Norway. Finally, the bustling port city of Novigrad features the sophisticated financial services of Hanseatic-era Hamburg and the intellectual dynamism of

Immanuel Kant's Königsberg (Prussia).

This transnationalization of open world form is the flip side of an equally striking transformation of player agency. One of the lessons CD Projekt learned during the production of the first two *Witcher* videogames was that the expansion of player freedom in post-2008 open worlds came with a narrative price tag. This price tag was increasing pressure on the credibility of player choices. If the choices players make are powerful enough to overturn the underlying rules of the open world, then those rules became uninteresting, and the open world lapsed into a mere simulation. Conversely, if player choices do not significantly affect the open world, there is no incentive for players to progress further in the main story.

The studio concluded that the only way to make interactive choices truly meaningful was to balance increased player freedom with its opposite – that is to say, with the interactive experience of unfreedom. This latter is not to be confused with non-interactive cut-scenes, crafting requirements, or game difficulty settings. Rather, its key category is the interactive experience of collective choicelessness, a.k.a. geopolitical closure.

To portray this closure, CD Projekt made the decision to build its open world on the basis of two transnational archives, both of which explicitly critique Eastern Europe's official or mainstream national histories as forms of geopolitical closure. The first archive is comprised of the work of the leading Eastern European dissident artists of the 1970s and 1980s. The four artists who most directly influenced on *Witcher 3* were Polish poet Wislawa Szymborska, Polish director Krzysztof Kieslowski, Czech animator and film director Jan Svankmajer, and German dramatist Heiner Müller.

What united these otherwise very different artists was their incisive critique of the despotic one-party states of post-1945 Eastern Europe, and a political commitment to a pan-European process of democratic transformation which culminated in the construction of the European Union. The history-drenched landscapes of dissidence in Szymborska's *Psalm* (1978) anticipate *Witcher 3*'s history-filled open world, precisely where the sparkling script and soundtrack of Kieslowski's *The Decalogue* (1987) foreshadow *Witcher 3*'s interactive dialogues and superb ambient music.<sup>7</sup> In the realm of visual design, Svankmajer's alternately whimsical and terrifying stop-motion animated creatures are the analog predecessors of *Witcher 3*'s finely-crafted digital monsters. Last but not least, the character of Ophelia in Müller's *Hamlet-machine* (1977) is very much the forerunner of Ciri in *Witcher 3*.

The second archive which provided a model for *Witcher 3*'s open world was not aesthetic in nature, but historical. It is the archive of what Timothy Snyder named, in one of the most suggestive historical syntheses of the early 21<sup>st</sup> century, the Bloodlands. This was a zone of apocalyptic violence generated by the twin imperial expansionisms and eventual war between the Soviet Union and Nazi Germany between 1931 and 1945, a zone comprised of the territories of present-day Belarus, Estonia, Latvia, Lithuania, Moldova, Poland, the western edge of Russia, and Ukraine.<sup>8</sup>

This time period and region of the world have been largely overlooked by most postcolonial scholars, who have focused on the struggles of the post-1945 African and Asian nations for self-determination against Western European colonialism and US neocolonialism.<sup>9</sup> One of the lessons of Snyder's work is that there is an urgent need to rethink the histories of the Austrian, Ottoman, Russian and Qing Chinese empires, and to grasp the ways in which Tito's Yugoslavia, Kemal's Turkey, Stalin's Soviet Union, and Mao's China were simultaneously

neocolonial as well as postcolonial polities.

The current consensus of historians is that in the course of fourteen years, approximately 38.7 million to 40.3 million human beings perished from war, state-engineered famine, the Nazi Holocaust, and Soviet political repression in the Bloodlands and in the Soviet republic of Kazakhstan. Approximately one in three Kazakhs, one in four Belarusians, one in five Ukrainians, one in six Lithuanians and Poles, one in seven Russians and Lithuanians, and one in ten Latvians perished. Between 8.3 million to 10 million of these deaths were caused by Soviet neocolonial famines, mass imprisonment and mass shootings,<sup>10</sup> while approximately 30.3 million of these deaths were caused by Nazi Germany's invasion and the extermination campaigns of the Holocaust.<sup>11</sup>

Historical memorializations of the Bloodlands are legion in the nations of Eastern Europe and Eurasia. They run the gamut from WW II war memorials to the stained glass installations of Marc Chagall,<sup>12</sup> and from films such as Polish director Andrej Wajda's *Ashes and Diamonds* (1954) to Heiner Müller's play *Germania Death in Berlin* (1971). However, CD Projekt deserves credit for being the first studio to successfully memorialize the Bloodlands in an open world videogame.

Where Snyder synthesized multiple national histories into one of the first transnational histories of the Bloodlands, *The Witcher 3* transformed the multiple national archives of the Bloodlands into the first interactive experience of transnational geopolitical closure. Put bluntly, *Witcher 3*'s open world does not draw exclusively on the Polish experience of the Bloodlands, but accesses in equal measure the Belarusian, Estonian, Latvian, Lithuanian, Moldavan, Polish, Russian and Ukrainian experiences of the Bloodlands.

One of the first examples of this transnational strategy is the game's prologue, a sequence of three successive tutorials designed to teach the basic rules of the open world to a diverse audience with a wide range of player skills.<sup>13</sup> The first of these tutorials is set in Kaer Morhen, an abandoned castle partly rebuilt into a witchers' hideout. A series of interactive dialogues introduces Geralt, the main playable character; Yennefer, a powerful sorceress and one of Geralt's past romantic interests; Ciri, a spirited young girl with superhuman combat skills who is also Geralt's adoptive daughter; and finally Vesemir, a grizzled old witcher who is Geralt's former mentor.

None of the dialogue choices or player actions of this first tutorial have significant long-term consequences. That said, the tutorial concludes with an extraordinary cut-scene which introduces the theme of geopolitical closure. A mysterious frost suddenly appears around Kaer Morhen, transforming a sunny day into a raging snowstorm. This signals the appearance of the main villains of *Witcher 3*, a mysterious group called the Wild Hunt. The goal of this group is to kill or capture Ciri, and they ride in on a magical ship whose black sails and hull float in mid-air on a foreboding white mist.

This sequence rewrites one of the most powerful narrative innovations of the late 20th and early 21st century neo-slave narrative, namely the ghostly specter of the slave ship, in an Eastern European context.<sup>14</sup> Where novelists employed the symbol of the slave ship to write the largely unwritten histories of the twelve million human beings incarcerated by Atlantic chattel slavery, CD Projekt employs the ghost-ship of the Wild Hunt to interactively narrate the largely unwritten histories of the millions of human beings incarcerated by Eastern European and Eurasian serfdom.<sup>15</sup>

At this point the screen fades to black and we learn that the entire prologue up to this point was one of Geralt's nightmares. A subsequent conversation with Vesemir reveals that Yennefer has never actually visited Kaer Morhen, and that Ciri is no longer a child, but is a full-grown young woman on the run from the afore-mentioned Wild Hunt.

Players are now granted access to the second tutorial of the game, consisting of a small village called White Orchard and its immediate environs. Whereas the first tutorial is a single linear path, White Orchard is a miniaturized open world designed to teach players the basic techniques of open world travel, riding, swimming and navigation. It also introduces players to the crafting, combat and quest systems of the open world.

The White Orchard tutorial contains a total of fourteen quests. Only two of these are required to advance the overall storyline, while the other twelve are optional. This preponderance of side quests, the single most striking feature of *Witcher 3*'s open world, is not an accident. CD Projekt explicitly encourages players to wander off the beaten path and explore the open world at their own pace and in a manner of their own choosing. These side quests include activities as varied as witcher contracts, treasure hunts, side quests, and even a fully-functional and well-designed collectible card game within the game called Gwent.<sup>16</sup> Gwent proved so popular among players, that CD Projekt upgraded it and released it as an independent digital card game in May 2017.<sup>17</sup>

In the previous chapter, we described how CD Projekt abolished the fetch quest by making each quest a memorable and unique interactive experience, and by designing the open world's in-game economy to reward player exploration. The White Orchard tutorial builds on this achievement, by balancing increased player freedom with increased geopolitical closure. What this means in practical terms is that player decisions now begin to have serious consequences on the fate of other characters.

These decisions and consequences are narrated primarily by means of interactive dialogues, which blend top-notch facial animation, sound design, voice-acting and camera position into a seamless whole. These dialogues are constructed to encourage players to probe more deeply into the past history and motivations of the non-player characters, by separating player dialogue choices into responses which have consequences (printed onscreen in a yellow font) and responses which are merely informative inquiries (printed in onscreen a white font). Many of these dialogues are marvels of narrative concision, and regularly manage to compress the content of novellas into a few lines of dialogue while sacrificing nothing of the humanity of the characters involved.<sup>18</sup>

For example, after meeting Tomira, White Orchard's resident herbalist, players can complete a side quest called "On Death's Bed."<sup>19</sup> This involves collecting the ingredients for a potion necessary to save the life of Lena, a villager mortally wounded by the griffin. Players must decide whether to save Lena by brewing a special witcher potion, or allow her to die in peace. Players will not discover the true consequences of their decision until much later in the storyline, when players visit the Nilfgaardian military encampment located at the southeastern edge of the open world map.<sup>20</sup>

One of the most striking expressions of geopolitical closure in the White Orchard tutorial is the interactive depiction of the horrors of imperial war. The region has been ravaged by the rampaging armies of Nilfgaard and Redania, two mighty empires locked in a life-and-death struggle against each other. Players explore burnt-out huts, hear peasants wailing in front of the

wreckage of their homes, and search former battlefields littered with rusted armor and rotting corpses. Predictably, most survivors are hostile towards outsiders or anyone perceived as different. Since Geralt is a witcher, a mutated human being, he is subject to relentless contempt and occasional open violence from the villagers, the first instance of CD Projekt's unrelenting critique of xenophobia and chauvinism in the full open world.<sup>21</sup>

After completing the two main quests of the White Orchard region, players must complete a third and final tutorial before accessing the full open world. This tutorial consists of a single main quest, entitled "Imperial Audience", wherein Geralt is dressed up in formal court attire, banters with the chamberlain, Mererid, and pays a visit to the leader of the Nilfgaardian empire, emperor Emhyr var Emreis (superbly voiced by Charles Dance).

These interactive dialogues banish any notion that Nilfgaard is a cardboard evil empire. Keen-eyed players will note Nilfgaard's cultural cosmopolitanism as well as the Emperor's political acumen, and comprehend that the empire is a flawed but by no means wholly malevolent polity. That said, the main function of these dialogues is to teach players that their choices now have serious consequences on the open world.<sup>22</sup> The player learns that Ciri is not just a sorceress of remarkable power, she is also the Emhyr's daughter. As a potential successor to the imperial throne, Ciri's survival is of the utmost priority, and the Emperor duly orders Geralt to locate her and bring her to the imperial court.

What makes this tale of geopolitical destiny so riveting is its interactive framing by means of the seemingly least important character in the scene, namely Mererid, the chamberlain. When first meeting the Emhyr, the player must make a time-limited decision to either bow or refuse to bow to the emperor. There are no positive or negative consequences for Geralt for either decision, but there are significant consequences for the chamberlain. If the player chooses not to bow, the following conversation occurs in the hallway:

Mererid: *in an agonized whisper*: "Did the gentleman not understand? Did I not emphasize adequately that one must bow to the emperor?"

Geralt: *surprised*: "Relax. Nothing happened."

Mererid: *hisses*: "To the gentleman. But I shall be punished."

This revelation will elicit an involuntary pang of guilt in many players, precisely because Mererid's behavior is in such startling contrast to his previous demeanor of supercilious hauteur. Even minor player choices may turn out to have major consequences for other characters, to the point that some players will feel obliged to replay the sequence in order to spare Mererid from harm.

It is only after completion of "Imperial Audience" that players are permitted to travel freely through the full open world.<sup>23</sup> This is the moment CD Projekt unveils one of its most intriguing narrative innovations, best described as the transformation of the writing of history into a core game-play mechanic. We noted previously that players utilize Geralt's superhuman witcher senses in order to investigate clues and reconstruct past events. Once players are permitted to explore the full open world, these detective skills are utilized in what we will call open world history-writing. This latter reworks the large-scale history of the Bloodlands into the small-scale experiences of what E.P. Thompson famously termed "history from below."<sup>24</sup>

One of the first moments of this history-writing takes place during the “The Nilfgaardian Connection” main quest, which takes place immediately after “Imperial Audience.” In a village tavern, Geralt encounters the hirelings of the Bloody Baron, a former Temerian soldier turned vassal of Nilfgaard. When these hirelings threaten Geralt with violence, players can choose either violent or nonviolent responses. Neither choice is necessarily wrong or right, but both have significant consequences for the local population.<sup>25</sup>

What makes this history-writing so compelling is that it is seamlessly integrated with all other aspects of *Witcher 3*'s open world. Just as each player quest is a unique story, each settlement, each region, and each polity has a unique set of histories, transmitted via a carefully balanced admixture of interactive dialogues, non-interactive commentary from non-player characters, and incidental historical materials. In order to distinguish these historical materials from those which relate to player quests, we will call them discoverables.

These discoverables run the gamut from personal letters to lyric ballads, and from homemade medical remedies to abstruse metaphysical discussions. None of this material is necessary for quest completion, nor does it necessarily serve to advance the main story. Yet the consistent narrative excellence of these discoverables sustains the credibility of *Witcher 3*'s depiction of geopolitical closure, in much the same way that the narrative excellence of the side quests underwrite the credibility of the main quests.

To appreciate the power of discoverables, consider the cut-scene which precedes “The Nilfgaardian Connection” quest. Players watch Geralt riding past a giant tree festooned with the bodies of executed prisoners. This is a stark visual reminder of the price tag of imperial war, as well as a game-play hint. If players search the base of the tree, they discover a half-finished manuscript written by someone named Aldert Geert. Geert was the traveling scholar who taught Geralt how to play Gwent at the White Orchard tavern, who has now become one of the countless victims of the war.

This discoverable transmits the horror of war far more effectively than any voiceover or character dialogue, by emphasizing the vulnerability of historians and the fragility of historical archives. The sequence also testifies to the function of replayability in *Witcher 3*'s open world. Since players are not required to speak to Geert in the White Orchard tavern, not all players will grasp the full import of the manuscript during their initial play-through.

To be sure, the vast size of the open world and the extensive amount of additional narrative content available through discoverables presented an enormous design challenge to CD Projekt's game designers. Discoverables had to meld seamlessly with the content of player quests, while remaining congruent with the overall atmosphere and narrative tone of the open world. To meet both goals, CD Projekt balanced the larger histories of the open world with the smaller histories of the discoverables by means of a series of critical frames.

These frames ensure that the seemingly disparate events of the main story quests, the discontinuous narratives of the side quests, and the local histories of the discoverables all function as a cohesive whole. Three of the most important of these frames are the identity-politics, the dynastic expansionisms, and the gender norms endemic to the empires which ruled the territory of the Bloodlands between 1648 and 1945.

The frame of identity-politics critiques the confessional, caste-based, racial, ethnic and communal conflicts raging in the open world. We previously noted that players interactively experience the caste discrimination directed against witchers while role-playing as Geralt. This

experience is reinforced by numerous cut-scenes depicting the ultimate consequence of repressive identity-politics, e.g. the beginning of the main quest “Pyres of Novigrad” shows witch hunters executing a doppler, a humanoid shapeshifter able to mimic the appearance of others. In addition, a range of discoverables highlight the disastrous effects of past forms of caste discrimination, religious intolerance and xenophobia.

The frame of dynastic expansionism denounces the catastrophic effects of the ongoing war between Redania and Nilfgaard. Just as importantly, it documents the painful legacies of past imperial wars. Many of the explorable ruins of the open world are the remains of ancient elven kingdoms, whose populations were exterminated during a series of genocidal wars with human kingdoms. In the context of the Bloodlands, the grim fate of the elven peoples has self-evident parallels to the late 18th century partition of the Polish-Lithuanian Commonwealth by the Austrian, Prussian and Russian empires.

The frame of gender provides a similar double periodization, by critiquing the institutions of gender characteristic of the pre-1914 Austrian, Prussian and Russian dynastic empires, as well as those of the 20<sup>th</sup> century Nazi German and Soviet empires. While this gender frame had its origins in Sapkowski's *Witcher* novels, which feature a number of strong and nuanced female characters, CD Projekt deserves credit for listening to the fan critique of the female characters in its first two games.<sup>26</sup> In fact, *Witcher 3* is one of the few role-playing videogames to feature true gender balance across its full roster of playable and non-playable characters.

One of the best examples of this gender frame is the side quest “Master Armorers”, unlocked by visiting the smithy in the town of Crow's Nest, apparently run by a dwarf named Fergus with the assistance a woman from Skellige named Yoana. During the quest, however, players discover Fergus has no armorsmithing talent at all (a satirical jab at the cliché of the metalworking dwarf, a mass-cultural fantasy trope as old as Richard Wagner's *Rhine Gold* (1854)), while Yoana turns out to be a talented craftworker held back by gender prejudice. After a smithing competition held by the Nilfgaardian authorities to choose the best armorer, Yoana utterly crushes Fergus -- in fact, she turns out to be the most powerful armorsmith in the game. He accepts his defeat, and the duo continue to work together, only this time he is the assistant and Yoana is the acknowledged lead.<sup>27</sup>

What makes the critical frames of identity-politics, dynastic expansionism and gender so powerful is their narrative synthesis. No identity-politics is ever presented without its dynastic or gendered context, no dynastic struggle is devoid of identity-politics or gender, nor does any expression of gender exist without identity-politics or dynastic politics. Just as importantly, these critical frames link the game-play mechanic of player choice and its in-game consequences to the archive of past player choices and their corresponding consequences. The more history players uncover, the greater the likelihood they will make historically informed and thus more astute decisions. Conversely, the less history players uncover, the greater the chance they will unwittingly replicate the disasters of the past.

In fact, the challenge of balancing player-encountered discoverables with player-initiated history-writing led CD Projekt to one its most remarkable innovations. This is a mode of interactive storytelling which successfully synthesizes the elements of player choice and geopolitical closure as no other videogame has done before. We will call this mode the interactive path.<sup>28</sup>

*Witcher 3* contains eight main story paths and fourteen side quest paths. Each path is a

subcycle of quests which develop a specific character or set of characters, and a specific location or set of locations. While all of the main story quests are organized into paths, only a subsection of all of the side quests are given paths. The function of these paths is to maximize the principle of player freedom, while preserving the thematic and narrative continuity of the open world. Although certain quests in each path must be completed in a specific order, the player can have most of the main story and nearly all of the side quest paths open at any given time. This allows players to explore the open world at their own pace, and to construct their own unique timeline of interactive dialogue choices and in-game actions.

Since each path contains several key moments when players must make decisions vis-a-vis the character or characters who are at the center of each path, the result is a complex web of choices and consequences. While some of these consequences are revealed at the end of the path, others are not revealed until the very end of the game.

To understand how these paths operate and why they are so effective, consider one of the first side quest paths in the game, the Keira path, unlocked at the conclusion of the main quest “Hunting a Witch.” During this path, players discover that the alleged witch is none other than Keira Metz, a powerful female mage who was the former advisor of Temeria's slain former leader, King Foltest. In the wake of Nilfgaard's occupation of Temeria, Keira has been hiding incognito in Velen's countryside to avoid execution at the hands of roving witch hunters. Ironically, despite being a powerful sorceress in her own right, Keira was troubled by nightmares projected by the Crones, three powerful magical beings who rule over the trackless swamps of Velen:

*Player action: choose “Did you know these witches?” during “Wandering in the Dark” quest.*

Geralt: “You know these witches?”

Keira: “I've never met them, but I've read of them. In an old manuscript I found in one of the huts in the village. It mentions the village witches venturing into Crookback Bog at times – to liaise between the villagers in the Crones, the Ladies of the Wood. The Crones appear to be intolerant of outsiders, but they help the local folk. Apparently, they stopped the spread of the plague in Velen.”

Geralt: “Hm. What's your take on all this?”

Keira: “I'd love to shrug it off as the nattering of so many old women, yet... Throughout my first fortnight in Velen, I had horrible nightmares. Something was calling me out into the swamps. One night I decided to enter the dream consciously, render it lucid. I confronted the... thing directly. It broke contact at once. Peaceful nights ever since.”

Keira's path is comprised of one main quest and five subsequent side quests. During the main quest “Wandering in the Dark”, Keira accompanies Geralt during the player's first open battle against one of the warriors of the Wild Hunt. Subsequently, Keira provides Geralt with five successive side quests, each of which must be completed to unlock the next (“Magic Lamp”, “An Invitation from Keira Metz”, “A Towerful of Mice”, “A Favor for a Friend” and “For the Advancement of Learning”).

While none of these side quests are mandatory in terms of advancing the main storyline, all are superbly narrated, all generate useful items for the player, and all have significant consequences on the fate of Keira herself. Completion of “An Invitation from Keira Metz” grants

Geralt ownership of Keira's magic lamp, an item which dispels magical illusions and can also reveal brief scenes of past events. This lamp is necessary to complete a number of subsequent side quests. Similarly, completion of the side quest “A Towerful of Mice” is necessary to unlock a side quest involving the Pellar, a herbalist who lives near Crow's Nest. The fourth side quest, “A Favor for a Friend”, establishes Geralt's credentials as a medieval foodie, and also unlocks an optional romance sequence with Keira. While the choice of accepting or declining this romance has no positive or negative consequences on the storyline or on any of Geralt's subsequent relationships, the sequence is skillfully narrated and respectful of Keira's ability and intelligence.

What makes these side quests so compelling is that each is a compelling narrative in its own right. For example, in “A Towerful of Mice” Geralt discovers that a mage constructed a secret laboratory in the tower on Fyke Island in order to expose unwilling human subjects to a rat-borne plague, a reference to the horrific human experiments of the Nazi German invasion of the Bloodlands. Geralt also discovers that a ghost haunts the tower, a spirit named Annabelle. During an interactive dialogue with Annabelle, she claims to have been the daughter of the lord of the tower, and that she perished during a peasant insurrection against the lord.

However, the ghost's story also contains a number of logical inconsistencies. If players fail to notice these latter, they will inadvertently release a malevolent spirit into the countryside and wreak additional havoc on the long-suffering villagers of Velen. If players remain skeptical about the ghost's claims and press the latter for answers, they will discover the spirit is really a plague maiden, a disease-bearing specter cursed to seek vengeance on its former human lover. Armed with this information, the player will be able to lift the curse and permanently dispel the ghost, although there is a price tag for this ending as well.<sup>29</sup>

The fifth and final side quest of the path, “For the Advancement of Learning”, raises the stakes yet again by determining Keira's fate. If players do not complete this final side quest, Keira will be caught by the witch hunters and burned at the stake (to hammer the point home, players are compelled to watch her execution in a cut-scene). If players do complete this quest, there is a chance she will survive until the end of the game. For this to occur, players must avoid picking a fight with her when they meet once more on Fyke Island (the result will be a battle to the death), and advise her to seek refuge with Geralt's fellow witchers at Kaer Morhen.

The Keira path is not necessary to complete the main story of *Witcher 3*, and has comparatively few long-term consequences. Yet the path features extraordinary scriptwriting and voice-acting, delivers compelling character development, and deftly mixes narrative subgenres as diverse as comedy and action-adventure to horror and romance. One of the reasons *Witcher 3* creates such a compelling open world is that every single path features credible character development, balances a unique set of discoverables with the player's history-writing, and is constructed with the same care and attention to detail as all other paths.<sup>30</sup>

The complete list of side quest paths in *Witcher 3* is described below, in approximate order of their availability in the main storyline:

**Table 1.** Side quest paths of *Witcher 3*.

Path	Requirements	Side Quest or Chain of Quests	Consequences
1	Completion of first tutorial	Treasure hunts for Feline, Griffin, Manticore, Serpentine, Ursine, Wolven and Viper witcher gear	No long-term consequences
2	Completion of main quest “Wandering in the Dark”	Successive side quests “Magic Lamp”, “An Invitation from Keira Metz”, “A Towerful of Mice”, “A Favor for a Friend” and “For the Advancement of Learning”	Keira romance option, determine Keira's fate
3	Completion of side quest “Towerful of Mice”	Side quest “Forefathers' Eve”	Determine fate of Pellar
4	Completion of main quests “Bloody Baron”, “Family Matters”, “Ladies of the Wood” and “The Whispering Hillock”	Side quest “Return to Crookback Bog”	Determine fate of Philip Strenggar and Anna Strenggar
5	Completion of “Count Reuven's Treasure”	Completion of side quest “A Matter of Life and Death” and choose to kiss Triss during fireworks, completion of “Now or Never” and choose to romance Triss	Co-determine fate of Triss and Geralt
6	Begin main quest “The King is Dead – Long Live the King”	Choose to kiss Yennefer after springing laboratory trap and choose subsequent romance option, romance Yennefer during main quest “No Place Like Home”, completion of main quest “Nameless”, completion of side quest “The Last Wish” and choose romance option	Co-determine fate of Yennefer and Geralt
7	Completion of main quest “A Poet Under Pressure”	Successive side quests “A Matter of Life and Death” and “Now or Never”, successive side quests “Cabaret” and “Carnal Sins”	Determine fate of Novigrad mages and Triss romance (path 5), determine fate of Priscilla
8	Completion of main quest “Get Junior”	Concurrent side quests “Redania's Most Wanted”, “Eye for an Eye” and “The Gangs of Novigrad”	Determine fate of captured Nilfgaardian soldier and Rico

9	Completion of main quest “Nameless”	Concurrent side quests “In Wolf’s Clothing” and “The Last Wish”	Determine Yennefer romance
10	Completion of main quest “The King is Dead – Long Live the King”	Concurrent side quests “Possession” and “Lord of Undvik”, completion of both unlocks the side quest “King’s Gambit”	Determine next ruler of Skellige
11	Completion of side quest “Stranger in a Strange Land”	Side quest “The Cave of Dreams”	No consequences
12	Completion of main quest “The Play’s The Thing”	Side quest “A Dangerous Game”, which contains a collectible necessary to begin the side quest “The Soldier Statuette”	No consequences
13	Completion of main quest “Broken Flowers”	Side quest “Fencing Lessons”	No consequences
14	Completion of side quests “Now or Never”, “An Eye for an Eye”, “A Deadly Plot”, and “Redania’s Most Wanted”, and one player choice in main quest “Blindingly Obvious” (be diplomatic towards Dijkstra)	Side quest “Reason of State”, choose to either defend Vernon Roche or refuse to become involved	If player defends Vernon, Nilfgaard defeats Redania. If player refuses to become involved, Redania under Dijkstra defeats Nilfgaard

Only one of the side quest paths, namely the fourteenth and final one, has significant consequences for the end state of the open world. By contrast, the final four main story paths all have significant consequences for this end state. Of the eight main story paths, the first six are concurrent in nature, i.e. their respective subquests can be initiated and then completed in any order the player wishes.<sup>31</sup> All six main story paths begin with Geralt as the playable protagonist, and conclude with a quest or set of quests featuring Ciri as the playable protagonist. The final two main story paths are linear in nature, and are accessible only when the first six main story paths are completed.<sup>32</sup> To compensate for this linearity, the final two main story paths merge Geralt and Ciri’s perspectives, allowing players to alternately play as Geralt and then as Ciri at key points in the story. The eight main story paths are listed below:

**Table 2.** Main story paths of *Witcher 3*.

Path	Requirements	Geralt's Quests	Ciri's Quest(s)	Characters Developed
1	Completion of "Imperial Audience"	"The Nilfgaardian Connection", "Bloody Baron"	"Ciri's Story: The King of the Wolves"	Baron Philip Strengger (Bloody Baron), Gretka and Ciri
2	Completion of "The Nilfgaardian Connection"	"Hunting a Witch", "Wandering in the Dark", "Ladies of the Wood", "The Whispering Hillock"	"Ciri's Story: Fleeing the Bog"	Keira Metz, the members of the Wild Hunt, the Cronos
3	Completion of "Bloody Baron"	"Family Matters", "Princess in Distress"	"Ciri's Story: The Race", "Ciri's Story: Out of the Shadows"	The Pellar, Phillip Strengger, Tamara Strengger, Anna Strengger
4	Completion of "Imperial Audience"	"Pyres of Novigrad", "Novigrad Dreaming", "Broken Flowers", "Get Junior", "A Favor for Radovid"	"Ciri's Story: Visiting Junior"	Dandelion, Priscilla, Triss, Radovid
5	Completion of "Imperial Audience", payment of 1000 crowns to Atropos	"Destination: Skellige", "The King is Dead – Long Live the King", "Echoes of the Past", "Missing Persons", "Nameless"	"The Calm Before the Storm"	Yennefer, Crach an Craite, Cerys an Craite, Hjalmar an Craite, Ermion
6	Begin "Get Junior" quest, complete bathhouse sequence	"Count Reuven's Treasure", "The Play's The Thing", "A Poet Under Pressure"	"Ciri's Story: Breakneck Speed"	Dijkstra (Sigi Reuven), Cleaver, Francis Bedlam
7	Completion of Paths 1-5	Required quests, in order of completion: "Ugly Baby", "Disturbance", "The Final Trial", "To Bait a Forktail...", "No Place Like Home", "Va Fail, Elaine". Optional quests: "Brothers in Arms: Velen", "Brothers in Arms: Novigrad", "Brothers in Arms: Skellige". Required quests, in order of completion: "The Isle of Mists", "The Battle of Kaer Morhen", "Blood on the Battlefield"		Avellach, Lambert, Vesemir, Emhyr var Emreis

8	Completion of Paths 1-6	Required quests, in order of completion: “Bald Mountain”, “Final Preparations”, “Blindingly Obvious”, “The Great Escape”, “Payback”, “Through Time and Space”, “Battle Preparations”, “Veni Vidi Vigo”, “The Sunstone”, “The Child of the Elder Blood”. Optional quest: “Skjall’s Grave”. Required quests, in order of completion: “On Thin Ice”, and “Tedd Deireadh, The Final Age”	Imlerith, Skjall, Geels, Eredin
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Both the fourteen side paths as well as the eight main story paths gradually increase the consequentiality of player decisions as well as the scale and scope of the geopolitical closure, i.e. the first side quest path determines Keira's personal fate, whereas the fourteenth co-determines the end state of the open world. In like fashion, the first main story path focuses primarily on the region of Velen and has relatively few long-term consequences, whereas the final main path has decisive consequences on the entire open world.

On closer examination, the first three main paths incorporate one or two of the three critical frames mentioned previously, i.e. identity-politics, dynastic expansionism and gender, whereas the fourth through the eighth main paths incorporate all three. One of the best examples of a two-frame strategy is the second main story path, whose primary critical frames are identity-politics and gender. The main character of the path, Baron Phillip Strenger (superlatively voiced by James Clyde), is a former Temerian soldier who now rules the countryside of Velen as a vassal of Nilfgaard. Strenger tasks Geralt with investigating the disappearance of Strenger's wife and daughter, Anna and Tamara, in exchange for information about Ciri.

What makes Strenger so compelling is CD Projekt's extraordinary skill at weaving the gradual revelations of his past into the critical frame of gender. For example, at the conclusion of the “Bloody Baron” quest, Strenger recounts to Geralt how he first met Ciri. Instead of telling the story in a cut-scene, players step into the shoes of Ciri as a playable character in the main quest “Ciri's Story: King of the Wolves”. This is the interactive equivalent of a cinematic flashback, or what can be termed a retrospective playthrough. While playing as Ciri, players must rescue Gretka, a young girl, from prowling wolves. A series of interactive dialogues reveal that Gretka's family had too many mouths to feed and consigned her to the Trail of Treats, a place where unwanted children are banished, never to return.

These interactive dialogues and a subsequent battle against a werewolf do more than just showcase Ciri's empathy for others and her astonishing combat skills. They illustrate the structural violence of the family as an economic unit. This critique of the family, which hearkens back to Engels' ground-breaking critique of the family as a pitiless structure of economic accumulation,<sup>33</sup> is reconfirmed by the second half of “Family Matters”, wherein Geralt discovers the real motivation for Anna and Tamara's disappearance was domestic violence. Strenger savagely beat his wife in one of his drunken rages, causing her to miscarry and precipitating Anna and Tamara's flight from the Baron's home.

Geralt's subsequent confrontation with Strenger is one of the most moving interactive

experiences ever crafted in a videogame. Far from being a cardboard villain, Strenger is both utterly despicable and yet wholly pitiable, a violent domestic abuser and yet a genuinely affectionate husband, a hopeless alcoholic and yet a doting father, a brutal functionary of Nilfgaardian rule and yet a secret Temerian sympathizer haunted by the guilt of being a collaborator.

It is only after this interactive sequence that players are allowed to determine Strenger's final destiny. The first step is tracking down the grave of the Baron's stillborn child, which harbors a vengeful ghost called a botchling. Players must either destroy the botchling, or else appease its anger and thereby transform it into a benevolent guardian spirit called a lubberkin. Both choices elicit a series of realistic and priceless reactions from Strenger.

The ultimate fate of the Baron hinges on the decisions the player makes during the main quests "Ladies of the Wood" and "The Whispering Hillock". Geralt discovers the Trail of Treats described by Gretka is not a legend, but is a magical lane carved through the swamp by the Crones. The trail leads to the village of Crookback Bog, inhabited by an elderly caretaker and a group of abandoned children. This caretaker is none other than Anna, the Baron's estranged wife, who in a moment of utter desperation agreed to become the magical servant of the Crones.

In yet another bravura moment of interactive story-telling, players must earn the trust of the orphaned children by playing a game of hide-and-seek. This sequence is a clever nod to one of the most celebrated videogame franchises of all time, Hideo Kojima's *Metal Gear* series (1987-2015), which helped to popularize stealth-based game-play in videogame culture. Eventually the player will discover the location of Johnny, an impish and harmless magical creature who has information on Ciri's whereabouts.

This unlocks the main quest "The Whispering Hillock", wherein players must choose whether to following the Crones' wishes and slay a magical spirit trapped inside an ancient tree, or to disobey the Crones and free the spirit from its prison. The conclusion of this path marks the first significant milestone in the category of geopolitical closure, in the sense that the player's actions now have consequences for entire groups as opposed to just one or two individuals.<sup>34</sup>

Conversely, later paths and side quests begin to integrate the critical frame of gender with the frames of identity-politics and dynastic expansionism. This is most evident in the various quests involving the witch hunters of Novigrad and Redania. At first glance, the theme of witch hunting might seem to be historically anachronistic, given that witch hunts were one of the most egregious forms of state-chartered violence perpetrated against Western and Central Europe in the period during and immediately after the Thirty Years War (1618-1648), but were comparatively rare in early modern Eastern Europe and Eurasia. Yet what makes CD Projekt's depiction of the witch hunters narratively credible is the fact they are based not on the sectarian persecutions of the 17th century religious wars, but on the Nazi and Stalinist persecutions of the 20<sup>th</sup> century Bloodlands.

This lesson is hammered home everywhere from the main quest "The Great Escape", which denounces the bureaucratic juggernaut of mass persecution, incarceration and execution, to the side quest "A Favor for Radovid", which reveals that the witch hunters are Radovid's roving death squads. Similarly, "Forefather's Eve" shows a band of witch hunters persecuting local peasant religious believers, while "Now or Never" shows Radovid's extermination campaign against mages. This theme is echoed by a number of other side quests, e.g. "Little Red" illustrates the nightmarish effects of the partisan warfare which raged throughout the

Bloodlands between 1940 and 1945, showing how the spiral of violence and counter-violence blurs the line between perpetrators and victims.<sup>35</sup>

What prevents this nightmarish history from disrupting the open world's careful balance between player-controlled history-writing, exploration-based discoverables and plot-driven geopolitical closure is the emergence of a new kind of transnational solidarity. It should not be surprising to learn that the three main forms of this solidarity -- civic tolerance, egalitarian citizenship, and gender equality -- are the utopian negations of the critical frames of identity-politics, dynastic expansionism, and gender inequality mentioned previously. What is surprising, however, is the fact that these forms of solidarity are spatially concentrated in the neutral polity of Novigrad, the largest and wealthiest city in the open world.

The reason is that Novigrad is more than just the main prize of the war between Redania and Nilfgaard. It is the narrative fulcrum where CD Projekt connects the urban histories of the largest cities of the Bloodlands with those of the transnational present.<sup>36</sup> Put bluntly, nearly all of the main and side quests located in Novigrad and its immediate environs set the past histories of the Bloodlands in motion towards the post-1991 histories of Eastern European and Eurasian global economic integration.<sup>37</sup>

One of the best examples of this interweaving of the past and present is the beginning of the main quest “Get Junior”, in the middle of the fourth main story path. Geralt meets with three gangsters, each the head of a powerful faction of the Novigrad underworld, in the seemingly incongruous setting of a bathhouse: Dijkstra, the former head of Redanian intelligence who has reinvented himself as a powerful gangster under the pseudonym of Sigi Reuven; Cleaver, a.k.a. Carlo Varese, a dwarf who controls the prostitution rings in the city; and Francis Bedlam, King of the Beggars, head of the thieves' guild of Novigrad.

This meeting is a sociologically accurate snapshot of the “grey bourgeoisie” which took power in nearly all Eastern European and Eurasian nations in 1990-1991 imaginable.<sup>38</sup> This stratum was an unruly admixture of genuine entrepreneurs (Geralt himself), privatized national security employees turned entrepreneurs of coercion (Dijkstra), criminal syndicates rooted in minority ethnic groups (Cleaver), and prisoner subcultures (Bedlam).<sup>39</sup> In this context, the bathhouse setting is not accidental, but suggests the Belarusian, Russian and Ukrainian folk tradition of the sauna.

That said, CD Projekt made the wise decision to limit these allusions to post-1991 Eastern Europe to a significant subtext rather than a major theme of the story, in order to preserve the thematic unity of the open world.<sup>40</sup> What Novigrad does provide, on the other hand, is the cosmopolitan setting wherein the critical frames of identity-politics, dynastic expansionism and gender can be seamlessly integrated into a new type of character development: the birth, in short, of market-driven individuation. This latter is not to be confused with individualism or self-interest per se, but refers to the new types of urban-based subjectivities capable of practicing the new forms of solidarity mentioned previously. These subjectivities would be distinctly out of place in the war-ravaged villages of Velen or the clan-based society of Skellige, which is why characters such as Keira and Yoana remain distinct outliers vis-a-vis their social locations. By contrast, Novigrad's urban spaces teem with properly urbane sophisticates.<sup>41</sup>

During the Novigrad main quest “Broken Flowers”, for example, Geralt meets Elihal, a tailor elf who happens to be an unashamed and talented cross-dresser. This is both a reference to the democratization of gender norms typical of urbanization, as well as a nod to the participatory

cosplay (costume play) culture popularized by digital fan communities and comic conventions.<sup>42</sup>

Just as importantly, Novigrad's urbanity allowed CD Projekt's quest designers to parody, satirize and pastiche a broad range of transnational media forms and genres, without disrupting the continuity of the open world. The main quest "Novigrad Dreaming" not only pokes fun at the city's greedy bankers in the best tradition of citizen journalists such as Bill Moyers and Nomi Prins, it also rewrites the Hollywood haunted house thriller into the comic fable of a mildly supernatural urban squatter.

Conversely, the Novigrad side quest "Of Swords and Dumplings" parodies the Hollywood heist caper, the rags-to-riches story, and the gangster thriller in order to critique Novigrad's urbanized racism and xenophobia. The main character of the quest, Hattori, is a talented elven swordsmith who has been reduced to selling dumplings due to racial discrimination and a local extortion racket.<sup>43</sup> To complete the quest, the player must defeat the local extortion racket, help reconcile Hattori with an estranged former worker, and repair the strained relationship between two merchant brothers. It is only by rebuilding three forms of solidarity -- Hattori's right to live and work in the city like any other citizen, Hattori's trust in his assistant, and the trust between the merchant brothers -- that players are granted access to Hattori's smithy, the most powerful in the open world.

This dialectic of greater individuation and expanded solidarity need not take the form of earth-shaking battles or epic confrontations. One of the single most moving quests of *Witcher 3*, titled "Empty Coop", is also one of the simplest.<sup>44</sup> In this quest, a peasant woman asks Geralt to track down a monster which has allegedly been stealing her chickens. On further investigation, players discover a trail of small human footprints, alongside some oddly-shaped wolf tracks, leading into the forest. The perpetrators of the chicken theft turn out to be three small children, ages seven to ten, whose parents were abducted by soldiers during the war. They explain to Geralt that the wolf prints were caused by a family heirloom, a pair of wolf moccasins created by their father, which masked their footprints. Players must make a choice:

*Player action: choose "Give 'em a home. Likely to stop stealing, then" instead of "Watch out... They'll be back."*

Geralt: "Take them in, give 'em a home. Won't steal from you, then."

Old Woman: "Sure, but it'll mean feedin' the whelps. I gain nothin' from it." *Pause.* "But... suppose I'll give it some thought."

If players choose "Watch out", the children vanish. Given the parlous state of the open world, one must assume the worst. However, if players encourage the woman to take in the children, nothing seems to happen at first. After sufficient time has passed, however, and if players return to the old woman's home, they will discover the three children are now playing merrily in the yard.

What makes this positive ending sublime is that there is no monetary reward for nor any other overt commemoration of the player's good deed. The simple visual confirmation that the player's actions saved three children from perdition -- a confirmation only possible thanks to the handcrafted nature of *Witcher 3*'s open world, which renders each location memorable and distinct from all others -- will trigger a profound wave of empathy in most players. The social

meaning of this empathy is the recognition that by stepping into the shoes of the child protective services staffer, Geralt is defending the welfare state services which were systematically pulverized by the post-1991 wave of privatization and deregulation across Europe.<sup>45</sup>

More remarkable still, this particular ending was co-produced by CD Projekt's fan community. The original version of this quest was timed, i.e. if players did not investigate the childrens' tracks within a certain time period, the quest automatically failed and the children disappeared. Players argued, with some justification, that timed quests are incompatible with the overall principle of maximum player freedom typical of the game as a whole.<sup>46</sup> CD Projekt listened to its fan base, and removed the timer from the quest in a subsequent update.<sup>47</sup>

Perhaps the most striking examples of the forms of solidarity which germinate in Novigrad are those of the cultural sphere. The key agent of this sphere is Priscilla, one of the most interesting characters in the game and the co-star of some of its most finest quests. While *Witcher 3* leaves the aesthetic merits of Dandelion's poetry open to debate, Priscilla is portrayed as a singer, writer and lyricist of the highest caliber. Her performance of the song "The Wolven Storm" in the side quest "Cabaret" is not just one of the highlights of the game, it is also one of the most sublime cut-scenes in videogame history.<sup>48</sup>

In addition to her artistic talents, Priscilla also has a pragmatic understanding of Novigrad's cultural politics. In the main quest "The Play's The Thing," Geralt must find and talk to a doppelganger, harmless creatures with the capacity to precisely mimic the appearance of other humanoid creatures. This is seemingly impossible, given that doppelgangers are being relentlessly hunted down by roving witch hunters and have every reason to remain in hiding. After some thought, Priscilla comes up with the properly Brechtian solution of writing a play which preaches tolerance, in order to convince the doppelganger to appear (suitably disguised, of course) in the audience.

The player must subsequently co-write the main theme and script with Priscilla, recruit and compensate the actors, ushers and performers, and arrange for publicity. Above all, the player must perform as one of the main characters: legendary witcher Geralt plays the onstage role of -- what else -- a legendary witcher. The resulting play-within-a-videogame delivers an astonishingly open plea for humanity and tolerance in a city ravaged by xenophobia.<sup>49</sup> It also ingeniously simulates the experience of stage fright by compelling players to deliver lines of onstage dialogue in time-limited interactive dialogues: suddenly, the pressure of fighting occult monsters in underground caverns pales next to the demands of the acting profession. While there is no serious penalty for choosing the wrong line, the experience of making a mistake is as comically mortifying as it should be.

This quest is not just a tour de force of interactive story-telling, it is a rewriting of Act II of Heiner Müller's *Hamletmachine*, the legendary 1977 drama which accurately forecast both the democratic uprisings of 1990-1991 as well as the subsequent eurozone-induced austerity and neo-national political revanchism of the European Union, a.k.a. transnational capitalism with European regional characteristics.<sup>50</sup> In contrast to the tragedy portrayed in *Hamletmachine*, where the characters cannot break free of their historical moment, "The Play's The Thing" depicts a subtle but unmistakably positive transformation. This is the moment Geralt recognizes the doppelganger in the audience and uses the opportunity to peacefully and safely draw the latter out -- all while staying in his on-stage character as the witcher playing a witcher.<sup>51</sup>

This transformation of Geralt from mercenary-minded professional into an agent of social

solidarity is also apparent in the Novigrad side quest “Carnal Sins”. This latter is an ingenious reworking of the detective story, the forensic procedural, and the vampire thriller into a searing critique of the increasingly widespread politics of 21st century political revanchism -- a.k.a. economic policies which enrich local plutocrats, legitimated with xenophobic violence towards perceived outsiders. After a vicious attack on Priscilla aimed at destroying her voice, Geralt must sift the physical evidence, cross-examine witnesses, and follow the due process of law (e.g. presume innocence before assigning guilt) in order to discover the true culprit. In essence, the player must think and act like a civil investigator, rather than a hired assassin.

Given the concurrent structure of the first six main story paths and nearly all of the side quest paths, one might ask why *Witcher 3*'s final side quest path and two main story paths are primarily linear in nature. The reason is that the finale had to satisfy three narrative challenges. Two of these latter are unique to the form of the interactive open world, while the third was unique to the *Witcher* franchise.

The first challenge was the necessity to integrate the parallel stories of Geralt and Ciri into a single narrative frame, and thereby showcase how the player's choices influenced the development of both characters. Put bluntly, an open world premised on character development would not be credible if its two main characters did not develop in some significant way. The second challenge, the logical corollary of the first, was the requirement to make the theme of geopolitical closure credible by showing how the player's choices in the game concretely affect the end state of the open world. The third challenge was to fulfill CD Projekt's public commitment to the fan community as early as February 2013, two years and three months before its official release, that *Witcher 3* would be the epic conclusion of the *Witcher* trilogy.<sup>52</sup> This meant that the ending had to tie up as many loose narrative ends from *The Witcher* and *The Witcher 2* as possible.

The final main story and side quest paths succeed brilliantly in answering all three challenges, in large part by adopting one of the most important innovations of *Witcher 3*'s illustrious predecessor, Square Enix' *Final Fantasy 12* (2006). This latter's greatest innovation was its last-minute switching of narrative gears from the framework of fantasy fiction to that of science fiction. The conclusion of *Final Fantasy 12* depicts the victory of an anti-colonial united front against a revanchist energy-rent imperialism, only not through sheer firepower, but through a collective solidarity which defeats the plutocratic elites driving the open world towards an apocalyptic war.<sup>53</sup>

The finale of *Witcher 3* adopts a similar strategy, by rewriting the registers of fantasy into those of science fiction. In retrospect, CD Projekt carefully prepared the ground for this move by liberally salting its open world with themes drawn from science fiction. These latter include everything from magical constructs which invariably turn against their creators in the best tradition of Mary Shelley's *Frankenstein* (1819), to the Skellige side quest “The Tower Outta Nowheres”, an uproarious satire of some of the most exploitative and anti-consumer business strategies of the videogame industry, namely digital rights management (so-called DRM).<sup>54</sup>

This long-running science fiction subtext finally comes into its own in the main story quest “The Isle of Mists”. The isle in question is a magical portal which is everywhere and nowhere, i.e. it coexists with all times and spaces, but is also irreducible to these latter. At first glance, this quest might seem to be a straightforward rewriting of the classic European fairy-tale and subsequent Disney franchise “Sleeping Beauty”, given the presence of the stranded dwarves

Geralt meets on the Isle and Ciri's magical slumber. What does not fit into the fairy-tale framework, however, is the magic lantern Geralt employs to steer through the isle's harbor, the fully mechanized worlds the newly reawakened Ciri describes having visited, or the interdimensional surveillance technologies of the Wild Hunt which quickly detect Ciri's presence, forcing her and Geralt to teleport elsewhere.

There is a similar transformation of fantasy into science fiction in “The Battle of Kaer Morhen”, wherein Ciri's power to drive back the soldiers of the Wild Hunt is not primarily military in nature, but rests on her capacity to disrupt the very fabric of the space-time continuum (they hastily retreat, but Ciri's mentor has to restrain her at the last second, to avoid permanent damage to the cosmos).<sup>55</sup> The deeper lesson here is that Ciri's limitless power to travel through time and space will always be constrained by the limitless military resources of the Wild Hunt, and continued conflict between the two will result in nothing but an endless spiral of mutual destruction.

The nature of this conflict is revealed by the main story quest “Through Time and Space”. Far from being inexplicably evil, the members of the Wild Hunt turn out to be seeking Ciri's power for the wholly rational purpose of warding off an impending cosmic apocalypse. The Wild Hunt are the elite warriors of an elven kingdom called the Aen Elle, an ethnic group distantly related to the elves of Geralt's world, but which long ago discovered a means of interdimensional travel and conquered a number of other worlds. However, their inter-world empire is being engulfed by the White Frost, a monstrous blight spreading across the cosmos which is freezing and destroying every world in its path. In response, a warrior named Eredin has usurped control of the Aen Elle and driven them to wage unremitting interstellar war, in hopes of finding a source of magical power strong enough to stop the Frost.

This shattering series of scientific and sociological revelations is given its corresponding geopolitical context in the main story quest “Tedd Deireadh: The Final Age”, wherein the forces of Skellige, Nilfgaard, Geralt's allies, Ciri and a group of sorceresses must unite to defeat Eredin and halt the suicidal war of the worlds. When the player finally dispatches Eredin, however, they are confronted with an apparent betrayal. Ciri's mentor, Avellach, an elven mage of extraordinary power who is an exile from the Aen Elle, has unleashed what appears to be a Conjunction of the Spheres. This is the long-prophesied opening of the magic portals connecting all worlds at once, which threatens to disintegrate the very fabric of the universe in much the same way as Ciri's outburst during “The Battle of Kaer Morhen”.

Yet when Geralt finally corners Avellach and challenges him to a duel, on the plausible assumption that the latter is the ultimate villain of the story, no battle takes place. Instead, Avellach reveals that Ciri has decided to fight the root cause of the conflict between Aen Elle and the rest of the universe, by directly attacking the White Frost on its own interstellar grounds. When Geralt takes issue with Ciri's decision, like any parent or guardian agonizing over a mortal danger threatening their adopted or natural offspring, this astonishing exchange takes place:

Geralt: *stubbornly*: “There's gotta be another way...”

Ciri: *gently*: “What can you know about saving the world, silly? You're but a witcher. This is my story, not yours. You must let me finish telling it.”

This is the moment the open world's simulation of the geopolitical past suddenly becomes the science fiction laboratory of the future: Geralt's player-initiated history-writing accedes to Ciri's mandate to change the course of history.<sup>56</sup> What is crucial here is that none of the interactive dialogue choices during this quest have any effect on the final outcome of the game -- indeed, all the determining choices have already been made.

CD Projekt's goal was not to deceive players but to shed light on one of the deepest contradictions of the open world as a form. This is the fact that the more pervasive the digital media has become, the greater the integration of its practices and institutions into everyday life, the greater the potential collective power of transnational audiences vis-a-vis any given open world. *Witcher 3* acknowledges this power through its multiple endings, which transform the themes of player freedom and geopolitical enclosure into something new.

These endings are divided into two main categories, namely the outcome of the war between Redania and Nilfgaard, and Ciri's personal fate after battling the White Frost. A series of quests and interactive dialogue choices generate three possible end states for the former, namely the victory of Nilfgaard, the victory of Redania under Radovid, or the victory of Redania under Dijkstra. A separate series of player choices located in six interactive dialogue sequences generate three possible destinies for Ciri -- her demise due to the White Frost, her survival and crowning as empress of a victorious Nilfgaard, or her survival and decision to become a witcher.

The three end states of the war are determined not by the main story, but by the player's completion or non-completion of side quest path 14. If this side path is not completed, Redania led by Radovid will automatically defeat Nilfgaard. The price tag of this victory is that Radovid will rule over his expanded empire with a reign of terror against mages and non-humans. Conversely, if side path 14 is completed, the player's decisions will tip the balance towards either the victory of Nilfgaard, or else the victory of Redania under Dijkstra. The former option results in less overall bloodshed, albeit at the price of autocratic stagnation, whereas Dijkstra's rule ushers in an epoch of authoritarian industrialization.

One possible hypothesis is that these three end states correspond to the three hegemonic forms of dynastic geopolitical closure on the territory of the Bloodlands between 1775 and 1914. These destinies were annexation by the Austrian, Prussian (after 1871, German) and Russian dynastic empires. Nilfgaard's victory most resembles the dominion of Romanov-era Russia, something confirmed by a sub-variation of this scenario wherein Ciri becomes empress of Nilfgaard.<sup>57</sup> This latter triggers a playable epilogue wherein Ciri and Geralt spend one last day together in an icy, snowbound White Orchard and must drive off an inoffensive bear from a fishing hole at a frozen lake, a nod towards the rule of Catherine the Great. Conversely, Redania's victory under the brooding cloud of Radovid's madness suggests the elite senescence of the Austrian empire, while Dijkstra's authoritarian industrialization recalls to mind Prussia's expansion into the German empire.<sup>58</sup>

This raises the question as to why none of the three empire endings -- nor any of the three Ciri endings -- overtly refer to the two major post-dynastic empires of the Bloodlands between 1914 until 1945, namely Hitler's Germany and Stalin's Soviet Union. This strategy may seem especially counterintuitive given the myriad references to the apocalyptic violence unleashed by these empires in *Witcher 3*'s open world.

We can begin to unravel the mystery with the assistance of one of Timothy Snyder's most insightful comments, namely that the construction of the European Union was not the final

settlement of the conflicts of World War II, something more accurately ascribed to the inauguration of the US to the status of world hegemon in 1945. Rather, the European Union is the final settlement of World War I.<sup>59</sup>

*Witcher 3*'s empire endings stop in 1914 for a similar reason: its open world is not about 1945, but about 2008. This is why Ciri cannot be reduced to a national allegory of Poland, Ukraine, or any other specific nation or ethnic group in the Bloodlands. It is not that she has nothing to do with the post-1914 anticolonial resistances or the post-1945 anti-neocolonial resistance movements of the region, but precisely because she represents what they all have in common today. Ciri is, in short, the first great interactive avatar of the European-wide social movements fighting against the EU's own version of transnational capitalism, and for a new kind of transnational political, economic and cultural solidarity.

It is here that CD Projekt pulls off one of the greatest feats of interactive story-telling of all time. Ciri's survival or demise depends on whether or not the player has properly grasped *Witcher 3*'s critique of identity-politics, dynastic expansionism and gender, by choosing dialogue options which treat Ciri with the values of cosmopolitan solidarity, democratic autonomy and egalitarianism. In practice, players must correctly choose either two out of four or three out of five interactive dialogue choices. Put bluntly, each choice is a test of the player's understanding of the importance of social solidarity.

The first of these five dialogue choices occurs at the end of the main story quest "Blood on the Battlefield", when players must advise Ciri on how best to mourn the passing of Vesemir. One of the dialogue choices triggers an uproarious interactive snowball fight, one of the truly sublime moments in *Witcher 3*, while the other triggers a lugubrious drinking session. The snowball fight adds to Ciri's chances of survival, while the drinking session subtracts from such. The first lesson is that our sorrows are bearable only when we grasp the joy of laughter and play with others.

The second dialogue choice occurs in the final moments of "Blood on the Battlefield" and is triggered by Ciri's optional visit to Emperor Emrys (note that if the player encourages Ciri to visit the Emperor, there is a possibility she will become empress of Nilfgaard in the epilogue, whereas if the player encourages her to go to Velen instead, the empress ending is automatically excluded and her fate will depend on four dialogue choices instead of five). During the conversation with the emperor, the player must make an additional interactive dialogue choice to accept or reject the Emyr's payment to Geralt for fulfilling the Emperor's order to bring Ciri to the court. If Geralt refuses to accept the money, this adds to Ciri's chances of survival, whereas if he accepts it, this reduces her chances. The second lesson is that solidarity always comes before money.

The main story quest "Child of the Elder Blood" contains the third dialogue choice, triggered by Geralt and Ciri's fruitless search through Avellach's laboratory. If Geralt encourages Ciri to run amok in the laboratory to express her feelings, this counts towards her survival. If Geralt encourages her to bottle up her feelings, this detracts from her survival. The lesson here is that we must be honest with ourselves if we are to be honest with others.

The fourth dialogue choice occurs prior to Ciri's meeting with the Lodge of Sorceresses in the main story quest "Final Preparations". Geralt must decide whether to allow Ciri to go to the meeting by herself, or to accompany her. The former choice adds to her chances to survive, the latter detracts from her survival. The lesson is that everyone must fight their own battles.

The fifth choice is whether to visit Skjall's grave or not in the side quest "Skjall's Grave". Skjall is a minor character who sacrificed himself to protect Ciri during one of her escapes from the Wild Hunt. Completing this side quest adds to Ciri's chance of survival, while failing to do so subtracts from her chances. The lesson here is the necessity to acknowledge even the smallest acts of solidarity which sustained us in our lives.

Equipped with this understanding of the dialogue choices, we are finally in a position to understand the connection between the three empire endings and the three Ciri endings. These six endings boil down, in practice, to three geopolitically meaningful endings. The first ending occurs if the player's choices trigger Ciri's demise. This results in a playable epilogue wherein Geralt hunts down the last surviving Crone, as vengeance for Ciri's death. After completing this quest, a cut-scene suggests that the interdimensional portals between the worlds is becoming active again, and that humanity is unlikely to survive the next Conjunction of the Spheres. This is the dismal fate of national polities without any hope of transnational democracy, which relapse into plutocratic and kleptocratic despotisms.

If the player's choices trigger Ciri's crowning as empress, stagnation replaces catastrophe. This is the bleak future of eurozone austerity, wherein neo-mercantilist policies benefit Europe's export surplus nations at the expense of Europe's import surplus nations. Yanis Varoufakis has provided the single best account of why this neo-mercantilism is unsustainable in Greece, Portugal and Spain, and will eventually be unsustainable in Italy and France.<sup>60</sup>

It is Ciri's survival as a witcher, by contrast, which offers the most interesting avenue of resistance. The secret of this third ending is contained in the brief cut-scene showing Ciri crouching on a frozen plain, shielding her eyes from the blinding core of the White Frost before beginning her assault. We never see what powers she summons against the Frost, precisely because *this struggle is still going on*. The Ciri witcher ending asks the player to reflect on the basic contradiction between player choice and geopolitical closure -- to think through *Witcher 3's* open world as a model of our own world.

By linking the early modern history of Eastern Europe and Eurasia to the geopolitics of contemporary European integration, *Witcher 3* honors the possibility of a future emancipated from the categories of geopolitical closure altogether. This closure must end, for true freedom to begin: the choice between human need versus plutocratic greed is ultimately the choice between a human future versus planetary extinction. If the price tag of digital citizenship is universal complicity with the injustices and horrors of a networked world, then the crushing weight of this complicity can only be borne by means of a democratically chosen and transnational solidarity. Against the White Frost of the two thousand billionaires, only the solidarity of the 7.5 billion digital witchers will do.

1. Szymborska's original line: "Tylko co ludzkie potrafi być prawdziwie obce./ Reszta to lasy mieszane, krecia robota i wiatr." Wislawa Szymborska, *Psalm* (1978), translated by Joanna Trzeciak in: *Over the Wall/After the Fall: Post-Communist Cultures through an East-West Gaze*. Edited by Sibelan Forrester, Magdalena J. Zaborowska and Elena Gapova. Bloomington: Indiana University Press, 2004. (xiv).
2. For further details, see: Steven Messner. "The Myth Behind The Monsters of The Witcher 3." *Rock, Paper, Shotgun*. October 15, 2015. <https://www.rockpapershotgun.com/2015/10/15/the-witcher-3-folklore/>.
3. The *Witcher 3* side quest "Forefather's Eve" refers to Adam Mickiewicz's *Dziady* (1822-1834), while the side quest "A Towerful of Mice" is loosely based on the Polish folk tale of Prince Popiel. However, the narrative content of both quests has nothing to do with the originals. "Forefather's Eve" is not an ode to Polish nationalism, but denounces both the imperial-era and Soviet-era repression of peasant religious practices. Conversely, "A Towerful of Mice" denounces Nazi-era human experimentation and the brutality of the Polish nobility vis-a-vis their Polish and Ukrainian peasants. The wedding sequence of "Hearts of Stone" is based on Stanisław Wyspiański's 1901 play, *The Wedding*, while the crypt sequence features the non-player character of Witold quoting a line from Adam Asnyk's "No, Nothing Happened There". The full roster of *Witcher 3*'s limited references to Polish culture is here: [https://www.reddit.com/r/witcher/comments/3zkaxv/spoilers\\_all\\_the\\_references\\_to\\_polish\\_culture\\_in/?](https://www.reddit.com/r/witcher/comments/3zkaxv/spoilers_all_the_references_to_polish_culture_in/?)
4. For a comprehensive analysis of Polish nationalism, see: Brian Porter. *When Nationalism Began to Hate: Imagining Modern Politics in Nineteenth-Century Poland*. New York: Oxford University Press, 2000.
5. Piłsudski was one of the key instigators of Poland's post-1918 independence from the Russian and German empires, as well as its dictatorial leader from 1926 until 1935. The Second Polish Republic lasted from 1918 until the combined Nazi and Soviet invasion of 1939.
6. CD Projekt built on the achievement of Andrej Sapkowski's *Witcher* novels, which critique the institutional violence of 19th and 20th century imperialism, colonialism and militarism along with the identity-politics of racism, sexism and chauvinism.
7. For a fuller analysis of the specific achievements of *The Decalogue* and its relationship to Poland's post-WW II media culture, see chapters 4 and 5 in my own text: Dennis Redmond. *The World is Watching*. Carbondale: Southern University of Illinois Press, 2003.
8. Timothy Snyder. *The Bloodlands: Europe Between Hitler and Stalin*. New York: Basic Books, 2010.
9. The contradiction here is that both Stalinist and post-Stalinist Soviet Union and Maoist China supported genuinely popular anti-imperial mass movements and Third World national revolutions in Cambodia, Cuba, Laos, Vietnam and elsewhere. At the same time, the Soviet state crushed anti-imperial revolutions in Hungary (1956), Czechoslovakia (1968) and Poland (1981), while the various Soviet republics were ruled by neocolonial nomenklaturas. These national nomenklaturas were ambiguous social formations, halfway between the British, French and Portuguese colonial despotisms and the Anglophone, Francophone, and Lusophone comprador elites which ruled many postcolonial American states during the late 19<sup>th</sup> century, and many African and Asian states during the late 20<sup>th</sup>

century.

10. This number includes the 5.6 million Soviet victims of the 1931-1934 famine-genocide, the 800,000 mass shootings of Soviet citizens during the Great Purges, and the 2 to 3.6 million excess deaths due to the lethal conditions of the Soviet gulag.

11. Timothy Snyder's *Black Earth: The Holocaust as History and as Warning* (2015) argues that social geography explains one of the most puzzling features of the Holocaust, namely its regional nature. Approximately half of all European Jews living outside of the Bloodlands in 1939 lived to survive the Holocaust, but only about 5% of all Jews living in the zone of the Bloodlands escaped the Nazi killing machine. Snyder makes a convincing argument that this special lethality was due to the fact that the existing state structures of the Bloodlands were destroyed twice over, first by Soviet neocolonialism (the Soviet mass killings and state-engineered famines in Soviet Ukraine between 1931 and 1938, and the 1940 invasions of the Baltic states and eastern Poland) and then by Nazi colonialism. See: Timothy Snyder. *Black Earth: The Holocaust as History and as Warning*. New York: Penguin Random House, 2015.

12. Chagall was born to a Lithuanian Jewish family in Vitebsk, in what later became the country of Belarus. Today Vitebsk is the site of an annual arts festival and a Chagall museum.

13. These basic rules include how to use the camera system to look around, how the player-character walks and runs, how to examine and acquire objects, how to use the player's special witcher senses, how to interact with non-player characters, and how to access the combat and inventory systems.

14. Neo-slave narratives explicitly memorialize the stories of the enslaved populations of the Atlantic triangular trade which were either excluded from the historical archives, or never recorded in the first place. As such, they are profound meditations on the writing of history, as well as on the politics of aesthetic representation. Three of the most influential neo-slave novels are US writer Toni Morrison's *Beloved* (1987), Haitian writer Evelyne Trouillot's *The Notorious Rosalie* (2004), and Indian writer Amitabh Ghosh's *Sea of Poppies* (2008). The three most prominent interactive media works which borrow heavily from the literary neo-slave narratives are Cory Barlog's *God of War 2* (2007), Dana Jan and Ru Weerasuriya's *God of War: Ghost of Sparta* (2010), and Stig Asmussen's *God of War 3* (2010), all of which rewrote the materials of the Greek mythology epic into an interactive slave insurrection. For additional context on the importance of slavery as a key foundational structure of the early capitalist world-system as well as a critical element of present-day history, see: Paul Gilroy. *The Black Atlantic: Modernity and Double Consciousness*. London: Verso, 1993. Also see: Marcus Rediker. *The Slave Ship: A Human History*. New York: Penguin, 2007.

15. It is no accident that the systems of Atlantic maritime slavery and land-based Eastern European and Eurasian serfdom emerged during the same time-period -- the late 16th and early 17th centuries -- and were abolished at roughly the same time, i.e. the mid-19th century. Both modes of wageless labor served comparable functions in the histories of their respective empires, i.e. whereas slavery was a crucial engine of wealth for the Atlantic maritime empires, serfdom was an equally indispensable engine of wealth for the Austrian and Russian empires. As late as 1860, 3.95 million US citizens (12.6% of the population) were chattel slaves and 10.5 million citizens of the Russian empire (14% of the empire's population) were serfs.

16. The quest which introduces players to Gwent features this witty exchange:

Geert: "What a waste of time! The earth shall revolve around the sun before you comprehend these rules!"

Geralt: "Got a minute?"

Aldert: "Why not. Aldert Geert, assistant professor in contemporary history at Oxenfurt Academy."

Geralt: "Geralt of Rivia. Witcher with tenure."

17. CD Projekt Red. *Gwent*. <https://www.playgwent.com/en>.

18. During one of the main quests, Geralt finds the body of a villager who was killed by a griffin (a magical flying lizard) and strikes up a conversation with Mislav, a local hunter. If the player chooses to show empathy with Mislav, the following dialogue occurs:

Geralt: "You know him?"

Mislav: "We served at the lord's manor together, where the black army's encamped now. He was a stable hand, I was the lord's hunter. But that was before... Well, a long time ago."

*Player action: choose "Before what?" instead of "The Nilfgaardians – where'd you find them?"*

Geralt: "Before what?"

Mislav: "Before they drove me from the village."

Geralt: "What'd you do?"

Mislav: "Nothin'. I'm a freak. Sorry, I'd rather not talk about it."

*Player action: choose "I'm a freak, too." instead of "Won't press you."*

Geralt: "I'm a freak, too."

Mislav: "Aye, but of another kind."

Geralt: "If it's lycanthropy, I can help."

Mislav: "What?"

Geralt: "Lycanthropy. Werewolves? Handled a few cases in the past. It's usually a simple curse that..."

Mislav: "The lord's son, Florian, and I... We loved each other. Dieter walked in on us in the stables. They drove me away... Florian hanged himself. Lord started drinkin', and the estate fell into ruin. That's the long and short of it."

Geralt: "I'm sorry."

Mislav: "Ah, ancient history now. I was to show you where I found the Nilfgaardians. Come."

This sequence exemplifies the brilliance of *Witcher 3*'s storytelling. Players are free to ignore Mislav and concentrate on the quest, but they are rewarded for their curiosity and empathy with a riveting tale of same-sex lost love – the ingenious queering of the heteronormative fantasy romance melodrama.

19. Tomira's hut is located just to the west of White Orchard village.

20. If the player visits this area, one of the soldiers will recognize Geralt and the following dialogue will take place:

Soldier: "Geralt of Rivia, correct? You were in White Orchard recently? Near Vizima?"

Geralt: *assents*: "Mh-hmh. Charming village if you don't mind rotting corpses."

Soldier: "There'd have been one more if not for you. Lena... she survived, thanks to your potion."

Geralt: "Nice to see a Nilfgaardian soldier concerned about the fate of some simple Nordling. But kind of surprising, too."

Soldier: "That night, when the griffin attacked her... she was on her way to meet me, in the woods near the garrison."

*Player choice: select "1. Lousy spot for a rendezvous" or "2. Love knows no bounds, I guess".*

*If player selects 1:*

Geralt: "Mmh. Love knows no bounds."

Soldier: *agreeing*: "Not so."

*If player selects 2:*

Geralt: ""

*In both cases, soldier continues:*

Soldier: "Her parents told her that if they saw her with a Nilfgaardian, they would shave her head, cut out her tongue and banish her from their home. Listen. Lena... she has not fully recovered. I took her with me when I was transferred, thought she might get better. But no. She says nothing, recognizes noone, sleeps most of the day."

Geralt: *sadly*: "I warned Tomira. Witcher potions have powerful, usually permanent side-effects. Can't do anything to help now. Maybe a mage could."

Soldier: "I don't know whether to thank you, or curse you for not letting her die with dignity."

Geralt: *unmoved*: "Trust me, the choice I had to make was harder."

21. The final interactive scene in White Orchard shows an angry female villager beating the female tavern owner close to death, accusing the latter of being a collaborator with the invading Nilfgaardians. However, when Geralt and Vesemir intervene to stop the tavern keeper from being murdered, they only make things worse, because three male villagers use this opportunity to ambush the witchers. There is no option to choose a non-lethal path: the player (as Geralt) and Vesemir must kill the three or be killed. Real life variations of this tragedy occurred in tens of thousands of cities, towns and villages all across the Bloodlands, where invading Nazi or Stalinist armies inflicted massive violence on local populations, nationalist or Soviet partisans committed counter-violence, etc.

22. The theme of player responsibility is also conveyed by means of several optional conversations with Morvran, one of Emhyr's top military commanders, which allow players to simulate the effects of past decisions they had made during play-throughs of *TW2*. During the third tutorial, Morvran will ask Geralt about whether or not the latter killed Aryan, and chose the Yorveth or Roche path (if the player chose Yorveth, Morvran will ask if Geralt saved Triss or broke Saskia's curse, and if the player chose Roche, Morvran will ask whether Geralt saved Triss or saved Anais). Finally, Morvran will ask whether Geralt helped Sile in the Megascopes or not, and whether Geralt killed Letho or let him go. If the player chose to let Letho go, Letho will appear in the optional *Witcher 3* side quest "Ghosts of the Past". If Letho survives this quest, he can be recruited to fight against the Wild Hunt at Geralt's side during the main quest "The Battle of Kaer Morhen".

23. It is true that a significant part of the full open world, the island archipelago of Skellige, requires the completion of a main quest. This was done to ensure that players witness and experience the devastation unleashed by the warring empires on the communities of the open world.

24. E. P. Thompson. "History from Below." *Times Literary Supplement*. April 7, 1966 (279-280).

25. Many of these consequences take the form of incidental or ambient story-telling. The first time the player visits the village, they will overhear a peasant couple located in a hut directly opposite the inn arguing over whether to slaughter their pig before the local authorities take it from them. If the player chooses to fight the Baron's thugs, the peasant couple will not be harmed, but the whole village will suffer collective retribution from the Baron as punishment. If the player chooses not to fight the Baron's thugs, Geralt will observe two of the Baron's thugs force their way into the peasants' hut and slam the door shut (there is no way to stop the thugs in time, or to open the door thereafter). Whichever course of action the player chooses, they must bear the burden of complicity.

26. Most notoriously, the first *Witcher* videogame rewarded players for seducing women with in-game trading cards. A representative fan critique is available here: [http://feministing.com/2008/12/10/subtle\\_sexism\\_analyzing\\_the\\_wi/](http://feministing.com/2008/12/10/subtle_sexism_analyzing_the_wi/). By contrast, every single one of the character romances and romance-related interactions in *Witcher 3* are handled with great care and respect for all the parties involved.

27. This is a subtle allusion to the significant transformation of gender during the epoch of the Bloodlands, namely the mass entrance of Eastern European and Eurasian women into arms factories and industrial plants due to Stalinist industrialization in the 1930s and WW II in the 1940s.

28. This term originated in Sapkowski's *Witcher* novels and is often cited in CD Projekt's videogames. The witcher's path is the unique destiny which each witcher is said to pursue, independently of the other members of their caste.

29. To exorcise the ghost, the player must either bring Annabelle's remains to Graham, her former lover, or bring Graham to her remains on Fyke Island. In both cases, the meeting is fatal for Graham, who is reconciled to his lover at the price of a properly Wagnerian *Liebestod* (i.e. the couple are reunited forever in death). The first ending releases the plague maiden to prey on the villagers of Velen, while the second exorcises the ghost forever.

30.

31. It is worth pointing out that where *The Witcher 3* employs character-driven paths, *Fallout 4* employs companion friendship and romance paths. These latter require the player to garner companion approval through multiple quests and successive player actions vis-a-vis friendly allies. The main difference is that players can pursue multiple paths simultaneously in *The Witcher 3*, whereas *Fallout 4* limits players to one companion at a time. We will describe the structure and consequences *Fallout 4*'s companion-based narrative strategy more closely in the next chapter.

32. The first six paths correspond to Act I of *Witcher 3*'s main storyline, while the seventh and eighth correspond to Act II and Act III.

33. Friedrich Engels. *The Origin of the Family, Private Property and the State*. Hottingen-Zurich, 1884. <https://www.marxists.org/archive/marx/works/1884/origin-family/>.

34. If the player disobeys the Crones and frees the Tree Spirit, the orphaned children of Crookback Bog will remain alive. However, the Tree Spirit will slaughter all of the inhabitants of Dunwood village as vengeance for its imprisonment, while the Crones will punish Anna by transforming her into a water

hag. She can be returned to human form, but the undoing of the curse will be fatal for Anna. Her death subsequently drives Strengger to suicide, causing Strengger's second in command, a brutal thug with none of the Baron's redeeming qualities, to take charge of Velen. Alternately, players can attack the Tree Spirit directly or kill it through covert sabotage. This choice will permit the Dunharrow villagers, Strengger and Anna to survive. However, the orphaned children in Crookbag Bog vanish, most likely becoming the hapless prey of the Crones. There is no happy end to either choice, just a pair of grim alternatives.

35. If the player does not complete the “Now or Never” side quest, mages will continue to be persecuted and slaughtered by Radovid. If Radovid is allowed to remain on the throne, the witch hunters will begin to persecute non-human residents of Novigrad (primarily dwarves, elves and dopplers). Alternately, if Radovid is replaced by Dijkstra or if Nilgaard wins the war with Redania, the witch hunts cease, at the price tag of perpetuating other forms of dynastic violence.

36. While the demography of the Bloodlands remained primarily rural until the post-1945 period, the largest cities in the region at the end of the 19th century included Chişinău, Dnieper, Gdansk, Kaliningrad, Kharkiv, Krakow, Kyiv, Łódź, Lviv, Odessa, Riga, Vilnius and Warsaw.

37. These urban quests are especially interesting because they provide important hints as to how CD Projekt's will create credible characters and quests for its next game, *Cyberpunk 2077*, an open world science fiction role-playing videogame set primarily in a futuristic city.

38. The newly independent polities of the former Soviet bloc experienced three geopolitical outcomes in the period between 1991 and 2015. The first was the dismantling of the rule of the grey bourgeoisie and the development of full electoral democracy. This occurred in the thirteen polities of post-2004 Bulgaria, Czechia, Croatia, Estonia, Hungary, Latvia, Lithuania, Mongolia, Poland, Romania, Slovakia and Slovenia, and post-2014 Ukraine. The second outcome was the rise of oligarchic collectivism, where nascent democratic institutions, traditions of indigenous anti-colonial nationalism, and a lack of energy-rents constrained the political power of the grey bourgeoisie. This occurred in the twelve polities of Abkhazia, Albania, Armenia, Belarus, Bosnia-Herzegovina, Georgia, Kosovo, Kyrgyzstan, Macedonia, Montenegro, Serbia and Tajikistan (Ukraine was ruled by oligarchic collectivism from 1991 to 2013, until the democratic revolution of 2014). The third outcome was the transformation of grey bourgeoisies into autocratic kleptocracies in the four polities of Azerbaijan, Russia, Turkmenistan and Uzbekistan. These kleptocracies took the political form of presidential monarchies and the economic form of energy-rent patrimonial states. These latter were structurally most comparable to the Middle Eastern and Eurasian presidential monarchies and energy-rent autocracies.

39. In the nations of the former Soviet Union, the prison subcultures took the form of the “thief in law” convict culture which emerged in the Soviet prison system. For further details on the contemporary trajectory of the grey bourgeoisies, see: Karen Dawisha. *Putin's Kleptocracy: Who Owns Russia?* New York: Simon and Schuster, 2014. For information about the coevolution of Russian organized crime and the Russian state since 1991, see: Mark Galeotti. *Russian Security and Paramilitary Forces since 1991*. London: Osprey Publishing, 2013. Also see Galeotti's blog, “In Moscow's Shadows”: <https://inmoscowsshadows.wordpress.com>. For additional details of the thief-in-law subculture of the Soviet prisons, see: *Russian Criminal Tattoo Encyclopaedia, Volumes I, II and III*. Edited by Damon Murray and Stephen Sorrell. London: Fuel Design, 2009. <http://fuel-design.com/russian-criminal-tattoo-archive/>.

40. This is why the three gangsters do not develop significantly as characters, but remain representatives of their respective class fractions. It also explains why the gangsters' plan to seize political control of Novigrad, a plan briefly discussed by Bedlam, remains unrealized.

41. The one apparent exception to the maxim that Novigrad is the space of greatest individuation, namely the Skellige side path which determines who will succeed King Bran as the ruler of Skellige, only reconfirms the rule. During the side path, a series of player choices determine whether Skelligens unite around the intelligent Cerys an Craite, the headstrong Hjalmar an Craite, or the authoritarian Svanrige Tuirseach. However, none of these three choices are integrated into the development of the three characters. If players explore the Skellige islands, they will discover a decentralized, lineage-based society with a tradition of strong-willed female warriors. They will also encounter examples of the justice as well as injustice meted out by these lineages, everywhere from traditions of family honor and druidic nature worship, to clan feuds and slaving expeditions. What the various quests suggest, but never explicitly state, is that Skellige can either evolve towards a trade-based society more or less at peace with its neighbors (the Cerys option), or become a haven of ruthless maritime expansionism comparable to the land-based expansionism of Redania (the Hjalmar option) or Nilfgaard (the Svanrige option). All three choices remain sociological possibilities, rather than sites of character development.

42. While one of the oldest of today's transnational fan conventions, the San Diego Comic Con, first met in 1971, attendance did not cross the 10,000 mark until 1989.  
[https://en.wikipedia.org/wiki/San\\_Diego\\_Comic-Con](https://en.wikipedia.org/wiki/San_Diego_Comic-Con).

43. The name and the theme of dumplings are not accidental, but refer to the legendary 16th century Japanese swordsman Hanzo Hattori, the subject of innumerable Japanese films, television series and manga (comic strips). [https://en.wikipedia.org/wiki/Hattori\\_Hanzō](https://en.wikipedia.org/wiki/Hattori_Hanzō). Unlike his historical namesake, Hattori shrinks from combat and flees physical confrontations of any kind.

44. This quest is located just east of Honeyfill Meadworks, in the settled region to the east of Novigrad.

45. This subtle but unmistakable defense of social solidarity is echoed by a number of minor side quests which are not part of the main story or side quest paths. These involve defeating packs of roving monsters which have occupied small villages. After defeating all of the monsters, a cut-scene shows the residents returning to their village to rebuild, as Geralt watches with evident satisfaction. Restoring these villages generates small amounts of experience points, but does not generate significant economic returns or other rewards, i.e. the decision to restore them is primarily a moral and not an economic decision.

46. On September 29, 2015 CD Projekt Red forum member REDKatja informed the fan community of the change: “It [i.e. the timer] was design[ed] at first, but we decided to adjust it. If quest failed for you, after patch arrives, you will be able to start it again and complete it. Sorry for inconvenience.”  
<https://forums.cdprojektred.com/forum/en/the-witcher-series/the-witcher-3-wild-hunt/tech-support/43787-quest-bug-empty-coop/page3>.

47. Other examples of CD Projekt's capacity to deliver game-play which respected the wishes of the fan community include the quest “The Taxman Cometh”, located in the *Hearts of Stone* downloadable expansion, which subjects Geralt's excess income to taxation. This was an elegant way of quashing an

in-game exploit which allowed the player to accumulate excessive wealth (the name of the tax collector is Walthenor Mitty, homage to James Thurber's Walter Mitty) without unduly upsetting fans. Another example includes Patch 1.05, a free update of the game released online by CD Projekt in May 2015. This patch created the Bovine Defense Force Initiative, a tongue-in-cheek monster designed to prevent players from killing a herd of local cows in White Orchard and selling their hides. Since the herd automatically respawns, players could generate significant amounts of money early in the game, disrupting overall game balance. The Bovine Defense Force is a powerful upper-level monster with zero experience points which constantly reappears whenever players attack the respawned herd.

48. The song was written by Marcin Przybyłowicz. CD Projekt deserves special commendation for the sophisticated facial animation employed to depict Priscilla's performance, as well as the onscreen reactions of the audience members. While all the vocal renditions of the song in the *Witcher 3*'s seven spoken languages are excellent, the Polish version sung by Anna Terpiłowska is especially resonant. This latter is available online: <https://www.youtube.com/watch?v=ZvQNZZCdjeI>.

49. The sequence is one of the most direct allusions to Eastern Europe's world-class theater culture, from its foundation by Bertolt Brecht to its later efflorescence under Heiner Müller.

50. Act 2 of Müller's play highlights Hamlet's incapacity to show his solidarity with the gender politics of Ophelia's rebellion, anticipating his later betrayal of the revolution at the end of the play. The conclusion of *Hamletmachine* depicts Hamlet and Ophelia as allegories of the intellectuals affiliated with the one-party state and the independent social movements: the former betrays the revolutionary cause and finds accommodation within the ruling order, while the latter are crushed. My own original English-language translation of Müller's play is available online: <http://monkeybear.info/Hamletmachine.pdf>.

51. Specifically, Geralt detects a familiar face in the audience -- a notoriously brutal Temple guard who was... [**specify this sequence of reading the non-identity within the repressive mask.**]

52. CD Projekt Red. "The Witcher 3: Wild Hunt Announced." February 5, 2013. <http://en.cdprojektred.com/news/the-witcher-3-wild-hunt-announced/>.

53. Two rival empires in *Final Fantasy 12* are waging an imperial war to control supplies of magacite, a crystal which stores vast quantities of magical energy called "Mist". This crystalline Mist powers the vehicles and industries of the open world, just as hydrocarbons power those of the real world, i.e. the storyline is a critique of 20th century and early 21st century energy wars.

54. In this particular quest, Geralt is trapped in a mage's laboratory and must escape by finding a book called Gottfried's Omni-opening Grimoire. The initials G.O.G. are a reference to Gog.com, CD Projekt's real world digital distribution service. As a company, CD Projekt has abolished all forms of DRM for all of its videogames and digital services, including Gog.com. To escape the tower, Geralt must disable the Defensive Regulatory Magicon (i.e. DRM). The name of the mage, Gottfried, is a reference to Gottfrid Svartholm, one of the founders of The Pirate Bay, a file-sharing site legendary for its age and durability. Adding to the mirth, the final battle inside the tower is structured as a miniature tower defense game.

55. Players can recruit as many as seven other non-play characters to serve as allies in this quest,

provided they have completed the various main story and side quests involving these characters. This is an ingenious game-play incentive to complete as many quests as possible, since players are rewarded with increased experience points, additional cut-scenes, and assistance in one of the more challenging sequences of the game.

56. From a literary standpoint, this moment is also the negation of one of the oldest tropes of the literature of colonialism, namely Prospero's self-serving renunciation at the end of *The Tempest* (1610). Shakespeare's play signaled the moment that Dutch and French market despotism began to replace Hapsburg dynastic expansionism as the hegemonic authority of the capitalist world-system, a.k.a. the prelude to the tectonic conflict of the Thirty Years War. By contrast, *Witcher 3* marks the moment that the transnational artists of the early 21st century have begun to renounce their commercial monopoly over the work of interactive media, by opening the door to the vast digital fan communities which are beginning to create, share and consume their own forms of non-commercial media.

57. This ending requires players to choose to complete side quest path 14, to defend Roche against Dijkstra the end of this path, to convince Ciri to meet with Emyr during the denouement of "Blood on the Battlefield", and to guarantee Ciri's personal survival of the battle with the White Frost. Note that it is possible for Nilfgaard to win the war while Ciri perishes against the White Frost or becomes a witcher.

58. Scholars of the Austrian-Hungarian empire may object to this reading on the grounds that Radovid's blood-thirstiness does not match the historical track record of the Austrian empire, a significantly less repressive and violent polity than the Soviet and Nazi empires which replaced it. This is true, but not relevant to the argument. None of *Witcher 3*'s polities are exact replicas of actual empires or historical events. Rather, CD Projekt's goal was a transnational retelling of the history of the Bloodlands which is critical of all xenophobic nationalisms and repressive sectarianisms. Radovid's descent into madness is meant to suggest the elite malfeasance which doomed the Austrian Hapsburgs, much as Dijkstra's rule suggests Bismarck's reign as Minister President of Prussia (1860-1890) and Chancellor of the German empire (1871-1890).

59. "...the European Union is a settlement of empire for the former [maritime] empires, and also for the former subjects of Communist empire. That is, by the way, in my opinion the most interesting thing about the European Union. It's not a settlement of the Second World War so much as it is a settlement of the First World War." Timothy Snyder. "1917 Centennial Series: Origins of Unfreedom." November 15, 2017. <http://www.youtube.com/watch?v=6glynCBQtgk>. Clip runs from 17:20 until 17:30.

60. Yanis Varoufakis. *The Global Minotaur: America, Europe and the Future of the Global Economy*. New York: Zed Books, 2011. Also see: Yanis Varoufakis. *Adults in the Room: My Struggle With Europe's Deep Establishment*. London: The Bodley Head, 2017.

## Chapter 3

### ***Fallout 4: Digital Playground in the Ruins of Empire***

Science fiction role-playing narratives have long been one of the most popular branches of the videogame industry, ranging from cybernetic and nanotechnology-themed franchises such as *Metal Gear* and *Deus Ex* to space opera series such as *Star Wars*. For that reason, their digital open worlds exemplify some of the deepest social contradictions of the late 20th and early 21st centuries. These latter range from the daily battle between transnational corporations and the non-commercial practices of transnational audiences, to the post-2008 transition away from hegemonic US rule and towards a multipolar world-system.<sup>1</sup>

What marks Bethesda Softworks' *Fallout 4* (2015) as a significant advance in open world form is its recombination of three of the most important design principles of contemporary open worlds, namely craftability, walkability and interactive sound design. Walkability refers to the fact that exploration and character interaction takes place on foot and through face-to-face dialogues, craftability refers to the ability of players to gather resources in the open world in order to construct useful items, while interactive sound design requires balancing ambient sound tracks, auditory player cues and voice-acting.

*Fallout 4*'s integration of these three principles on the level of form enables it to compensate for a number of weaknesses on the level of content, most notably problematic quest design and an unsatisfactory main story. The whole is greater than the sum of its parts, in much the same way that successful digital platforms compensate for the limitations of their underlying protocols. That said, this achievement comes at a hefty price. We will explore the precise nature of this price at the end of this chapter, but for now it is worth placing *Fallout 4* in the context of its franchise history.

The *Fallout* videogames depict a post-apocalyptic world ravaged by atomic warfare, wherein players scavenge the ruins of civilization and interact with bands of survivors. What made the franchise different from most of its science fiction peers, however, was its strategy of integrating historical representation into its open world design.

This strategy was the unique contribution of Tim Cain, the lead designer, producer and writer of the original *Fallout* (1997) and *Fallout 2* (1998).<sup>2</sup> Cain's narrative masterstroke was to depict an alternate future which diverges from real world history beginning in 1947.<sup>3</sup> Instead of the semiconductor revolution of our own timeline, Cain's fictional time-line experiences a revolution in portable atomic energy. The result is a profusion of the atomic-powered appliances, autos, airplanes and personal robots beloved of 1950s pulp science fiction. However, the insatiable demand for the raw materials required to produce these goods exacerbates the geopolitical conflicts of the Cold War, triggering a global nuclear holocaust in the year 2077.

This alternate future enables *Fallout* to draw on the historical legacies of the Cold War as well as the speculative toolkit of near-future science fiction. Both elements are at work in the iconic opening sequence of the original *Fallout*, wherein a black-and-white television set broadcasts a grainy admixture of militaristic propaganda and satirical advertisements for atomic-powered consumer goods to the sound track of the Ink Spot's classic rhythm-and-blues song "Maybe" (1940).<sup>4</sup> At one point, the camera pans back from the television screen to reveal a city

devastated by some future atomic war.<sup>5</sup> The voice of Ron Perlman delivers the following voice-over, linking the nuclear apocalypse to humanity's long and tragic history of imperial expansionism:

War. War never changes. The Romans waged war to gather slaves and wealth. Spain built an empire from its lust for gold and territory. Hitler shaped a battered Germany into an economic superpower. But war never changes. In the 21<sup>st</sup> century, war was still waged over the resources that could be acquired. Only this time, the spoils of war were also its weapons. Petroleum and uranium. For these resources, China would invade Alaska, the US would annex Canada, and the European Commonwealth would dissolve into quarreling, bickering nation-states bent on controlling the last remaining resources on Earth. In 2077, the storm of world war had come again. In two brief hours, most of the planet was reduced to cinders. And from the ashes of nuclear devastation, a new civilization would struggle to arise.<sup>6</sup>

What makes this opening narrative so compelling is that the Cold War hegemony of the US empire is depicted not as a nostalgic past, but as a destroyed future.<sup>7</sup> Cain made this destroyed future playable by means of a robust system of open world exploration, designed to give players wide-ranging tactical and strategic freedom. This latter ranged from the ability to explore the world in a non-linear fashion, to the customization of the player-character's abilities via the S.P.E.C.I.A.L. system, a satirical version of the character-building systems of paper-based fantasy role-playing games.<sup>8</sup> It also included dialogue systems allowing players to determine the fate of individual non-player characters, and in some cases the destiny of entire communities.

The twin themes of Cold War history and digital player freedom are more than just narrative keynotes of the franchise. They are also the taproot of its scorching satire, which parodies everything from stentorian Cold War propaganda to early 21st century digital consumerism. Here, too, *Fallout* diverges significantly from the mainstream post-apocalyptic narratives of the 1990s and early 2000s, which denounced Big Government conspiracies without any corresponding critique of Wall Street plutocrats. In an interview, Cain has noted that the primary target of this satire was not political despotism per se, but unchecked corporate power:

A big part of *Fallout* was, you don't trust your own government. We made it quite clear that the government was lying to you, that there needs to be a check and balance, that the military needs to answer to civilians, because the military in the *Fallout* world pretty much took over. Corporations were taking over. You saw that the vault you were living in was built by Vault-Tec, and all the products in there were built by Vault-Tec or a subsidiary of Vault-Tec, so your Pip-boy, your Stealth-boy... everything was related to this one overarching, massively invasive company. We even had, inside the *Fallout* manual, we had a page describing other manuals you could buy from Vault-Tec which made light of all the horrible things that are going to happen after a nuclear war, and basically this company was making all of its profit off of people's fear of the war. And if a war actually happened, they planned to profit off of that as well. And I think we were just trying to comment that, while this is all exaggerated, a lot of this is true in our own society.<sup>9</sup>

The Pip-boy is a portable computing device which serves as the player's main character

customization, equipment selection and communications interface. Yet the device is more than just a satirical version of the first transistorized radios and televisions. Its green screen, manual knobs and dials, and unwieldy sorting functionality are dead ringers for the earliest videogame consoles and personal computing devices of the early 1980s.<sup>10</sup>

Cain's combination of an open world which made past Cold War history meaningful to players, while allowing players to make meaningful choices about a post-atomic future, made the first two *Fallout* videogames popular as well as critical successes. After Cain departed from Interplay, the firm released two additional *Fallout*-themed games, *Fallout Tactics: Brotherhood of Steel* (2001) for Microsoft Windows and *Fallout: Brotherhood of Steel* (2004) for the Xbox and Playstation 2. These titles were less successful, and when Interplay almost went bankrupt in the early 2000s, the firm sold the rights to the *Fallout* franchise to Bethesda Softworks piecemeal between 2004 and 2007.<sup>11</sup>

Bethesda faced two significant challenges in rebooting the *Fallout* series. First, the studio had to construct an open world based on the narrative principles of science fiction rather than fantasy. The difficulty here is that science fiction narratives rely primarily on representations of the future, whereas fantasy narratives generally depict representations of the past.

Second, Bethesda had to transpose the core elements of the *Fallout* series – its gallows humor, its admixture of factual Cold War history with alternate-future speculative fiction, and its game-play design of maximum player freedom – into the setting of a three-dimensional open world (all previous *Fallout* games employed two-dimensional environments with an isometric player view). Bethesda's *Fallout 3* (2008) largely met these challenges, delivering a credible open world in the form of the Capital Wasteland, the post-nuclear version of Washington, DC and its immediate environs. Two years later, independent developer Obsidian delivered an above-average expansion, *Fallout 3: New Vegas* (2010). This latter featured a protagonist and storyline unrelated to *Fallout 3*, set in a post-nuclear Las Vegas and southern California.

While *Fallout 3* and its expansion had flaws ranging from limited crafting functionality to uneven character development, the response of audiences was overwhelmingly positive. The two iterations of *Fallout 3* sold a combined 14.37 million official copies between 2008 and 2015, transforming the series from a minor cult favorite into one of the biggest science fiction role-playing videogame franchises of the early 21<sup>st</sup> century.<sup>12</sup>

Yet nothing in the history of the franchise quite compares with the startling leap in quality from its third iteration to its fourth. *Fallout 4*'s open world is so well-constructed that it is easy to overlook the single greatest flaw of the videogame, namely the generic nature of its main story. This latter focuses on the player's quest to find their son, kidnapped by parties unknown from an underground fallout shelter while he was still an infant.<sup>13</sup>

Nowhere is this improvement more apparent than in the category of walkability. The *Fallout* franchise has always required players to access its open world on foot, both in order to make the post-apocalyptic setting credible as well to provide logistical challenges to players.<sup>14</sup> Players are rewarded for exploring new locations with experience points to upgrade their player-character, as well as a steady supply of new settlements to discover and non-player characters to interact with.

*Fallout 4* expanded the scope of walkability by adding three additional elements to Cain's basic adventure-survival formula. First, the player's location now correlates with the game's overall difficulty. After the interactive prologue, the player awakens inside an abandoned

underground vault in the northwestern corner of the world map. This region is where enemies and environmental conditions are the least threatening, and where supplies and potential allies are most plentiful. However, the further players walk to the east or to the south, the more dangerous opponents and environmental hazards become. Walkability thus correlates intuitively with difficulty.<sup>15</sup>

Second, the principle of walkability was linked directly to the rich architectural and linguistic heritage of Boston. Founded in 1630, Boston is one of North America's most historic and most walkable cities, and some of the most memorable areas of *Fallout 4* are post-apocalyptic versions of real world tourist attractions such as Faneuil Hall, Boston harbor and Fenway Park. This New England geography is also apparent in the authentic Boston accents of many of the non-player characters, as well as the name given to the open world by its residents, the Commonwealth.<sup>16</sup>

Third, walkability functions as the narrative backbone of *Fallout 4*'s companion system. There are thirteen different companions who can accompany the player in the open world, if the player so chooses.<sup>17</sup> Only one companion stays with the player at any given time, and players are free to dismiss any companion at any time (they can be sent back to their home community, or to player settlements).

These companions sustain the credibility of the Commonwealth in a number of ways. To begin with, each companion is a fully-rounded character with a well-written back story and a number of individual quests. Each companion also provides a running commentary on the events of the storyline, on the four different factions vying for control of the open world, and on specific locations in the open world, transforming the single-player experience into something closer to a multiplayer experience. More pragmatically, each companion provides combat and logistical support to players during quests.

The companion system has the significant consequence of replacing the standard karma system typical of many role-playing videogames with what we will call an affinity system. Karma systems typically classify a player's actions via a simple binary scale (the most common is good actions versus evil actions) and then deliver bonuses and penalties for specializing in each behavior. This is problematic because it restricts the player's choice to a specific set of actions defined by the design team, not the player.

By contrast, *Fallout 4*'s affinity system gives players bonuses or penalties on the basis of their behavior vis-a-vis their companions. Each companion judges the player's interactive dialogue choices and actions according to their own unique experiences and ethical outlook. It is possible for players to gradually earn a companion's trust through their actions, and it is equally possible for players to alienate companions to the point of permanent rupture. While the specific expectations of each companion varies, they share a common preference for solidarity. Generosity and tolerance towards others earn approval, while wanton violence and anti-social behavior earn disapproval. Once the player has earned enough companion approval through their words and deeds, a scripted dialogue is triggered wherein the companion reveals more of their personal background and history to the player. We will describe the ultimate narrative consequences of this affinity system in more detail somewhat later, but suffice to say that the system delivers a breakthrough in interactive story-telling as important as *Witcher 3*'s invention of the narrative path.

There is an even more remarkable expansion of craftability from a secondary feature in

previous *Fallout* games into a core feature of *Fallout 4*. While most open worlds feature collectible resources or other items designed to reward players for exploring the world and interacting with its residents, *Fallout 4* links these resources to a sophisticated crafting system. By scavenging prewar goods from the ruins of the open world, players can produce useful equipment, armor and weapons at specialized workshops.

The crafting system is the rough equivalent of Mojang's enormously popular *Minecraft*, in the sense that the system is designed to produce structures and services as well as individual objects.<sup>18</sup> Players can employ crafting to plant food crops, build defensive fortifications, dig water wells, create cooking stations, generate electricity, and construct buildings. They can also populate their settlements by attracting settlers and building facilities to keep them productive and healthy. Conversely, if the morale of the settlers falls below a certain level due to lack of food, water or other resources, they will depart from the settlement.

The creation of this crafting system was not an accident, but was rooted in Bethesda's long-term policy since 2001 of supporting player mods, a.k.a. non-commercial downloadable digital content for videogames produced by fans.<sup>19</sup> While most mods are produced for the personal computer platform, Bethesda updated the PS4 and XboxOne versions of *Fallout 4* to provide modding support several months after the game's initial release.<sup>20</sup>

Craftability also had a significant effect on *Fallout 4*'s player customization mechanics. For example, if players choose to invest experience points in their player-character's charisma character ability, they can add a range of services to their settlements, ranging from health clinics and scavenger stations to weapon and armor stores. Craftability also co-regulates the difficulty of the game. While players can selected a range of difficulty levels from *Fallout 4*'s opening menu, the open world contains a number of in-game economic restrictions designed to generate balanced game-play. For example, adhesives are a comparatively scarce item early in the game, which limits the player's ability to craft armor, weapons and other useful items.

The third and final design achievement of *Fallout 4* is its sound design. First and foremost, Inon Zur's ambient sound track deserves wider renown as one of the greatest achievements of early 21<sup>st</sup> century interactive music.<sup>21</sup> Zur's track consists of sixty-five separate pieces with a total running time of approximately three hours and thirty-eight minutes.<sup>22</sup> Each track is played while players explore specific regions of the open world, generating a musical atmosphere which is by turns haunting, mesmerizing, and occasionally enthralling.

**Table 1.** Location-based music design in *Fallout 4*.

Location or Faction	Designation on Original Sound Track (OST)
Prologue and mission completions	OST 1 Main Theme
Outdoor areas	OST 2 The Commonwealth, OST 3 Of Green and Grey OST 08 Wandering, the Blasted Forest Part 1 OST 09 Wandering, the Blasted Forest Part 2 OST 10 Brightness Calling OST 28 Lonely Walls

	<p>OST 31 Wandering, The Foothills Part 1  OST 32 Wandering, The Foothills Part 2  OST 33 Wandering, The Foothills Part 3  OST 34 Darkness Falls  OST 44 Explore and Discover  OST 47 The Stars My Solace  OST 49 Lone Wandering</p>
Goodneighbor settlement	OST 11 Of the People, For the People
Diamond City settlement	<p>OST 20 Rebuild, Renew  OST 62 In This Together</p>
Sanctuary Hills and The Castle settlements (Minutemen theme)	OST 39 Liberty Lives
Theme of Supermutants	OST 42 We Are Unstoppable
The Railroad headquarters and mission themes	<p>OST 35 War of Wills  OST 59 Covert Action</p>
Interiors of buildings and underground locations	<p>OST 7 Deeper and Darker  OST 16 Uninvited  OST 22 Tread Carefully  OST 38 Dust and Danger  OST 51 Echoes of the Dead  OST 58 No Voices, No Cries</p>
Coastal outdoor areas	<p>OST 50 The Last Mariner  OST 53 Wandering, The Coast Part 1  OST 54 Wandering, The Coast Part 2  OST 55 Wandering, The Coast Part 3  OST 57 Endless Ocean, Endless Dreams  OST 61 No More Sails</p>
Brotherhood of Steel themes	<p>OST 25 The Vigilant  OST 41 Honor and Steel</p>
Outdoor areas, city ruins	<p>OST 17 Wandering, The City Part 1  OST 18 Wandering, The City Part 2  OST 19 Wandering, The City Part 3  OST 21 Concrete Mysteries  OST 27 Red Brick, Broken  OST 40 Lost Boston</p>
Institute themes	<p>OST 48 Imagine Utopia  OST 56 Humanity's Hope  OST 64 Science and Secrecy</p>
Glowing Sea theme	<p>OST 45 Wandering, the Glowing Sea Part 1  OST 46 Wandering, the Glowing Sea Part 2</p>

Battle themes played during combat (rhythmic only)	OST 5 Standoff OST 6 Combat Ready OST 13 Predator and Prey OST 14 War in the Wastes OST 15 Time to Die OST 24 No Quarter OST 26 The Warlord OST 29, Regrouped, Reloaded
Battle themes during combat (orchestral themes)	OST 30 VATS or Die OST 37 A Critical Change OST 43 Dominant Species OST 52 Enough is Enough OST 60 Rise and Prevail

For example, sorrowful and unnerving tracks such as “Green and Grey” complement the first outside environments the player encounters after emerging from the vault. It is only after spending considerable time in the open world that the player encounters the bittersweet harpsichord and piano of “Rebuild, Renew” in Diamond City, which evokes both past loss as well as the faint hope of future reconstruction. Somewhat further afield, the haunting melody and ethereal chimes of “Brightness Calling” often appear during conditions of heavy fog.

While most of the sixty-five tracks signify place, six signify the identities of the four major factions seeking to control the Commonwealth, namely the Minutemen, the Brotherhood of Steel, the Underground Railroad, and the Institute. These tracks include the spy-thriller horn themes of “War of Wills” and “Covert Action” which play in the Railroad's secret underground base, the surging brass and big band themes of “The Vigilant” and “Honor and Steel” in areas controlled by the Brotherhood of Steel, the track “Liberty Lives” which plays in the Minutemen-controlled Castle and Sanctuary Hills, and “Science and Secrecy” which plays in the underground base of the Institute. Finally, there are a number of non-melodic and purely rhythmic tracks which serve as acoustic backgrounds during combat sequences.

One of the reasons for the sound track's immense power is that Zur draws extensively on the musical innovations of Charles Ives, the greatest twelve-tone composer of the United States of the early 20th century. In particular, Ives' *Robert Browning Overture* (1914), *Trio for Violin, Cello and Piano* (1915), *A Symphony: New England Holidays* (1919), and *Three Places in New England* (1919) furnish the basic acoustic palette for Zur's sound track. This palette is a uniquely American variant of the twelve-tone musical revolution of the Second Viennese School which orchestrates the plebian sonic materials of early 20th century industrial America -- military marches, music-hall tunes, penny whistles and clanging streetcars -- into large-scale rhythmic blocks.<sup>23</sup> It is no accident that these rhythmic blocks parallel the musical innovations of early jazz artists Jelly Roll Morton, King Oliver and Louis Armstrong. From a musicological perspective, Ives is the missing evolutionary link between twelve-tone and jazz modernism.<sup>24</sup>

Zur retrofits Ives' rhythmic blocks with electronic chimes, a glockenspiel, and various reverberation effects modeled on the most significant musical compositions of 1966-1968, namely the studio albums of Jimi Hendrix and Velvet Underground.<sup>25</sup> The resulting tracks

transform mundane piles of rubble into shimmering wonderlands of loss and mystery, radiating the illimitable promise – or is it the radioactive menace? – of Ives' famously unanswerable question.<sup>26</sup>

Where Zur's work diverges from its forerunner, however, is the function of the melodic fragment. Whereas every melodic fragment in Ives broadcasts the possibility of imperial construction, its musical analogue in Zur radiates the pathos of imperial disintegration. This transformation is most evident in the comparative framework of the single most influential science fiction sound track of 1950s and 1960s, the work which fulfilled Ives' famously unrealized musical ambitions. This sound track was Bebe and Louis Barron's all-electronic score in Fred Wilcox' *Forbidden Planet* (1954), of live performances of analog electronic sounds which celebrated the ingenuity of US consumerism at its imperial zenith.<sup>27</sup>

By contrast, Zur's sound track employs digital effects to split Ives' rhythmic blocks apart. The result is the greatest musical elegy of the US empire of the early 21st century. This elegiac function is most evident in *Fallout 4*'s main theme, an updated version of Zur's opening theme for *Fallout 3*, which plays in the background of *Fallout 4*'s main menu screen. The new version retains the signature *Fallout* melody, while extending its emotional range with complex layers of ambivalence and irony.<sup>28</sup> The result is both incomparably tragic and yet infinitesimally hopeful -- albeit with the proviso, to paraphrase Walter Benjamin, that this hope is not for us. Zur has described the collaborative process behind the creation of the new theme:

“I have a very nice grand piano at home, and I recorded myself playing the main theme,” [composer] Zur says. Todd's [Howard] first reaction was mixed: He liked the idea of the piano, but he found the actual sound to be too bright, bordering on harsh. Todd and Mark [Lempert] wanted something warmer. “So I created a combination between a real piano and an electric piano sound,” Zur says. “A sound that is really round and not bright at all but very lush.” When Zur played this for Todd and Mark, both of them immediately knew this was what they wanted. “So following that lead on, there are multiple times that I use this,” Zur says. “You also hear it first in the main theme. This is not a mistake or just a random choice. The piano will stay with us throughout the whole score.”<sup>29</sup>

Fragments of the opening theme's melody recur at key turning-points in the game, and are also occasionally replayed after quest completions and other player achievements. This creates the effect of a musical ruin which is constantly being overheard, much as the urban ruins of the open world are constantly being rediscovered.

In addition to its ambient sound track, the other signal achievement of *Fallout 4*'s sound design is its voice acting. *Fallout 4* was the first in the franchise to have voice acting for its playable protagonist. Like many other role-playing videogames, *Fallout 4* allows players to customize their gender as well as their overall appearance. However, Bethesda's designers avoided the trap of writing a single gender-neutral script for both male and female player-characters. Instead, players must choose to role-play as either a husband or a wife living in a Boston suburb with their infant son in an alternate future 2077.

The husband is voiced by Brian Delaney, while the wife is voiced by Courtenay Taylor. Both deliver spectacular performances, delivering over one hundred thousand separate lines apiece and constructing memorable and credible characters. These lines run the gamut from

harrowing to heroic, and morbid to whimsical. While many of their lines are comparable in meaning, some are unique to each voice actor, and all are given unique delivery and inflection.

These performances are backed by the superb scriptwriting of Bethesda writer Emil Pagliarulo and by the equally extraordinary work of independent voice director Kal-El Bogdanove and Bethesda staffer Mark Lampert. The voice acting is universally excellent throughout the game, from the two lead protagonists to the smallest bit character.

While the voice actors for the player companions are all top notch, two performances deserve special mention. Stephen Russell is outstanding as Codsworth, Nick and Nora's faithful robot butler,<sup>30</sup> and also as the voice of private eye Nick Valentine, whose body is a robotic machine but whose core humanity far outshines most of the human inhabitants of the open world. Kudos are also due to Courtney Ford, who delivers the performance of a lifetime as roving post-apocalyptic citizen journalist Piper Wright.

While the work of the voice actors and scriptwriters is beyond reproach, *Fallout 4's* interactive mechanics lag behind, most notably the dialogue choice system. During conversations with non-player characters, the player will be asked to choose one of four onscreen responses. These four choices are generally affirmative-positive, negative-sarcastic, neutral-objective, and informative-questioning, with a few exceptions. These dialogue choices determine whether certain quests open up or close down, influence the outcome of certain plot strands, and determine whether certain alliances and friendships with non-player characters occur. The problem with this rigid four-part structure is that not every line of dialogue requires four responses. Nor do the capsule summaries of the four choices adequately summarize the ensuing dialogue, a source of frustration for players.<sup>31</sup>

Leaving aside these flaws, *Fallout 4's* voice acting was crucial to one of its most significant innovations. This is the possibility of building romances with seven of the thirteen player companions. The depiction of romantic relationships is a challenging task in any artistic medium, but it is especially fraught with danger in open worlds for the simple reason that these relationships potentially conflict with the principle of maximum player choice as well as with the thematic coherence of the open world.

Bethesda's designers met this challenge by an ingenious combination of decreased player access and increased player responsibility. *Fallout 4* has no restrictions on the number of romances a player-character can initiate, or on the genders of the partners involved, i.e. same-sex romances have full narrative equality with opposite-sex romances.<sup>32</sup> In addition, no relationship has any negative repercussions on any other relationship. This fulfills the mandate of maximum player freedom, while also lending credibility to a post-apocalyptic setting in which there is no organized society to police relationships anymore.

At the same time, a successful romance requires players to expend significant amounts of in-game time by traveling with their companion around the Commonwealth, and behaving in ways which meet that companion's approval. After three scripted dialogues triggered by increasing companion approval, the player can attempt to romance the companion (occasional flirtations are allowed at lower levels of approval, but have no consequences on companion approval or the success of the eventual romance).<sup>33</sup>

The scriptwriters and voice actors deserve special kudos for presenting the same-sex romances with the same dignity and respect as the opposite-sex ones, and for crafting and delivering dialogue which honors the core humanity of every single romanceable character. At

their best, these romances seamlessly integrate character development and quest progression in much the same way that each main quest and side quest story path functioned in *Witcher 3*.

Given this extraordinary achievement, what needs to be explained is why *Fallout 4*'s main story not only failed to integrate character development with quest progression, but suffered a near-total loss of credibility in the final third of the game. To begin to understand why this is so, consider the romance with Piper Wright, owner of independent newspaper *Publick Occurrences*.<sup>34</sup> Piper is the quintessential 21<sup>st</sup> century citizen journalist of Diamond City, a bomb-blasted Fenway Park turned into an improvised settlement. After earning Piper's first rank of approval, the following conversation ensues:

Piper: "Always on good behavior, aren't you?"

*Player action: select any option. After choice-specific response, Piper continues:*

Piper: "I appreciate it. Too few folks can be bothered. Of course, if you want to do some real good, playing nice only gets you so far. I mean, look at Diamond City, a place I've been trying to warn of real danger. But every issue I publish, all I hear is, ohhh Piper, why don't you publish anything happy – Piper, why can't you write something nice for a change? It's enough to make me want to hang up my hat some days."

*Player action: select any option. After choice-specific response, Piper continues:*

Piper: "I've been firsthand what the truth can do. My sister and I, we grew up way out in the Commonwealth. Tiny little settlement. Our dad, he was part of the local militia. 'Keeping the raiders off our backs and the mirelurks out of our latrines', as he'd describe it. Well, ah... one day, our dad turns up dead. His captain... asshole... named Mayburn claims raiders must have gotten him on watch. Well I didn't buy it. I start making inquiries. Turns out, the captain, he'd sold out. Thought he wasn't getting paid enough to babysit the town. He was going to leave the gates open one night, let a group of raiders sack the place and take a cut of the profits. My Dad found out and was going to turn Mayburn in, but Mayburn got to him first. And I wasn't about to let that bastard get away with murder. I tried talking to the mayor but he wouldn't listen. So I papered the entire town in posters. 'Wanted for gross dereliction of duty: Captain Mayburn.' Mayor sure wanted to talk after that. The town threw Mayburn out on his ass and were dug in when a very surprised group of raiders finally showed."

Courtney Ford's performance is spectacular, and the story could have been a compelling quest in its own right. The problem is that none of the main story quests showcase a political mobilization comparable to the one Piper has described. In fact, the only two moments in *Fallout 4* which depict mass political participation are two public speeches which have no significant consequences on the main story, one delivered by Hancock -- a romanceable character -- to the residents of Goodneighbor, and the other delivered by McDonough, an unscrupulous politician, to the residents of Diamond City.<sup>35</sup>

This basic lack of political collectivity vitiates one of the core elements of *Fallout 4*'s open world, namely the credibility of the hostile factions the player must battle against in the Commonwealth. After the player achieves the second rank of approval in the romance with Piper, the player can initiate the following dialogue, where Piper recounts a memorable encounter with the Children of Atom, a shadowy cult which worships radiation:

Player: “Seems that execution didn't quite take, huh?”

Piper: “Thank god. I'd been working on this story about irradiated drinking water in Bunker Hill. I traced the water back to its source, through these old sewer tunnels, and what do I find? The Children of Atom, setting up like they own the place. Unfortunately, they found me just as quick. Turns out they were not fond of reporters. So to atone for my trespassing they decided to make a sacrifice to Atom – me. I'm kneeling there, about to get the boot into this huge sewer pipe when suddenly I blurt out: 'Atom! He reveals Himself!' And they buy it! They pulled me back from the ledge, and then gave me their induction ceremony. You are looking at an official acolyte of Atom. Took me a couple more days before I managed to sneak away, get Bunker Hill security to finally clean the place up.”

After this promising start, there is no further exposition of the Children of Atom in *Fallout 4*. This missed opportunity is exacerbated by the fact that whereas the Children of Atom attack the player on sight in most locations of the open world, they are inexplicably neutral towards the player in the main story quest “The Glowing Sea” -- never mind the fact that the player is trespassing on one of their most sacred sites of worship.<sup>36</sup>

While this lack of political collectivity vitiates the player's experience of the opponent factions, its most damaging effect is on the game's multiple endings. These latter require the player to choose which of the four factions will rule over post-atomic Boston and which of the remaining factions will be destroyed. This choice is not credible because none of the four factions have a coherent political vision for the future. All four are top-down hierarchies ruled by a charismatic leader, who pursues an incomprehensible or inexplicable agenda.

For example, the scientists of the Institute are led by a character called Father (whose true identity we will reveal in just a moment) on a bizarre quest to replace human beings with programmable cyborgs called synths. Conversely, Desdemona leads the Underground Railroad on a mission to capture these synths and free them from their programming. This may sound like the science fiction version of the 18th and 19th century abolitionist movement, except for the fact that the removal of this programming requires erasing the past memories of the synths, destroying the very personhood which the Railroad claims to protect. Somewhat further afield, Brother Maxwell leads the Brotherhood of Steel on a quest to exterminate all mutant life-forms on the planet. This would mean the genocidal killing of the ghouls, a group of radiation-scarred but otherwise normal human beings (a few ghouls become feral due to radiation poisoning, but most do not), not to mention the destruction of the bulk of a highly irradiated but nonetheless functional eco-system. The final faction, the citizen militia of the Minutemen, is controlled by the player but has no political agenda aside from patrolling the territories under its control.

This lack of credible factions triggers an open crisis of narrative legitimacy the moment the player's personal quest to find their son becomes political. This is the revelation in the main story quest “Institutionalized” that the leader of the Institute, Father, is none other than the player-character's grown-up son (his name is a reference to the fact that he was the original genetic model for the Institute's synths). The revelation falls flat because neither Father nor the Institute are given credible back stories.

This is in striking contrast to the two most compelling main story quests of *Fallout 4*, “Reunions” and “Dangerous Minds”. Both succeed precisely because they shed an empathic light on the personal history of the nominal villain, Kellogg, a mercenary working for the Institute. The second of these quests even highlights the power of interactive media in the form

of the memory loungers of Goodneighbor's Memory Den, devices which enable users to interactively relive past memories.

That said, it would be inaccurate to blame *Fallout 4*'s flaws solely on flawed scriptwriting. There is a deeper contradiction at work here, namely the increasing structural tension between transnational audiences located primarily in the industrializing nations, and a videogame industry located primarily in the fully industrialized nations. What makes *Fallout 4* an exemplary case study of this tension is the fact that its greatest strength -- its capacity to depict the Cold War consumer culture of the United States with incomparable historical precision -- is also the site of its greatest weakness.

This weakness is the inability of *Fallout 4* to critique that consumer culture from the standpoint of the historical counterforces against US hegemony. Inside the US, these counterforces included the trade unions fighting for wage increases and an expanded welfare state, the various post-WW II civil rights mobilizations over race, sexuality and gender, mass environmental activism, and independent media artists struggling against McCarthyism and Hollywood monopolies. Outside of the US, these counterforces included the anti-colonial national revolutionaries fighting against colonial empires, radical artists critical of Hollywood as well as their own indigenous culture-industries, and the mass movements battling US and Soviet proxy states as well as postcolonial despotisms.<sup>37</sup>

One of the most successful examples of such a critique is William S. Burroughs' science fiction novel *Nova Express* (1964), one of the few texts to forecast the worldwide uprisings of 1968. Where such critiques are lacking, however, and this is the case with most post-apocalyptic narratives, the aesthetic work regresses back to reenactments of imperial conquest or settler-colonial expansionism.<sup>38</sup>

Predictably, *Fallout 4*'s lack of such a critique fatally undermines the credibility of its faction-based endings. What is more surprising is the degree to which it also damages *Fallout 4*'s greatest achievement, namely its companion friendships and romances. This is because all of the companions rely on long-standing archetypes of US imperial hegemony for their narrative form. While most of these companions satirize aspects of their respective archetypes, none of them manage to transcend these latter, either.

Out of *Fallout 4*'s six friendships, the smooth British accent and unctuous servility of the robot butler, Codsworth, symbolizes Britain's status as the junior partner of the US. Deacon, an agent of the Railroad, is the standard secret agent of the espionage thriller, whose propensity to fib is a nod to the embellishment-prone hero of Alfred Bester's classic science fiction tale, *The Demolished Man* (1952). The friendly canine, Dogmeat, refers to Harlan Ellison's novella *A Boy And His Dog* (1969)<sup>39</sup> as well as to Max's nameless dog in George Miller's *The Road Warrior* (1981). Meanwhile, the Institute synth X6-88 refers to Arnold Schwarzenegger's iconic role as the cyborg anti-hero of James Cameron's *The Terminator* (1981).

The friendships with Strong and Valentine are clear missed opportunities. Strong is a supermutant, a race of predatory giants who are *Fallout*'s satirical homage to Marvel superhero the Incredible Hulk, first created by Stan Lee and Jack Kirby in 1962. This makes Strong a fundamentally comic character, who should have been endowed with a suitably tongue-in-cheek degree of cultural sophistication.<sup>40</sup> Conversely, Valentine, the synth detective, alludes to Hollywood film noir as well as Philip K. Dick's 1968 novella "Do Androids Dream of Electric Sheep?" and its cinematic spin-off, the *Bladerunner* film franchise. While Valentine has some of

the best dialogue of any of the characters, his personal quest to solve the case of Eddie Winter, a pre-war criminal turned postwar fugitive, never transcends the bounds of the white, heteronormative masculinity of Hollywood film noir.

The missed opportunities are even more apparent in the case of the seven romanceable characters. This is because their more extensive character development enables us to identify the corresponding counterforces which were either underdeveloped, or omitted from the romance altogether. For example, the romanceable character Danse, an exemplary soldier loyal to the Brotherhood of Steel, is not developed beyond the trope of the disaffected or wounded veteran typical of the Hollywood war film. The eventual revelation that he is actually a synth triggers his expulsion from the Brotherhood of Steel, but there is no further exploration of the implied politics of xenophobia or homophobia. Similarly, the character of Preston Garvey may allude to the famous 1920s African American radical Marcus Garvey, but his character plays only a nominal role in organizing the Minutemen and has no other connection to the centuries-old political archives of the African American civil rights struggle. Meanwhile, the character of MacCready is a standard cowboy who serves primarily as interactive fan service, in the sense that he is the grown-up version of a child character in *Fallout 3*.

The other four romanceable characters have greater depth, but suffer from similar problems. We have already noted the limits of the romance with Piper, i.e. the fact that her avowed vocation of citizen journalist is never put into the context of an actual political process or social movement. The romance with Cait, a female gladiator in an arena called the Combat Zone, draws on the history of the working-class Irish diaspora in Boston as well as to the local history of a notorious Boston neighborhood.<sup>41</sup> Yet her back story makes only one brief reference to the obvious parallel of the 20th century neo-slave narrative, and concludes not with a battle against slavers, but her own personal battle with drug addiction.<sup>42</sup> Similarly, the medical robot Curie is a reference to the famous French scientist as well as to Bernard Shaw's *Pygmalion* (through a series of events, Curie becomes a female synth and thus available for a subsequent romance). However, she remains the standard non-governmental healthcare volunteer without any discernible connection to France's internal anti-colonial resistance movements or to the anti-colonial revolutions and vibrant social movements of the Francophone region.

Perhaps the most egregious missed opportunity is Hancock, a mutated ghoul who has suffered from racial discrimination from non-mutated humans. He is also the mayor of Goodneighbor, a settlement for ghouls and outsiders of all kinds. However, the romance with Hancock concludes with the personal revelation that he is the estranged brother of Diamond City's mayor, McDonough. There is no further exploration of anti-ghoul racism or of the potential mobilizations against such.

The fundamental limits of *Fallout 4*'s interactive story-telling can thus be mapped out in terms of the following semiotic rectangle:

Sole Survivor  
(post-imperial US citizen)

nuclear family  
(suburban household)

vs.

collective trauma:  
end of US empire

fan media:  
player crafting

hostile factions:  
Children of Atom, Gunners,  
Raiders, Scavengers,  
Supermutants

non-ending:  
player settlements

non-family:  
synthetic bodies,  
a.k.a. transnational  
speculation

Minutemen, Brotherhood of Steel, Railroad, Institute:  
state-level, military, intelligence and scientific  
bureaucracies of the US empire

The lack of anti-imperial political mobilizations in *Fallout 4* does more than just limit the scope of its companion friendships and romances. It triggers the near-total collapse of the credibility of the factions and their respective endings at the end of the game.<sup>43</sup> Put bluntly, *Fallout 4*'s imaginary depiction of the end of the world cannot imagine the end of US cultural or political hegemony. This is not to argue that such representations are unthinkable, but merely to emphasize that two decades after its foundation, the *Fallout* franchise is still waiting for its first truly post-imperial iteration.

1. The four major powers of the contemporary world-system are the United States, the European Union, China and India.
2. At the time, Cain was an employee at California-based studio Interplay Productions. Interplay was a leading producer of role-playing videogames for the personal computer platform in the 1980s and 1990s. One of the happy coincidences which enabled Cain to create *Fallout* was the fact that a team at Interplay had already developed the post-nuclear open world videogame *Wasteland* in 1988 (EA published the game on the Apple II computer platform), the title widely acknowledged to be the spiritual predecessor of the *Fallout* franchise. While Cain did not work on *Wasteland* personally, the director of *Wasteland*, Brian Fargo, later served as Interplay's CEO in the early 1990s. Cain notes that late in its production cycle, *Fallout* was threatened with cancellation, and Fargo personally made the decision to approve the completion of the game. In addition to *Fallout*, Interplay was also the publisher of Michael Cranford's classic role-playing videogame *The Bard's Tale* (1985), as well as noteworthy franchises such as Bioware's *Baldur's Gate* and Parallax's *Descent*.
3. Cain credits Chris Taylor with introducing the idea of perks (specialized player-character abilities), Leonard Boyarsky for the art direction, and Mark Morgan for the sound track of the original game. For further details of the 1993-1997 production history of the original *Fallout*, see Cain's talk at the 2012 US-based Game Developer Conference: <https://www.youtube.com/watch?v=Xa5IzHhAdi4>.
4. For an insightful analysis of the role of popular music from the 1930s, 1940s and 1950s in the construction of *Fallout 3*'s narrative, see: William Cheng. *Sound Play: Video Games and the Musical Imagination*. Oxford: Oxford University Press, 2014 (19-56).
5. Allan Flynn and Frank Madden. "Maybe" (1940). The Ink Spots. Decca. <https://www.youtube.com/watch?v=wp2Hwi9qM48>.
6. The sequence can be viewed online at GamingClassicsHD (Youtube channel). "Fallout 1 (1997, Interplay) Opening Intro [HD]." October 7, 2012. <https://www.youtube.com/watch?v=9SJS2nUE44M>.
7. While Cain's strategy has not been widely copied in the field of science fiction role-playing videogames, two of the best shooter franchises of recent history have employed the theme of alternate futures to good effect, namely Insomniac's *Resistance* and MachineGames' *Wolfenstein: The New Order*.
8. The acronym stands for the numerical ratings of the player-character's strength, perception, endurance, charisma, intelligence, agility and luck. When players earn enough experience through in-game actions, they can improve their attributes and thus acquire new skills or upgrade existing ones. The system allows players to develop the attributes they find most rewarding or which fit most closely to their particular play-style. Interplay originally intended to license Steve Jackson's GURPS (Generic Universal Role-Playing System) for use in *Fallout*. However, the negotiations over the license proved unsuccessful, prompting Tim Cain to create the S.P.E.C.I.A.L. system as satiric homage to the role-playing system of Gary Gygax's mid-1970s *Dungeons & Dragons* franchise (this latter featured the categories of strength, dexterity, constitution, intelligence, wisdom and charisma).
9. Matt Barton. [Matt Chat 67 Fallout with Tim Cain](#). (Video Interview). July 4, 2010. The transcript runs from 5:48 to 7:20, and has been lightly edited for clarity.

10. While the most obvious reference is to Nintendo's Gameboy line of portable consoles, the Pip-boy's start-up screen lists the device memory as 64K. This is a reference to the top-of-the-line personal computers of the early 1980s such as the Apple II+, which had 64 kilobytes of random access memory.

11. This was a sound choice, given Bethesda's proven track record of producing commercially popular and critically acclaimed open world videogame franchises, e.g. Bethesda's *The Elder Scrolls* series garnered sales of 33.25 million between 2002 and 2015. Data compiled by VGChartz.com. <http://www.vgchartz.com/gamedb/?name=elder+scrolls>. The secret of Bethesda's success is its combination of internal workplace egalitarianism and cross-disciplinary innovation, and respectful external engagement with fan communities. For more background on the practical effects of Bethesda's egalitarian workplace culture, see *Fallout 3* and *Fallout 4* director Todd Howard's 2009 address. Chris Weissenberger. "Todd Howard at George Mason University". (Video). <https://www.youtube.com/watch?v=CrfdNJDVpR4>. December 12, 2012. Also see senior Bethesda designer Joel Burgess' 2014 address on the studio's iterative design process. Joel Burgess. "How We Used Iterative Level Design to Ship Skyrim and Fallout 3." GDC 2014. Uploaded January 22, 2016. <https://www.youtube.com/watch?v=PhW8CY8XkFg>.

12. Data from VGChartz.com. <http://www.vgchartz.com/gamedb/?name=fallout>.

13. The generic nature of this story is all the more disappointing considering the extraordinary quality of the prologue, the single greatest introduction to a post-apocalyptic world ever created in any interactive media. After choosing to play as either Nick or Nora during the prologue of the game and experiencing a brief moment of domestic tranquility, an emergency television broadcast announces the outbreak of the 2077 war, forcing the player and their family to rush to their designated fallout shelter. They reach the shelter literally seconds before the first blast wave hits, but once underground, they are subjected to cryogenic freezing without their consent -- in *Fallout's* alternate future, the underground vaults built by Vault-Tec seemingly for protection against nuclear conflict are in reality a series of horrifying human experiments on the vault-dwellers, designed to maximize Vault-Tec's post-reconstruction profits.

14. *Fallout 4* continues this tradition by ensuring that the only moving vehicles are semi-autonomous robots which move at near-human speeds, and futuristic helicopters called vertibirds, which were limited in number and efficacy by the designers for purposes of game balance.

15. To avoid the tedium of backtracking, there is a fast travel option on the menu allowing players to revisit areas they previously discovered. The hardest player difficulty setting, called "survival", disables this option in order to provide a logistical challenge for experienced players.

16. The Massachusetts constitution ratified by voters in 1780 referred to the state as the Commonwealth of Massachusetts. [https://en.wikipedia.com/wiki/Constitution\\_of\\_Massachusetts](https://en.wikipedia.com/wiki/Constitution_of_Massachusetts).

17. The six potential companions include Codsworth, Deacon, Dogmeat, Strong, Valentine and X6-88. The seven potentially romanceable companions include Cait, Curie, Danse, Hancock, MacCready, Preston Garvey and Piper Wright.

18. For a more comprehensive discussion of *Minecraft's* contribution to videogame design, see: Dennis Redmond. "Minecraft: The Videogame Commons Remakes The Transnational Studio." In: *Understanding Minecraft: Essays on Play, Community and Possibilities*. Edited by Nate Garrelts. Jefferson: McFarland, 2014.

19. In a video presentation, senior Bethesda designer Joel Burgess has described the economic functionality of non-commercial fan media as follows: "The other thing that mods can do to extend the lifetime of sales in your game is keeping your game in the public eye. Particularly weird, ambitious, creative mods have a way of getting stories run on news sites. Marketing people would love to pay money for this. They can't. You can't buy this kind of thing. You can only have this thing by empowering a mod community of interesting, weird, creative people who can actually go and do these inspired things, and create new stories that people want to read and write about." Joel Burgess. "How Modding Made Bethesda Better." GDC 2014. Uploaded July 9, 2015. (Video). <https://www.youtube.com/watch?v=GxthbWfSak8>. Clip runs from 21:45-22:24 and is lightly edited for clarity.

20. The single largest resource for *Fallout*-related mod content is the independent site Nexus (<https://www.nexusmods.com/fallout4/>). This site also offers a useful metric of the exponential increase of the popularity of modding in the early 21st century. As of September 17, 2017, there were 14,494 mods for *Fallout 3* on the PC platform, 18,452 mods for *Fallout 3: New Vegas* and 20,666 mods for *Fallout 4*. Given their respective release dates, the average number of mods produced per year for each videogame rose from 1,610 to 2,636 to 10,333.

21. Ambient sound tracks operate under two overriding design constraints, due to the interactive nature of videogames as a form. First, ambient tracks must be clearly distinguishable from all other sounds in the open world, e.g. the sounds of enemies, footsteps, weapons, and other player cues. Second, these tracks must also be accessible enough for players to recognize their general location in the open world, but sophisticated enough to avoid player boredom due to excessive repetition.

22. *Fallout 4's* complete ambient sound track is available here: <https://www.youtube.com/watch?v=fIOKKJfXRQM>. The in-game Diamond City radio sound track is available here: [https://www.youtube.com/watch?v=44tCHxmzr\\_w](https://www.youtube.com/watch?v=44tCHxmzr_w).

23. Ives carried out the twelve-tone musical revolution from without precisely where Alban Berg, Arnold Schoenberg and Anton Webern carried out their revolution from within -- strategies overdetermined by their respective geopolitical locations inside an American empire on the cusp of world hegemony, and within an Austrian empire doomed to disintegrate in the conflicts of 1914-1945. Interestingly, this is most apparent in the single work of the Second Viennese School which assembled a series of large-scale rhythmic blocks in a manner almost identical to that of Ives, namely the military marches, folk melodies and music-hall tunes of Berg's *Three Pieces for Orchestra, Opus 6* (1914). To paraphrase Adorno, whereas Berg was the master of the smallest link, Ives was the master of the largest frame.

24. In particular, there are significant parallels between the four decade trajectory from Debussy's *The Sea* (1905) to Webern's *Cantata II, Opus 31* (1943) and the roughly five decade trajectory from the formation of King Oliver's band in 1918 to John Coltrane's *Ascension* (1966). Both twelve-tone and jazz modernism responded to the commercialism of the music industry by means of a comparable

autonomization of musical form: the emancipation of melody from all harmonic constraints and free chromaticism in the former were the equivalent of the emancipation of the soloist and the rise of free rhythm in the latter. This autonomization was additionally mediated by the transformation of early 20th century acoustic recording technology, something documented Michael Denning in his extraordinary study of the world recording industry between the 1920s and 1930s. Denning makes a convincing case that this recording revolution was inextricably linked to the larger wave of cultural and political anti-colonial movements of the time, raising intriguing questions about how twelve-tone and jazz modernism might relate to the anti-colonial struggles of Ukraine and India. Michael Denning. *Noise Uprising: The Audiopolitics of A World Musical Revolution*. New Delhi: LeftWord Books, 2016.

25. Jimi Hendrix's three canonic albums include *The Jimi Hendrix Experience* (1967), *Axis: Bold as Love* (1967), and *Electric Ladyland* (1968), while the Velvet Underground's two canonic albums include *The Velvet Underground & Nico* (1967) and *White Heat/White Light* (1968).

26. Charles Ives' classic piece "The Unanswered Question" (1908) is available here: <https://www.youtube.com/watch?v=tbArUJBRRJ0>.

27. *Forbidden Planet*'s other signal contribution was its anticipation of the videogame console, in the scene where Dr. Morbius employs a Krell device to create an animated hologram of his daughter which moves and reacts in real time.

28. The *Fallout* theme employs a tune which shuttles between a major C and a dissonant E flat, and background chords which oscillate between C major and B flat, generating a mood of intense foreboding. The *Fallout 3* theme is available here: <https://www.youtube.com/watch?v=Hl5xbFXrFU4>. The *Fallout 4* theme is available here: <https://www.youtube.com/watch?v=khTwu14CXcA>. *Fallout* fans have created sheet music and a notated piano score of the theme here: [https://www.reddit.com/r/Fallout/comments/3y1w1o/sheet\\_music\\_for\\_the\\_fallout\\_4\\_main\\_theme\\_for\\_piano/](https://www.reddit.com/r/Fallout/comments/3y1w1o/sheet_music_for_the_fallout_4_main_theme_for_piano/). Marioverehrer. (Youtube channel). "Main Theme - Fallout 4 [Piano Tutorial] (Synthesia)." (Video). <https://www.youtube.com/watch?v=NfCj8d6pl-E>. Uploaded November 21, 2015.

29. Gary Steinman. "Fallout 4 – Behind the Score with Inon Zur." Bethesda Softworks. September 22, 2015. <https://bethesda.net/#en/events/game/fallout-4-behind-the-score-with-inon-zur/2015/09/22/30>.

30. One of the early highlights is the interaction with Codsworth, the robot butler who has somehow survived the holocaust. The resulting dialogue is *Fallout*'s trademark gallows humor at its finest:

*Player action: ask "You okay?" instead of the other three options.*

Player: "Codsworth... you're acting.. a little bit weird. What's wrong?"

Codsworth: *voice breaking*: "I... I... oh mum ["sir" if speaking to male survivor], it's been just horrible. Two centuries with noone to talk to, noone to serve. I spent the first ten years trying to keep the floors waxed, but nothing gets out nuclear fallout from vinyl wood, nothing! And don't get me about the futility of dusting a collapsed house. And the car! The car! How do you polish rust?!"

31. One of the most glaring absences is the lack of differentiation between dialogue choices which trigger decisions and those which serve a merely informational purpose. *Witcher 3* solved this problem by printing decision-making dialogue choices in yellow text and information-seeking inquiries in white

text.

32. While videogames emerged as a mass media in the late 1970s, the first blockbuster titles to depict equality of sexual orientation did not arrive until the late 1990s, e.g. Timothy Cain's *Fallout 2* (1998) featured same-sex marriages, although these had a limited effect on game-play. Bioware's *Knights of the Old Republic* (2003) was the first blockbuster title to feature an openly lesbian character, namely party member Juhani, while Bioware's *Mass Effect* (2007) and *Dragon Age* (2009) franchises have featured fully-developed same-sex romances. Bethesda and Obsidian are to be commended for creating some of the first openly lesbian, gay and bisexual characters in *Fallout 3: New Vegas*, the 2010 expansion to the original *Fallout 3*, in the form of player's companions Arcade Gannon, Cass and Veronica. While these companions fight at the player's side, there are no romance options involving companions in the game.

33. This attempt depends on the player-character's charisma level, and is thus not always successful. However, players are allowed to keep earning companion approval and eventually to try again.

34. The name is a clever reference to the very first newspaper of the American colonies recorded in the historical archives. Published on September 25, 1690, it was banned four days later by the colonial authorities. [https://en.wikipedia.org/wiki/Publick\\_Occurrences\\_Both\\_Forreign\\_and\\_Domestick](https://en.wikipedia.org/wiki/Publick_Occurrences_Both_Forreign_and_Domestick). A scan of the original publication is available here: <http://nationalhumanitiescenter.org/pds/amerbegin/power/text5/PublickOccurrences.pdf>.

35. Bethesda designer Emil Pagliarulo noted in a December 15, 2015 Twitter post that McDonough was modeled on James Michael Curley, the four-term Mayor of Boston from 1913 until 1950, and one of the most colorful and corrupt politicians of the epoch of US machine politics. <https://twitter.com/Dezinuh/status/677132963474206721>.

36. There are similar hints of a more complex story in the eerie flashbacks which play during the player's initial exploration of the lower depths of the Dunwich Borers mine, which suggest the Children of Atom are the descendants of a pre-war cult of radiation worshipers. In fairness to Bethesda, the designers probably constructed a number of quests involving the Children of Atom, but did not have the time to properly polish them in time for the game's release in 2015. This shelved material may have recycled into Bethesda's downloadable expansion for *Fallout 4*, "Far Harbor", which portrays the Children of Atom as a fully-realized faction in its own right.

37. The only moments which refer to these resistances are the occasional denunciation of anti-Chinese racism and xenophobia in *Fallout 4*'s alternate future America, as well as side quests such as "Here Be Monsters", wherein the player discovers a disabled Chinese submarine left over from the war and interacts with a humane Chinese officer turned into a ghoul by radiation.

38. This contradiction is not exclusive to the field of US science fiction, but is also visible in the various science fiction traditions most strongly marked by the weight of imperial history, e.g. the British science fiction of H.G. Wells, the French science fiction of Jules Verne, and the Russian science fiction of Arkady and Boris Strugatsky.

39. Ellison's text was the basis for L.Q. Jones' 1975 cult science fiction film by the same name.

40. The character of Max Haas in Machine Games' *Wolfenstein: The New Order* franchise provided precisely such a role.

41. The Combat Zone was the nickname of a blighted neighborhood which was the city's adult entertainment district during the 1960s and 1970s. Salvatore M. Giorlandino. "The Origin, Development and Decline of Boston's Adult Entertainment District: The Combat Zone." Cambridge, MA: MIT, 1986. <https://dspace.mit.edu/bitstream/handle/1721.1/14980/15038233-MIT.pdf?sequence=2>. WBUR News (2010). "A Visual History of Boston's Combat Zone". <https://web.archive.org/web/20150218004344/http://www.wbur.org/2010/02/19/combat-zone>.

42. In her interactive dialogue with the player, she describes how her parents sold her into slavery when she was thirteen years old -- the political displacement of the horror of Atlantic slavery onto horrible individuals.

43. Since the Minutemen cannot be destroyed as a faction, the four possible endings are as follows. If the player sides with the Brotherhood, then the Institute and Railroad must be destroyed. If the player sides with the Institute, then the Brotherhood and Railroad must be destroyed. If the player sides with the Railroad, then the Brotherhood and Institute must be destroyed. The fourth and most difficult ending is to destroy the Institute, while preserving a truce between the Railroad and the Brotherhood through careful quest choices. A fan has illustrated the fourth ending here: The Triple S League. "Fallout 4 Best 'Good Ending' Possible: Peace between Railroad, Brotherhood and Minutemen." <https://www.youtube.com/watch?v=OUFEeYdQnVc>.

## Chapter 4

### *Freeman's Mind* and Transnational Fan Media

One of the most significant but least understood cultural developments of the early 21st century has been the increasing capacity of transnational audiences to produce and distribute digital media outside of the direct control of media corporations. This dynamic is especially prominent in videogame fan communities, everywhere from the extraordinary productivity of the mod community (fan-created interactive content for videogames) to the rise of new digital media forms such as machinima (fan-created videos created with videogame rendering software).<sup>1</sup>

These fan communities played a key role in Ross Scott's *Freeman's Mind* (2007-2014), a heavily modified walk-through of Valve Software's science-fiction videogame *Half Life* (1998), published on Youtube and other free-to-view video sharing networks.<sup>2</sup> The series derives its name from the playable protagonist of *Half Life*, a theoretical physicist named Gordon Freeman, who works at a secret government laboratory. While all of the non-player characters in the various *Half Life* games (*Half Life*, *Half Life 2*, and *Half Life 2: Episode One* and *Half Life 2: Episode Two*) have voice acting, Freeman has always been a silent protagonist with no voice dialogue.

Scott broke with this tradition by writing and performing a voice track for Gordon Freeman's internal monologue. Thanks to a combination of superlative scriptwriting, voice-acting, and editing, *Freeman's Mind* transformed the video remix, the videogame modification or mod, and the videogame walk-through into a series which is one of the touchstone media works of the early 21st century.<sup>3</sup>

To appreciate the magnitude of Scott's achievement, it is worth recalling that the series is comprised of sixty-nine official episodes, amounting to nine and half hours of footage, produced over the course of seven years with minimal financial support from the commercial mass media. While Scott did earn small amounts of ad revenue from his Youtube channel and other forms of media employment, the bulk of his support came from the *Freeman's Mind* fan community.

This community enabled Scott to overcome the constraints on previous generations of independent media producers, ranging from the high cost of proprietary production tools to the scheduling requirements of commercial broadcasting channels. Scott relied on Valve's open source tools for *Half Life* modders, which Valve released to transnational audiences for free, as well as the media production tools of the post-2008 digital commons. Fans publicized the series on social media platforms, provided Scott with monetary donations and computer equipment, and assisted with sound editing, website maintenance and subtitling.

Most important of all, fans provided constant encouragement and critical feedback while waiting patiently for each episode (the interval between each episode averaged about five weeks). The first episode of *Freeman's Mind* was created in 2007 as a light-hearted diversion from some of Scott's other machinima projects. It was the enthusiastic fan reaction to the initial episode which convinced Scott to produce additional episodes, and eventually to play through the entirety of the first *Half Life*.<sup>4</sup>

The length of these episodes was not primarily due to Youtube's restriction on the length of most user uploads to a maximum of 10 minutes between 2006 and 2010.<sup>5</sup> Rather, it reflected

the narrative density and complexity of each episode. Scott integrated Freeman's running internal monologue with in-game scripted events and non-scripted animated sequences, many of which satirized some of the more dated design features of the original *Half Life* as well as the genre conventions of the alien invasion thriller, the science fiction monster spectacular, and the platformer videogame.

In retrospect, the fan community made one other indispensable contribution to the series. It enabled *Freeman's Mind* to openly critique the transnational plutocracy in a videogame genre previously dominated by narratives of US imperial revanchism, a.k.a. the first-person shooters which glorified the US War on Terror conducted between 2001 and 2008.<sup>6</sup> To be sure, the original *Half Life* was always one of the few commercially successful shooters which was critical of US neoimperial interventions, in large part thanks to Marc Laidlaw's ingenious script.<sup>7</sup>

Yet it was geopolitical timing which made *Freeman's Mind* just the right machinima series in just the wrong place, to paraphrase a famous line from *Half Life 2*, to make all the difference in the world.<sup>8</sup> The first episode of the series premiered in December 2007, the moment when the 1995-2006 US housing boom and the 2002-2006 Wall Street securitization bubbles began to implode. Whereas the arrival of the original *Half Life* in 1998 was perfectly timed to satirize the dotcom bubble of 1997-2001, *Freeman's Mind* was perfectly positioned to narrate the global economic crisis of 2007-2009 and its geopolitical consequences.

This crisis had two significant consequences for transnational audiences. First, the core ideological claim of the Wall Street plutocrats, namely that market deregulation generates the most efficient economic outcomes, lost credibility amidst the worst economic downturn since the Great Depression. In the fields of journalism and politics, this legitimation crisis opened the door to the citizen journalism of Bill Moyers and Nomi Prins, sites such as New Economic Perspectives and Paul Jay's Real News Network, and the work of heterodox economists ranging from Joseph Stiglitz to Yanis Varoufakis.<sup>9</sup>

The second consequence was the crushing experience of immiseration for hundreds of millions of young people just entering the workforce. This experience included the explosion in student loan debt in the US (almost nonexistent in 1980, but \$1 trillion by 2012), state-administered austerity in the eurozone, and the structural unemployment afflicting the youth of the industrializing nations.<sup>10</sup>

What was different about this economic crisis compared to previous ones was that these young people had significant amounts of secondary and tertiary education, and could access planetary digital communication networks. In fact, these young people were a key driver of the dramatic expansion of the world internet audience from 1.4 billion in 2007 to approximately 3.0 billion at the end of 2014.<sup>11</sup> They were also a key constituency of the mass protest movements which swept across the world-system between 2011 and 2014.<sup>12</sup> These young people had a cultural need for forms of digital media which spoke to their personal experience of marginalization or immiseration, which were free to access on low-cost smartphones and mobile platforms, and which were conversant with post-2008 forms of collective political protest and digital cultural participation.

*Freeman's Mind* did not just meet this need, it gave its audience unprecedented insight into the transnational class struggles of the early 21st century. It is no accident that every single episode of *Freeman's Mind* critiques some aspect of plutocracy, by contrasting the promise of high-technology consumerism with the reality of economic catastrophe. Scott's version of

Freeman constantly bemoans the fact that the Black Mesa Research Facility is run like a profit-maximizing corporation, and harps on the theme of hunting for a new job while escaping from the wreckage of his current workplace. Freeman also dwells at length on the venality of the officials and state agencies who are supposed to protect Black Mesa's personnel, but instead sacrifice the latter out of narrow self-interest – a transparent allegory of how the plutocracy monopolized the power of the state to redeem its own bad bets, while bringing disaster down on everyone else.<sup>13</sup>

In short, Scott links Freeman's personal struggle of survival to the collective experience of the educated youth experiencing transnational immiseration. One of the most obvious forms of this narrative strategy is the extraordinary number of service-sector jobs named or referred to in the series. In the very first episode of *Freeman's Mind*, Freeman mentions the occupations of pilot, human resources personnel, robot designer, safety expert, environmental protection staffer, and courtroom official. Over the course of the sixty-nine official episodes of the series, Scott cites literally hundreds of service-sector professions and occupational specializations.

What makes Freeman's running commentary on the job market compelling is Scott's characterization of Freeman as a brilliant but exceedingly eccentric particle physicist. Consider this scene in episode 2, just prior to the alien invasion:

*While walking down corridor, Freeman glances through window and notices a scientist writing something on a whiteboard inside a room.*

Freeman: "Wait a second, did I see what I think I did?" *Freeman enters room and approaches the whiteboard.*

Freeman: "Yep, I sure did – Newton's formula for gravitational force. Having trouble remembering that one, guys? What is this? Are we back in high school now? My department is working on quantum displacement. Just what the hell are you guys doing? Jerking around in lab coats, from the looks of things." *Freeman exits room in disgust.*

Freeman: "I just can't believe it. Those monkeys in there are having trouble learning about gravity, whereas I can recite the quantum chromodynamic gauge invariant Lagrangian in my sleep. There is no justice."<sup>14</sup>

The formula on the whiteboard is indeed Newton's formula, while the reference to the Lagrangian invariant is reasonably accurate.<sup>15</sup> This is not just top-notch scriptwriting, it is also a clever homage to Marc Laidlaw's storyline, which always maintained the highest degree of scientific fidelity to the current state of astrophysics.

This sequence is a prime example of the "network effect" of transnational audiences. Scott had no formal training in the field of particle physics, but simply searched online for scientific terminology appropriate to the situation. He assumed that his audience would have the same power to conduct impromptu online searches of their own, and constructed dialogue which would appeal to transnational audiences with access to digital search tools.

Scott initially deployed this network effect for the purpose of character development. Various sequences depict Freeman as jumpy, quarrelsome, more than slightly paranoid, and quick to critique others. On the other hand, they also exhibit his brilliant problem-solving skills. While these attributes make Freeman a less than ideal co-worker, they are also the qualities most

useful in an actual state of emergency, and lend credibility to Freeman's later ability to survive the alien invasion.

Later episodes significantly expand the scale and scope of this network effect, transforming Marc Laidlaw's satirical fable of a neoliberal speculation gone disastrously wrong into something else. Our first glimpse of this transformation occurs in episode 5. After Freeman just barely survives the accident which triggers the alien invasion, a stuck metal door blocks his exit from the facility. Freeman's response is to cite one of the most infamous scandals of US industrial history:

Freeman: *outraged*: "I'm going to sue the hell out of Black Mesa when I get out of here. Locking your workers in? That's what the Triangle Shirtwaist Factory did. Locked its workers in, then there was a fire, and everybody died! That's a formula for success." *Freeman hits the metal door with his crowbar in frustration*. "Dammit. We're making history right now -- crap history." *Freeman accidentally hits the keypad with the crowbar. The keypad short-circuits, causing the door to open*.

Freeman: *with a cry of triumph*: "I am incredible. Is there any end to the number of problems I can solve just by beating the hell out something? I'm not sure there is! Yep, that's how I say open sesame -- with a crowbar to the face."<sup>16</sup>

This is much more than a passing allusion to the 1911 fire which killed 145 textile workers in New York City and sparked nationwide outrage. What is crucial here is the mention of the crowbar, *Half Life's* iconic tool and weapon. Scott thereby transforms Freeman's class position from the elite theoretical physicist to the plebian construction worker. This allows viewers to step, for the briefest of moments, into the shoes of the Indonesian, Bangladeshi and other transnational workers around the world who have suffered from some of the worst transnational workplace accidents in history.<sup>17</sup>

This raises the question, to be sure, as to how Gordon Freeman could possibly symbolize the class struggles of a planetary proletariat, given the structural privileges of his white, male, highly educated and heteronormative identity. The short answer is that he does not -- or at least, not at first. One of the most praiseworthy achievements of *Freeman's Mind* is that it does not shy away from the cultural, political and economic divide between the workers of the industrialized nations and those of the industrializing nations. Freeman's monologues between episode 1 and 34 showcase the political responses -- some progressive, some revanchist -- triggered by the 2007-2009 economic crisis among the workers of the industrialized nations.<sup>18</sup> By contrast, episodes 35 through 68 of *Freeman's Mind* integrate the most progressive of these political responses with the most progressive political initiatives of the workers of the industrializing nations.

One of the first examples of this admixture of progressive and revanchist responses occurs at the end of episode 6, when Freeman is attacked by aliens while descending on a slow-moving elevator into the lower depths of Black Mesa. Initially, Freeman adopts the live-action commentary of the professional sports broadcaster, a.k.a. the reassuring masculinity of the US sports culture. When repeated attacks cause Freeman's composure to crumble, he retreats to a revanchist nationalism:

Freeman: *frantically swinging crowbar as aliens attack relentlessly*: “Facehuggers! Batter up. Strike one. Strike two. Strike -- augh, it's raining men. I -- I mean, aliens. Why is this taking so long. I could fall faster than this.” *With increasing desperation*: “No, you're doing it wrong. No. Shut up. Noone cares about your opinion. You have no rights. You're all illegal immigrants. Now do what you're told and jump in this giant meat grinder. No, you're doing it wrong, you're all incompetent.”<sup>19</sup>

At the beginning of the next episode, Freeman recoils just as quickly from this revanchism into a remarkably progressive cosmopolitanism:

*Freeman treads carefully along a set of enormous pipes welded to a wall, while avoiding falling into an abyss on his left.*

Freeman: “Dammit. How come that catwalk doesn't have any supports? The last one had dangling cables after it collapsed. If I have one of those, I could swing across to the other side like *Tarzan*. That would be dope. They did that in *Star Wars*, too. Dude swinging across a gap with some babe holding on to him.” *Freeman treads carefully along pipe*. “That was a grappling hook, though. That's what this [hazard] suit needs, a grappling hook. Then I could swing my way to victory instead of performing this balancing act. Bugs can crawl on walls. Maybe I should've been a bug. Go Team Kafka! I'd at least want four arms, like the God Shiva.”<sup>20</sup>

The citation of *Tarzan*, one of the oldest adventure franchises of them all, is followed by a reference to the scene in the first *Star Wars* movie when Luke Skywalker and Princess Leia cross an abyss inside the Death Star on a rope. Similarly, the reference to the grappling hook -- a core game-play feature of numerous videogame franchises -- is followed by a reference to the circus high-wire act. The last two lines of dialogue bracket Kafka's classic short story “The Metamorphosis” (1915) as well as South Asian mythology -- a reference to the digital body of the player avatar as well as to the digital labor of South Asian software designers.

This is the expansion of the network effect to include decades-old mass cultural franchises as well as iconic works of 20th century modernism on behalf of a vastly enlarged transnational youth audience. This expansion is accompanied by a remixing of *Half Life's* original game-play, in order to endow Freeman's character with cinematic realism as well as to facilitate audience reception. To that end, Scott carefully choreographs all camera movements in his series, reducing unnecessary movement and adding motion blur in order to avoid triggering 3D motion sickness (so-called “Doom syndrome”) in viewers.<sup>21</sup>

Scott also created a number of custom animations for Freeman which depict narratively plausible actions not permitted by the programming of the original game, e.g. the ability to traverse low-lying obstacles and to climb grates. While some of these animations were created using keyboard commands available to players in the original game, others required considerable programming skill. These animations were carefully designed to be as close to first-person cinematic realism as possible, i.e. Freeman looks around, moves and jumps much as a real person would.

Some of the most interesting examples of this network effect are Scott's satirical meta-commentaries. These latter push against but never quite break the “fourth wall” of the videogame walk-through, in the sense that Freeman deliberately calls the viewers' attention to the glaring

narrative anachronisms of the original videogame, e.g. implausible traps, non-functional corridors and unrealistic level design. Many of these meta-commentaries function as elaborate allusions to the digital commons:

Freeman: *while crawling through an air duct*: “These bugs think they own the place. Well, there's going to be some restructuring around here... Hup – there's another one... That's right, keep running, you little bastard. I see you, thinking you're going to escape.” *Freeman flails wildly with crowbar in all directions, managing to crush one bug*. “Well you're wrong. Just like everyone else here. Rraaahhh!” *Freeman knocks open the grate covering the air duct, and crawls into a room*. “Man, today is so counterintuitive to everything I did at grad school. I would shout and break stuff there, too, but that never got anything done.”<sup>22</sup>

The theme of bug hunting is an artful nod to the animators, machinima makers and coders who must wrestle with Valve's open source graphics software. Like all software, it has its share of defective code, which open source artists must either forestall or somehow work around.<sup>23</sup> The reference to graduate students, however, is significant on two levels. First, graduate students are the prototypical high-skilled, low-paid workers who teach many of the classes at major US universities. Second, whereas international students accounted for than 5% of all US college students in 2010, they comprised 43.7% of all graduate students pursuing their degree in physics.<sup>24</sup> In episode 13, published on July 24, 2009, this theoretical workplace cosmopolitanism is given its concrete social referent:

Freeman: “Wait a minute, that's that cargo hook I swung on. I've been here before. Ughhh... Alright, alright. Well, I'm just going to keep moving forward.” *Freeman climbs ladder, reenters air duct*.  
Freeman: “I'm not ready to believe this entire facility is a giant fucking Moebius strip. Maybe I should become a tour guide after this. I'm good at acting like I know where the hell I'm going. 'Follow me.'” *A small alien creature attacks Freeman from behind, he crushes it with crowbar*.  
Freeman: “Augh! Stop that! You can't follow me! You don't have any money, that's the whole point!”<sup>25</sup>

Given the timing of its release, this might seem to be a reference to the frustrated job aspirations of the US university graduates of the post-2008 period. Two minutes later, however, Scott confounds our expectations by linking warehouse and transportation workers to a non-American branch of the transnational culture-industry:

Freeman: *looking around in disbelief*: “Have I been here, too? ...I don't know. This places starts looking the same after awhile. It's just some never-ending fantasy warehouse.” *Shines flashlight into metal air duct*: “No... I want some Cheetos. Alright, back in this snakehole.” *Reenters air duct, crawls forward*. “This is what it must have been like for the Vietcong. Underground all the time... crawling around in cramped tunnels... American soldiers shooting at you... bugs...”<sup>26</sup>

What gives this quotation of Vietnam's twenty-five-year war of independence against French colonialism and US neocolonialism its virulent sting is the fact that sections of the underground tunnel complexes constructed by the Vietnamese revolutionaries have become popular sites of 21st century tourism.<sup>27</sup> Due to the pragmatic necessity of conducting these tours in English, Mandarin Chinese, Korean and Japanese, many of the workers at these sites are well-educated and have a higher degree of cultural capital than other members of their society.<sup>28</sup> By allowing us to step into the shoes of highly-trained but low-paid Vietnamese culture-workers, the sequence generates a thrilling moment of transnational solidarity between online viewers and the service-sector workers of all nations.

This solidarity marks the eruption of the first open antagonism between Freeman's self-interest as a highly skilled scientist and the self-interest of the plutocrats in extracting maximum profits regardless of the cost to workers, consumers or the planetary ecology. What marks *Freeman's Mind* as a watershed of transnational aesthetics is that it not only gives voice to this class antagonism, but depicts some of the first concrete forms of its mass mobilizations.

There were brief hints of these mobilizations during the first twelve episodes, often in the form of fragmentary asides on the wastefulness of the Black Mesa Research Facility or musings on the incompetence of the rescue mission. By episode 13, however, Freeman has realized that the official response to the alien invasion is not utterly incompetent, it is wholly malevolent. The sole interest of the authorities is erasing the evidence of their culpability in unleashing the alien invasion, by ordering death squads to exterminate the entire scientific corps of Black Mesa.

In short, Freeman has decisively lost his privileged class status as a world-class scientist and become the antagonist of the transnational plutocracy. The conclusion of episode 13 provides a tantalizing glimpse of the narrative energies unleashed by this transformation. While navigating a crawlspace, Freeman reappropriates a conceptual field previously monopolized by the highest-paid strata of culture-workers and tenured university professors, namely the vocation of cultural theory:

Freeman: "I wonder what Freud would've said about me crawling in and out of all these ventilation shafts. Nothing good, I bet. Freud was kind of a nutbar but you have to give him some props. He had the perfect angle. He had all these theories you couldn't disprove." *Freeman unsuccessfully attempts to open a metal grate.*

Freeman: "But yeah, he could say anything he wanted, then claim you repressed the memories of what he was talking about. It's an unbeatable strategy." *Freeman attempts to open another grate, unsuccessfully.*

Freeman: *irritated*: "Come on, come on..." *Freeman notices an open air duct, enters duct.*

Freeman: "Yeah, I wish I had a 'theory' like that. You can't get away with that kind of crap in physics. You have to have serious math to back it up. Well, except for the string theory crowd. Those guys are a bunch of cultists."<sup>29</sup>

This allusion to the mass cultural underpinnings of Freud's critique – the fact that any theory of the unconscious must also be a theory of the mass media – is linked to the social basis of post-Einsteinian physics.<sup>30</sup> A more sophisticated version of this same strategy occurs in episode 16, when Freeman hears a gigantic alien banging against the metal walls of a rocket test chamber. Annoyed with the racket, Freeman hilariously -- but productively -- misquotes Nietzsche:

Freeman: “What was that Nietzsche said? He who fights drummers should see to it that in the process he does not become a drummer? Or was it monsters? I don't know. Same thing, really... no, it had to be drummers. That's a monster [referring to the tentacled alien], and there's no way I'm going to end up looking like that thing. I wonder if Nietzsche was in a band. I bet he was. I should look him up when I get out of here. I'll bet the songs have deep lyrics.”<sup>31</sup>

Nietzsche's famous aphorism had a crucial second sentence, namely the power of the abyss to look back at its viewer.<sup>32</sup> Scott rewrites the Nietzschean tropes of the monstrous imperial self and the colonial abyss into tropes of the digital music producer (in the original game, the tentacled alien lashes out in the direction of anything which makes a discernible noise) and the videogame avatar which stares (or in the case of Freeman, shouts) back at its creator.

Digital music and videogames have long been two of the most sensitive indicators of the spread of transnational media in the early 21st century.<sup>33</sup> The unveiling of these two tropes in *Freeman's Mind* marks two significant shifts in the series. The first is the sharpening of its critique of Wall Street speculators into a broader critique of the planetary plutocracy. For example, there is a scene later in episode 16 wherein Freeman briefly muses on the possibility of becoming wealthy from the gargantuan level of military spending which will be required to fight the alien invasion.<sup>34</sup> Moments later, this potential Cold War revanchism recoils into a scathing denunciation of the plutocratic demolition of US public education:

Freeman: “I guess the big danger to such massive defense spending is that we might end up as a military city-state at perpetual war with aliens, like *Starship Troopers*. What's that noise?” *Freeman notices two aliens who have taken over the bodies of scientists, waiting to ambush him.*

Freeman: “Oh, someone thinks they're smarter than me, eh? I don't need to dignify this.” *Freeman shoots aliens.*

Freeman: “You don't even have a degree! Actually, your host bodies had degrees around here, but you're just latching on to that. That's even worse than one of those online degrees. You're a parasite in every way.”<sup>35</sup>

The madness of the post-2001 US War on Terror and its vast expenditure of funds on illusory enemies converges with the lunacy of the privatization of US public education, a.k.a. the destruction of public schools and their replacement by test mills, the firing of highly skilled educators and their replacement by low-wage test proctors, and the demolition of libraries, music and arts programs for the benefit of textbook and computer monopolists.<sup>36</sup>

The second shift is the emergence of a new kind of transnational awareness linked to the daily institutions of interactive media and the practices of the digital commons. This awareness is not yet a coherent set of political beliefs or ideologies. Rather, it is the consciousness of class which precedes the emergence of class consciousness. The single most memorable expression of this consciousness of class was the 2011-2014 planetary wave of mass protests against plutocracy, the first geopolitical manifestation of transnational audiences in world history. These

protests did not invent new political forms to occupy national political spaces, so much as transform national spaces into nodes of a henceforth transnational politics.

While the first two years of *Freeman's Mind* make occasional references to the class antagonisms between the Wall Street plutocrats and the skilled scientific workers of the United States, it is no accident that the first sign of the transnational consciousness of class occurs in episode 18, published on November 2, 2009. This is the moment when Freeman must escape from a stopped elevator:

Freeman: *while elevator creaks ominously*: “Okay, I'm in a rickety-ass elevator that's creaking -- what do I do. Get... off it? Okay, that looks like a pipe. Looks like it might go somewhere. Don't think I have a lot of options.” *Creaks become louder*.

Freeman: *hurriedly*: “Okay, I -- I can jump this. And the irony is, it's probably going to be one of the safer jumps I've done this morning. Assuming I don't die.” *Freeman jumps the gap and successfully clings to the pipe. A split second later, the elevator plunges down the shaft and crashes into a pool of toxic waste.*

Freeman: *exultant*: “Oh, man... I climbed my way to safety! I am a monkey god!” *While climbing down the pipe, Freeman imitates the triumphant ululations of an ape, reaches the ledge and gazes at the pool of toxic waste.*

Freeman: “That could be me right now – a toxic human French fry. But no – my simian skills saw me safely.”<sup>37</sup>

This sequence links two videogame references and one science fiction reference to the phenomenon of peer cultural production in the digital era. The first reference is a nod towards machinima production, inasmuch as climbing down the pipe is not possible in the original game (players had to jump onto a nearby ladder instead). The second is to Sony's *Ape Escape* and Nintendo's *Donkey Kong* platformer videogame franchises, wherein players steer monkey avatars through maps comprised of timed jumps and traversal puzzles. The science fiction reference is relayed by Freeman's play-acting as a monkey, the satirical reversal of the hegemonic depiction of simians in British and US science fiction literature and mass media as the brutish and racialized Other of civilizing empires.<sup>38</sup>

This play-acting culminates in the final two lines, wherein Freeman's escape from the cooking of French fries -- the classic symbol of low-wage food service workers in the US -- is enabled by the exercise of “simian skills”. The ingenious word-play of the sentence is a nod towards the transnational networks of informal and non-commercial cultural labor which emerged during the 1990s and 2000s, everywhere from digital photography to free-to-view video channels, from hip hop and electronic music to slam poetry, and from independent theater to interactive media.

All of these networks exist in a state of continuous struggle against corporate media monopolies as well as against national regulatory systems largely beholden to commercial interests. Episodes 19 through 24 of *Freeman's Mind* refer to these struggles indirectly, everywhere from the forms of digital peer production facilitated by Valve's digital distribution service, Steam,<sup>39</sup> and the ecological despoliation wrought by Black Mesa's production facilities,<sup>40</sup> to the bohemian haircuts and dissident political opinions of Freeman's fellow scientists.<sup>41</sup> By episode 23, Freeman's critique of an uninformative map sparks a discussion of 21st century

digital cartography, 20th century manual drafting, and 19th century colonial smuggling.<sup>42</sup>

Yet it is not until episode 25 of *Freeman's Mind*, published on March 8, 2010, that these struggles are given a concrete historical framework. This is the moment Scott cites one of the most powerful literary innovations of the late 20th and early 21st centuries, namely the neo-slave narrative. These latter tell the stories of the enslaved, enserfed, and indentured laborers of the post-1492 capitalist world-system.<sup>43</sup>

Because these laborers left few written records or other forms of documentation behind, neo-slave narratives perform the difficult task of reconstructing an entire historical archive along with the specific tale they wish to tell. Here is Scott's quotation of the neo-slave narrative:

Freeman: "I have to fix everything in this damned building. This isn't my job." *Freeman starts electric tram back up.*

Freeman: "See, this is what we need slaves for. I think we really screwed up the handling of that as a nation. We were only enslaving black people. That's stupid. That's redneck reasoning. We should've just freed the existing slaves, wiped the slate clean, and grabbed new slaves from a larger pool. Like if you play the lottery. You can win a million dollars, or you can become a slave for life if you pick the wrong number. That's a better risk versus reward balance. I mean, what the hell kind of risk is a one dollar ticket. Do the same thing for voting, getting a driver's license... have a new system where every society member has a small risk to become a slave – except me."<sup>44</sup>

Whereas Freeman's character previously oscillated between the progressive and revanchist wings of late 20th century US identity-politics, here the oscillation is between two periods of plutocratic excess -- that of the US elites of the late 19th century, and that of the US elites of the early 21st century. What gives the passage its satirical sting is the recognition that the political revanchism of the twilight of US hegemony resonates with the revanchism of its hegemonic dawn: yesterday's Jim Crow heralds today's War on Drugs, yesterday's predatory trusts and cartels foreshadow today's banksters and information monopolies, and yesterday's invasions of Cuba, the Philippines and Puerto Rico anticipate the contemporary neocolonial occupations of Afghanistan and Iraq.<sup>45</sup> This historical insight opens the door to Freeman's first overt discussion of labor exploitation, a.k.a. the extraction of unpaid labor-time from US service-sector workers<sup>46</sup> and the hyper-exploitation of digital audiences in the industrializing nations.<sup>47</sup>

By the same token, Freeman remains ideologically ambivalent vis-a-vis these two plutocracies, due to the lingering belief that his credentials and citizenship will allow him to somehow escape the doom of plutocratic immiseration. One of the most striking expressions of this ambivalence is a mock pirate episode, released as an April Fools' Day joke for the fan community on April 1, 2010. Rather than playing the part of the roguish but ultimately harmless Hollywood pirate, Scott employs the historically accurate vocabulary and diction of a ruthless 18th century privateer:

Freeman: *in the raspy voice of a pirate*: "Ah, what do we have here." *Freeman approaches soft-drink machine.* "An anti-scurvy machine." *Aliens jump from ceiling and attack.*

Freeman: *fighting them off*: "Shiver me timbers! By the powers, there be all manner of queer beasties in

this hold. I cares not for 'em.” *Freeman notices a nearby room boarded up with wooden planks.*

Freeman: “Now, what booty be so special here, if he weren't guardin', I asks?” *Freeman smashes planks with crowbar.*

Freeman: “I aims to find out.” *Enters room, notices security guard standing in room.*

Freeman: “Arrr, this must be the brig.” *Before the guard can respond, an alien teleports behind Freeman.*

Freeman: “You stinkin' bilge rat!” *Freeman shoots alien.*

Freeman: “I swears, the men behind this mess will all swing for sure.” *To security guard:* “How there, squire? What say ye to joinin' me crew? I gives ye my affy-davy [affidavit] I give ya [you] a cut of any loot we take.”

Security guard: “Okay, why not. I didn't want to die alone anyway.”

Freeman: “Yarr! That be the spirit! Let us charge forth and paint the walls red with blood!”<sup>48</sup>

On the surface, this episode is an extended homage to the digital commons, where transnational audiences have battled for decades against corporate attempts to criminalize non-commercial file-sharing as theft.<sup>49</sup> On a deeper level, this episode complicates the national historical framework of episode 25, by revealing the transnational constellation which created the United States in the first place.

This constellation is that of the British, Dutch, French, Spanish and Portuguese maritime colonialisms which created Atlantic chattel slavery as well as the world's first globally integrated financial and trading system between 1492 and 1775. The ambivalence of Freeman's pirate persona, halfway between Bluebeard's forthright marauding and the anguished confession of Coleridge's mariner, expresses the ambivalence at the heart of the first cycle of anti-colonial national insurrections which erupted on three continents between 1775 and 1810.<sup>50</sup>

Just as the Atlantic and Western European insurrections were based on a fragile anti-colonial coalition between merchants, nobilitarian elites and plantocrats seeking higher profits on the one hand, and fully waged, partly waged and wageless workers seeking higher wages, personal emancipation and cheap land on the other, so too is Freeman located halfway between the antipodes of today's planetary plutocracy and the transnational proletariat. Occasionally, this ambivalence gives rise to revanchist fantasies of predatory neocolonialism, as with this moment in episode 28 where Freeman fantasizes about leveraging his First World status in the Third World:

Freeman: “I really am bummed they've identified me, though. That means I'm a fugitive now. So they've probably frozen my bank accounts. I need to get back to Massachusetts. I have about ten thousand dollars in gold buried in Harold Parker State Forest that I put there for exactly this kind of situation. Now I didn't anticipate I was going to get framed like this. I put it there so in case I got caught embezzling I would have some sort of exit strategy. Now, granted, ten thousand will only get me so far here. But if I can make it to India, I can live like a king with that kind of money. The American dollar goes a lot farther over there. [in basic Hindi:] *Maiṁ apanē na'e bhagavāna hūṁ*. *Mērē sāmanē ghuṭanē* [translation: I am your new god. Kneel before me.] I'm going to need a fake ID.”<sup>51</sup>

More commonly, this ambivalence gives rise to sequences which highlight the underlying antagonisms between transnational workers and plutocratic elites, but which do not yet express

the class position of the former. For example, episode 29 contains a pungent satire of the globe-straddling supply and distribution networks of transnational capitalism which employs a dense network of references to 20th century US children's media and Japanese videogame franchises:

Freeman: *watching metal transport boxes hanging from moving conveyor belts on the ceiling*: “Huh, guess the alien disaster isn't slowing production any. Gotta keep those shareholders happy. Today's episode is brought to you by the number 8. Just what are we shipping, anyway. These look like engine parts –” *On the other side of the tram track, soldiers seem to pop out of a wooden box and start shooting at Freeman.*

Freeman: *while shooting back*: “Oh god! No! Stop! Stop that! Stop!” *Freeman defeats soldiers.*

Freeman: “What the f--k? Did they just pop out of a box? Why were they in a box? That's Loony Tunes crap! Jesus. Well, they caught me off-guard, I'll give them that. I wonder if that was their idea or if it came from up the chain of command. Yeah, I could envision some cigar-smoking general ordering this.”

Freeman: *imitating the voice of a raspy general*: “Yeah, put two soldiers in a box! When the enemy approaches, they just jump out. It's brilliant.”

Freeman: *in normal voice*: “I bet they're both named Jack, too.”<sup>52</sup>

First of all, Freeman's seemingly offhand comment about the number eight is an allusion to the popular children's show broadcast on US public television, *Sesame Street*, which has a long history of satirizing commercial advertisements (e.g. “today's episode is brought to you by the letter R”). Second, the theme of soldiers hiding in boxes is an allusion to the core game-play of Kojima's stealth espionage franchise *Metal Gear Solid* (1987-2015), one of the most consistent and stinging critics of US imperialism in videogame history.<sup>53</sup> Third, Loony Tunes is one of the oldest children's animation channels in the US, featuring characters such as Bugs Bunny and Elmer Fudd. The final allusion to the jack-in-the-box, a children's toy, plays on the fact that videogames were originally a spin-off of the children's toy industry in the late 1970s.<sup>54</sup>

What is still missing, to be sure, is the perspective of the transnational workers who operate and maintain these distribution networks. This is the specific contribution of episode 32, which shows Freeman's tottering faith in his imperial privilege on the cusp of a complete meltdown:

*Freeman inhales after narrowly escaping drowning in a flooded corridor.*

Freeman: *inhaling*: “Air is good... we have a working relationship. Okay, I'm pretty sure nobody followed me in here, so I've got that going for me. I have supply concerns about the air in this room, though. Business needs to expand. We need more investors, which I guess would be... plants?” *Freeman notices worms in water.*

Freeman: *shouting*: “Not worms. Worms are not conducive to good business.”

Freeman: *normal voice*: “Look at this. They're trying to take over the market. I need to withdraw. I'm taking my assets with me and I'm going to look for business opportunities elsewhere.” *Freeman dives into water and proceeds further down the flooded corridor. After fifteen seconds, Freeman finds another air pocket and inhales.*

Freeman: *treading water*: “Ugh... this is a tight market. No matter. Here at Freeman Industries, we practice sound investment strategies.” *Freeman dives into the water again. Freeman tries and fails to unlock a flooded door, comes up for air one more time.*

Freeman: “Okay, don't panic, don't panic, don't panic... I'm sure there's... minutes worth of air in this pocket...”

Freeman: *suddenly shouting*: “Panic --”<sup>55</sup>

'Freeman Industries' is the pungent satire of one of the most powerful ideologies of the 21st century, namely the notion that everyone is their very own individual enterprise or start-up, and can thus dispense with any notion of collective solidarity. The lingering fiction of Freeman Industries falls to pieces completely later in the same episode, when Freeman has a narrow escape from a giant alien fish:

Freeman: *furious*: “You want to eat me? I'll give you something to eat. You think I work at Sea World? Giving you free food all day? You're going to have to pay for this meal. Come on up, I won't hurt you. Come on up.” *Alien fish resurfaces.*

Freeman: *mocking*: “Sucker.” *Freeman fires and kills alien fish.*

Freeman: *yelling*: “Yeah! Call me Ishmael, bitch!”

Freeman: *normal voice*: “Stupid shark, that take some of the fight out of you? Oh! Almost forgot about you!” *Freeman starts shooting tentacled aliens hanging on ceiling.*

Freeman: “Oop, need to reload.” *Freeman shoots remaining tentacled aliens while whistling 'Blow the Man Down'.*

Freeman: “Looks like I cleaned everything up. I am a bad ass pool boy. This water still looks nasty, though. But I'm not going back.” *Freeman dives into water, resurfaces near metal ledge.*

Freeman: “Okay, more pull ups.” *Freeman climbs onto ledge.*

Freeman: “Man, I'm going to be ripped after today. Now I need to hit the clubs more than ever. Hell, maybe I still can. If I get out of state, the Feds aren't going to be looking for me in night clubs. I'll drive to Dallas. There's bound to be something popping there.”<sup>56</sup>

What intermediates between Melville's *Moby Dick*, that magnificent allegory of the burgeoning internal contradictions which would explode in the US Civil War nine years after the novel's publication, and the transnational health club and fitness industries of the 21st century is the trope of the poolboy: the transnational service worker who whistles downloaded versions of sea shanties. In the very next episode, the theme of the transnational worker is given an even more intriguing twist:

*Freeman must jump across a flooded passageway. The only path is through a hole torn in a metal grate.*

Freeman: “Okay people, let's hear our options. Macintyre, you first. Well, I don't really want to get back into the water this quarter. For starters, I just killed a shark. Okay. And, I saw something swimming down there, so how can that be good. Knox, what do you think? Ah, see I thought of that too [referring to the gaping hole in the metal fence]. But the big gaping hole strategy is flawed due to the ragged chunks of metal surrounding it. No, gentlemen, I think there's only one course for our company. Allow me to demonstrate.” *Freeman jumps and climbs along metal grate.*

Freeman: “Yeah, I'd like to see a fish do this. I think this proves that, in addition to aliens, I am superior to fish as well. There's... dammit --” *Freeman falls into the water.*

Freeman: *resurfaces*: “I'm starting to get pretty sick of all this swimming...” *Freeman climbs out of water.*

Freeman: "I don't think this suit's really designed for it. I'm all waterlogged. I can't have that. That's how Bruce Lee died, too much water in his brain. Of course, I don't think that happened to him from swimming. It was painkillers or something. But then, hey, look at me. I am the Bruce Lee of physics."  
Freeman: *imitating Bruce Lee's onscreen martial arts utterances*: "Wickashaw!"<sup>57</sup>

The trope which mediates between Macintyre, the skilled worker of the transnational sports industry, and Bruce Lee, the transnational superstar of the Hong Kong films, is Freeman's performative leap onto to the grate. Given that the original *Half Life* game did not allow players to perform this move, this sequence is essentially a reflexive reference to the machinima director as a new kind of skilled transnational laborer.

What is not yet clear, on the other hand, is how the non-commercial networks of production and distribution crucial to machinima relate to the transnational cultural oligopolies of production and distribution exemplified by Disney, not to mention the information oligopolies exemplified by Google. Nor is it yet clear how skilled transnational laborers relate to unskilled transnational laborers. The result is the unmistakable grinding of narrative gears in episode 34, when the long-running oscillation in Freeman's monologues between a revanchist neo-nationalism and a progressive cosmopolitanism erupts into open conflict:

Freeman: "This whole neighborhood's going to hell. What with the gangs..." *Freeman shoots aliens.*  
Freeman: "Yep... can't even walk down the street of your own planet anymore. I remember the good old days, when I didn't have to bring a gun to work... my coworkers weren't space bugs... I had a salary... I wasn't wanted by the government..." *Alien teleports in front of Freeman, begins to attack.*  
Freeman: *yelling*: "Then you happened!" *Freeman shoots alien, but is hit in the back by a bolt of electricity by a different alien.*  
Freeman: "Ow! Was I shot in the back of the --" *Freeman spins around, shoots other alien.*  
Freeman: *in disgust*: "No respect, man. No respect at all."

Freeman: *in exaggerated rural accent*: “Goddamn outworlders are ruining this country.”

Freeman: *normal voice*: “There was a time when we'd put you all in cages. And if it was up to me, it'd still be that way. Some of you keep zapping me with electricity. That means you're a power source. We should be taking advantage of that. This is all so wasteful.”<sup>58</sup>

Freeman's final overt display of revanchism and the post-2001 xenophobia of the Terror War, at this point wholly satirical, suddenly recoils into a covert parable of renewable energy production. The insoluble contradiction here is that this revanchism is tied to the rule of the US empire, precisely where the progressive vision of a renewable energy economy is tied to the transnational institutions of the digital commons. To understand why and how Scott responded to this contradiction not by retreating back to national revanchism or indulging in empty utopianism, but through the relentless critical analysis of what exists, we must turn to the specific constellation of the first great wave of anti-plutocratic mass struggle between 2011 and 2014 and its relationship to post-2008 geopolitics.

1. Machinima works have significant similarities to the playable videogame mods created by skilled amateurs for various videogame franchises. While machinima are not interactive experiences in their own right, they generally cite or quote videogames for their narrative raw material.
2. Valve Software is an independent videogame and digital network services firm founded in 1996 by three former employees of Microsoft. Thanks to its roots as a PC gaming firm and its egalitarian internal culture, Valve understood the futility of trying to impose 20th-century broadcast monopolies on the transnational videogame market. The various iterations of Valve's *Half Life* franchise have sold an estimated 9.3 million official copies between 1998 and 2008, catapulting Valve from an obscure start-up into one of the leading videogame studios in the world. Valve's other prominent franchises include *Portal* and *Left for Dead*. Chris Remo. "Analysis: Valve's Lifetime Retail Sales For Half-Life, Counter-Strike Franchises." *Gamasutra*. December 8, 2008. [http://www.gamasutra.com/php-bin/news\\_index.php?story=21319](http://www.gamasutra.com/php-bin/news_index.php?story=21319).
3. The videogame walkthrough has a long and complex prehistory ranging from standup comedy and theatrical improvisation to the live-action television series and the online comedy series. In retrospect, three US and Canadian media series served as important precedents for *Freeman's Mind*. These included the televised comedy series *Mystery Science Fiction Theater 3000* (1989-1999), the machinima series *Red Vs. Blue* (2003-2007), and the web comedy series *Tiki Bar TV* (2005-2009). *Mystery Science Fiction Theater 3000*, created by Joel Hodgson, was a long-running comedy cable television show which remixed clips of B-grade science fiction, horror, and pulp films together with recorded improvised commentary. *Red Vs. Blue* (2003-2007) was a popular machinima series directed by Michael Burns and Matt Hullum. Burns and Hullum refunctioned the multiplayer component of Bungie's *Halo* videogame to create a long-running sketch comedy which satirized many of the conventions of the multiplayer shooter, including its affinity to imperial masculinity. *Tiki Bar TV* was an independent comedy web-series comprising forty-five episodes, which ran from 2005 to 2009. The brainchild of Canadian performers Jeff Macpherson, Kevin Gamble, and Lara Doucette, *Tiki Bar TV* was a satirical version of an online cocktail show, combining comedy improvisation with a do-it-yourself tiki bar and actual cocktail recipes displayed for viewers during each show. It was also one of the first series to rely exclusively on digital distribution platforms such as iTunes. See: Robert G. Weiner and Shelley E. Barba, editors. *In the Peanut Gallery with Mystery Science Theater 3000 : Essays on Film, Fandom, Technology, and the Culture of Riffing*. Jefferson, NC: McFarland, 2011. <http://www.tikibartv.com/>.
4. After the first episode of the series was published, Scott conducted an online poll of the fan community asking them whether they wanted additional *Freeman's Mind* episodes. Fans voted to continue the series by an overwhelming margin. Ross Scott (blog). December 5, 2007. <http://www.accursedfarms.com/appendum/>.
5. From March 2006 until July 2010, Youtube restricted the length of user-uploaded videos to 10 minutes. From July 2010 until December 2010, the length limit was raised to 15 minutes. After December 2010, the limit was further extended to a maximum of 12 hours for users in good standing. <http://youtube-global.blogspot.com/2010/07/upload-limit-increases-to-15-minutes.html>
6. Nick Dyer-Witthford and Greig de Peuter have argued convincingly that shooter franchises such as *Call of Duty*, *Battlefield* and *Halo* embody some of the worst aspects of neoliberal ideology – in particular, the celebration of a repressive imperial masculinity whose role was to safeguard the rule of the plutocracy. Between 1992 and 2012, the best-selling shooter franchises included *Call of Duty* (214.6 million official copies sold), *Halo* (60.0 million), *Battlefield* (40.8 million), *Medal of Honor*

(37.4 million), and *Gears of War* (20.4 million). All data is compiled by VGChartz.com. <http://www.vgchartz.com/gamedb/>.

7. Marc Laidlaw, a veteran science-fiction and fantasy writer, wrote a scenario in which human beings and aliens fight against an occupying army of interstellar invaders called the Combine, who practice a biological as well as political colonialism. Predictably, the worst villains of the *Half Life* series are the comprador human elites who ally themselves with the Combine. It should also be noted that the shooter as a genre need not be pro-imperialist. Insomniac's *Resistance* franchise portrayed humanity's struggle against an interstellar neocolonialism, while Irrational Games' *Bioshock* (2007) and *Bioshock Infinite* (2013) provide thoughtful albeit limited critiques of the neoimperialism of the videogame shooter as a form. Guerilla's *Killzone* franchise has also been somewhat critical of the ideologies of empire and neocolonialism.

8. Valve's original dialogue at the beginning of *Half Life 2*: "Rise and shine, Mr. Freeman, rise and shine. Not that I wish to imply you have been sleeping on the job. Noone is more deserving of a rest and all the effort in the world would have gone to waste, until... well, let's just say your hour has come again. The right man in the wrong place can make all the difference in the world. So wake up, Mr. Freeman, wake up and smell the ashes." <http://www.youtube.com/watch?v=mRtT4HHQef0>. The reference to Youtube refers to Ross Scott's unhappy experience with Machinima.com, which was once one of the leading channels featuring the works of machinima creators on Youtube. Over time, Machinima's priorities shifted away from showcasing independent artists and towards pure profit-seeking, causing Scott to leave the channel in 2012, a story we will describe more closely later in this work.

9. Nomi Prins (blog). <http://nomiprins.com>. Matt Taibbi (blog). [www.rollingstone.com/politics/blogs/taibblog](http://www.rollingstone.com/politics/blogs/taibblog). *New Economic Perspectives* (blog). <http://neweconomicperspectives.com>. Bill Moyers, *Bill Moyers and Company*. <http://billmoyers.com>. Paul Jay's *Real News Network*. <http://therealnews.com>. Joseph Stiglitz. "The GFC: Where are we now and what can be done about it?". July 7, 2014. <http://www.youtube.com/watch?v=2ZzKUrzNMXA>. Yanis Varoufakis (blog). <http://yanisvaroufakis.eu/>.

10. In March of 2012, the Consumer Financial Protection Bureau, an official Federal agency, estimated that total US student debt topped the \$1 trillion mark. Web: <http://www.consumerfinance.gov/blog/too-big-to-fail-student-debt-hits-a-trillion/>. At the end of 2013, almost four years after the end of the 2009 recession, European youth unemployment was 58.3% in Greece, 55% in Spain, 49.7% in Croatia, 40% in Italy, 38.9% in Cyprus, 38.1% in Portugal, 33.7% in Slovakia, 28.4% in Bulgaria, 27.3% in Poland, 27.2% in Hungary, 26.8% in Ireland, 24.8% in France, 23.7% in Belgium, 23.6% in Sweden and Romania, 23.2% in Latvia, 21.9% in Lithuania, 21.6% in Slovenia, and 20.5% in the UK. Normal rates of youth unemployment averaged between ten to fifteen percent. Eurostat. [http://epp.eurostat.ec.europa.eu/portal/page/portal/product\\_details/dataset?p\\_product\\_code=TIPSLM80](http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/dataset?p_product_code=TIPSLM80).

11. Data from ITU cited in: <https://www.internetsociety.org/globalinternetreport/2016/data-and-trends/>.

12. Prior to 2011, the major protests against plutocracy were limited to national electoral politics, e.g. the four successive Chavez presidencies of Venezuela which began in 1998, Lula's election to the Presidency of Brazil in 2002, Evo Morales' election to the Presidency of Bolivia in 2005, Pakistan's democracy movement of 2008, the 2009 Green protest movement of Iran, and the 2010 democratic revolution of Kyrgyzstan. After 2011, however, these national struggles began to take the form of

transnational constellations. The Tunisian, Egyptian, Libyan and Yemeni revolutions and the Occupy protest movements against neoliberalism in the US and EU all occurred between 2011 and 2012, mass protests occurred in Brazil, Turkey and the Kurdish region of Syria in late 2012 and 2013, while 2014 witnessed the democratic revolution of Ukraine, the election of Jokowi Widodo to the Presidency of Indonesia, and the pro-democracy protests of Hong Kong.

13. It should be noted that the theme of employment was already prominent in the original *Half Life* videogame, most notably in the very first and very last scripted sequences. The opening ten minutes of the videogame showcase Gordon Freeman, a newly-minted PhD in particle physics, reporting for his first day of work at a secret Government laboratory. An announcer welcomes Freeman to the facility, and then talks about the various work-related duties and programs for employees. Conversely, the very end of *Half Life* also invokes the job market and the possibility of continued employment.

14. *Freeman's Mind*, episode 2, 2:50-3:29. December 27, 2007.

15. The field of quantum chromodynamics is a decades-old theory of the subatomic interactions between quarks and gluons. Greiner, Walter and Schäfer, Andreas. *Quantum Chromodynamics*. Berlin: Springer Verlag, 1995.

16. *Freeman's Mind*, episode 5, 2:31-3:08. October 3, 2008.

17. While episode 5 was created in 2008, the sequence eerily anticipates two of the worst workplace disasters of Bangladesh: the notorious 2012 textile factory fire in Dhaka, the capital city of Bangladesh, which killed 117 workers and injured over 200, and the Savar building collapse of 2013, which killed 1,134 workers. [https://en.wikipedia.org/wiki/2013\\_Savar\\_building\\_collapse](https://en.wikipedia.org/wiki/2013_Savar_building_collapse).  
[https://en.wikipedia.org/wiki/2012\\_Dhaka\\_fire](https://en.wikipedia.org/wiki/2012_Dhaka_fire).

18. The progressive ones include the anti-globalization movement of 1999-2000 and the Occupy movement of 2011-2012, while the reactionary ones include the US wave of xenophobia during 2001-2004, the surge of Far Right populism in the countries of the European Union after 2008, and the authoritarian kleptocracy which took power in the US in 2016.

19. *Freeman's Mind*, episode 6, 4:29-4:58. December 9, 2008.

20. *Freeman's Mind*, episode 7, 0:06-0:44. December 21, 2008.

21. Motion sickness was a common problem for players of the original *Half Life* as well as many other first-person shooters of the 1990s, due to the lack of realistic visual cues in early videogames and rapid shifts of camera perspective. While most post-2008 videogames employ a range of techniques to minimize or eliminate motion sickness, motion sickness remains a key issue for one of the most important subgenres of videogame culture, namely fan walkthroughs. The most successful and popular of these latter are those wherein players avoid jumpy, excessive first-person camera movement. This means that the player will move in a straight line and at consistent speeds, limit dodging and jumping, and orient the screen around predictable visual landmarks -- the videogame equivalent of how car passengers avoid car-sickness by focusing on the horizon, rather than staring at objects to their immediate left and right.

22. *Freeman's Mind*, episode 8, 1:43-2:08. January 16, 2009.

23. Scott released footage of some of the most entertaining of these Source engine bugs with explanatory text commentary as a postscript in episode 68, the finale of the series.

24. This is data from a National Science Foundation survey, summarized in a report by the NFAP. Stuart Anderson. "The Importance of International Students to America." *National Foundation for American Policy Brief*, July 2013. <http://www.nfap.com/pdf/New%20NFAP%20Policy%20Brief%20The%20Importance%20of%20International%20Students%20to%20America.%20July%202013.pdf>.

25. *Freeman's Mind*, episode 13, 3:50-4:24. July 24, 2009.

26. *Freeman's Mind*, episode 13, 5:38-5:48. July 24, 2009.

27. The Government of Vietnam maintains an official website on the tunnels of Cu Chi: <http://www.cuchitunnel.org.vn/>.

28. According to the Ministry of Culture, Sport & Tourism of Vietnam, about 22% of the 4.2 million international tourists who visited Vietnam in 2008 were from Chinese-speaking countries and territories, 18% were from English-speaking countries or regions, 9% from South Korea and 8% from Japan.

29. *Freeman's Mind*, episode 13, 7:42-8:24. July 24, 2009.

30. Freud's ground-breaking *The Interpretation of Dreams* (1899) decoded the anxieties and aspirations of a group of mostly Jewish and highly educated Viennese professionals in terms of what might be called the "Austrian unconscious" – the identity-politics of nobilitarian status, wealth, ethnicity, religion, gender, sexuality and occupation inside a dynastic empire seething with explosive internal contradictions. Freud's greatest contribution was the insight that human psychology is neither natural nor immutable, but historically produced. This means the psyche is capable of some degree of transformation, either through internal (self-willed) or external (socially mandated) means. The reflexive revolution of Einstein in physics, namely the fact that the observer's position could not be separated from the observed universe, parallels the revolution of Freud in cultural analysis, namely the fact that the evolution of individual identities cannot be separated from the evolution of social identities.

31. *Freeman's Mind*, episode 16, 0:54-1:19. October 5, 2009.

32. Nietzsche's original commentary, written in 1886: "Wer mit Ungeheuern kämpft, mag zusehn, dass er nicht dabei zum Ungeheuer wird. Und wenn du lange in einen Abgrund blickst, blickt der Abgrund auch in dich hinein." ["Whoever fights with monsters should take care not to turn thereby into a monster. And if you gaze into an abyss for long, the abyss also gazes into you."] Aphorism 146. Friedrich Nietzsche. *Jenseits von Gut und Böse*. <http://www.gutenberg.org/cache/epub/7204/pg7204.html>.

33. In the musical field, the genres which once typified US cultural hegemony -- blues, jazz, rhythm-and-blues, gospel, rock and hip hop -- became templates of transnational musical networks no longer monopolized by the US recording industry or limited to the circuits of US audiences by the late 1990s. The same process took slightly longer in the field of interactive media, due to the slightly greater

computing resources required by most videogames. By 2008, console monopolists and commercial studios had lost their exclusive control over videogames, and by 2010, videogames were co-produced, co-distributed and co-critiqued by tens of millions of players.

34. Freeman: “The US is certain to dump boatloads into defense spending on top of what we already have. There's going to be a lot of trickling down to research and development. Hell, I could be driving a Porsche before the year's out.” *Freeman's Mind*, episode 16, 2:05-2:16. October 5, 2009.

There is a more evolved version of same moment in episode 33, where a design anachronism of the original *Half Life* gives Freeman the opportunity to critique the plutocratic state:

Freeman: “It's obvious what's going on here. It's the same as the crate-smashing room. If we don't spend a billion dollars one year, then we don't get a billion dollars the next year. And if we don't get a billion dollars the next year, then we have to go and spend more money on lobbyists to get the laws changed, so that we get our billion dollars the year after that. And nobody wants that, because then we might have to compete with other lobbyists. We could get into a bidding war. That's how democracy works. On the other hand, the nutcracker room here is a sure thing. I make fun of it, but in the long run, it's probably faster and cheaper just to build a giant nutcracker, write it off, and be done with it.”

35. *Freeman's Mind*, episode 16, 2:23-2:49. October 5, 2009.

36. Diane Ravitch remains the single greatest critic of the privatization juggernaut which ravaged the US public educational system after the 1970s. Diane Ravitch. *Reign of Error: The Hoax of teh Privatization Movement*. New York: Alfred Knopf, 2013.

37. *Freeman's Mind*, episode 18, 1:40-1:59. November 2, 2009.

38. These hegemonic depictions include the *Tarzan* novels and films, the *King Kong* films, and the *Planet of the Apes* television series and films.

39. For example, this line in episode 19 is a recondite inside joke about the independent media producers who sell digital hats and other items to players of Valve's online multiplayer videogame *Team Fortress 2*:

Freeman: *while looking at alien tentacles*: “What if this is the monster's hair strands or something -- the rest of it teleported inside the earth. It's wearing me and this entire facility as a hat. I'm not sure how I feel about that. I wouldn't go so far as to say I feel dirty, but it's... strange.” *Freeman's Mind*, episode 19, 4:10-4:20. November 12, 2009.

From the standpoint of the corporate media, the cultural networks of the digital peer economy are indeed alien growths which threaten to take over the commercial media from within.

40. *Freeman's Mind*, episode 20, 3:52-4:25. November 16, 2009.

41. Freeman: “You know, now that I think about it, the Einstein look is really just the Karl Marx look, just without the beard.” *Freeman's Mind*, episode 20, 5:56-6:00. November 16, 2009.

42. Freeman: “That map has to be bogus. It only lists one area as being dangerous. It needs to have, like, thirty. You could even write 'here be dragons' on it and that would almost be more accurate than nothing at all. Yeah, see, it doesn't even list... F-seven-twelve-D-H. How could you forget to put that down? I mean, I would have

named it Hell Pit 48, but if the cartographer doesn't care about that name, then who will? I guess they just looked up the Autocad layout and took some numbers off of that to feel important. Speaking of which, why do drafters always listen to country music? I never figured that out. What's the correlation/connection there? Is it whiskey?" *Faroff rumbling sound and cry of giant alien.*

Freeman: "Sounds like somebody's smuggling an elephant up there." *Freeman's Mind*, episode 23, 3:04-3:48. November 28, 2009.

43. For the formal definition of the genre, see: Rushy, Ashraf H. A. "Neo-slave narrative", in: William L. Andrews, Frances Smith Foster and Trudier Harris, editors. *Oxford Companion to African American Literature*. New York/Oxford: Oxford UP, 1997 (533-535). The canonic neo-slave narratives include Toni Morrison's *Beloved* (1984), Dionne Brand's *At the Full and Change of the Moon* (1999), and Evelyne Trouillot's *Rosalie the Infamous* (2003).

44. *Freeman's Mind*, episode 25, 6:23-7:02. March 8, 2010.

45. For the classic text on how the criminalization of drug addiction since the mid-1970s has reprised the toxic social polarization of Jim Crow, see: Michelle Alexander. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: The New Press, 2010.

46. Freeman: "You know what the ridiculous thing about all this is --" *He pauses to shoot alien.*

Freeman: "The ridiculous thing is – hey, a switch." *Freeman pulls switch, opening bridge to next area.* Freeman: "It's not only that he chooses this line of work but he's probably getting paid pretty well for this, with hazard pay. Meanwhile, I'm caught in the middle of this and I'm not getting paid anything. I'm basically doing volunteer work right now. These are community service hours." *Freeman's Mind*, episode 25, 8:33-8:48. March 8, 2010.

To understand the joke, readers should know that community service hours are both a common form of punishment in the US and a deliberately punitive requirement for eligibility for welfare benefits such as Food Stamps.

47. Freeman: "All this security must be to protect something. I bet we have gnomes down there mining precious metals and gems. I want a gnome. Damn, there's another alien." *Freeman shoots alien.*

Freeman: "I'd put my gnome in a cage and feed him granola. I think they'd eat that. Ah, who am I kidding, if the aliens got down there, they would've eaten them all anyway. Gnomes are small. Wait, are gnomes even real?" *Freeman's Mind*, episode 26, 0:23-0:44. March 24, 2010.

Fantasy races have long served as narrative proxies of the racialized Other in role-playing videogames, in much the same way humanoid aliens embody the racialized Other in science fiction. In this case, the racial subtext of the gnomes are "gold farmers", low-wage workers located primarily in industrializing nations who perform menial tasks inside digital open worlds in order to accumulate digital items to be resold to wealthier players. See: Richard Heeks (2010). "Gaming for Profits: Real Money from Virtual Worlds." *Scientific American*. <https://www.scientificamerican.com/article/real-money-from-virtual-worlds/>.

48. *Freeman's Mind*, episode 27, 3:34-4:26. April 1, 2010.

49. The mobilizations of these transnational audiences range from the mass adoption of open source software platforms such as Linux and Android to the creation of Pirate Parties in several nations of the European Union, and from the creation of digital rights organizations such as the Electronic Frontier Foundation to contemporary mass campaigns for net neutrality.

50. The most significant of these insurrections include the uprising of the thirteen British North American colonies in 1775, the Patriot uprising of the United Provinces from 1780-1787, the French revolution of 1789, the Brabant uprising of Belgium in 1790, the Haitian revolution of 1791, and the national insurrections of the future Argentina, Chile, New Granada, Mexico and Peru in 1810.

51. *Freeman's Mind*, episode 28, 7:59-8:40. May 26, 2010.

52. *Freeman's Mind*, episode 29, 3:15-3:59. August 16, 2010.

53. The narrative peak of the entire *Metal Gear Solid* series, *Metal Gear Solid 4: Guns of the Patriots*, had been released to overwhelming critical and popular acclaim in the summer of 2008, two years prior to this episode.

54. This satire of transnational networks of distribution is mirrored in the game-play sequence cited by episode 30. In the original *Half Life*, this sequence requires the player to launch a rocket in order to put a satellite into orbit. Inside the launch control center, a giant rotating hologram of the Earth shows the projected flight path of the satellite, a transparent reference to the invention of the internet by the US military-industrial complex in 1969. Scott alters this context slightly by alluding to the field of biomedical research, which receives significant public funding from the US and other national governments:

Freeman: *while exploring launch control center*: "Oh, I know what this is. Those are electron microscope shots of cells. Yeah, that one's pollen, I think. This must be the Microbiology Department. Why does the military want to kill microbiologists? I've never really known them to be a controversial bunch. I think some people yelled at Pasteur because they didn't understand what vaccines were, but that's all that comes to mind. But why do microbiologists need this very expensive hologram projector? We didn't get one of those. We could've used it more than they could." *Freeman looks at rotating hologram of Earth*.

Freeman: "What's that say? Something about satellites? They don't need this. They're padding their costs to get more grant money."

*Freeman's Mind*, episode 30, 4:36-5:10. January 8, 2011.

55. *Freeman's Mind*, episode 32, 0:14-1:33. May 6, 2011.

56. *Freeman's Mind*, episode 32, 5:25-6:03. May 6, 2011.

57. *Freeman's Mind*, episode 33, 2:42-3:43. May 20, 2011.

58. *Freeman's Mind*, episode 34, 1:29-2:17. May 27, 2011.

## Chapter 5

### ***Freeman's Mind: Digital Workers of the Universe, Unite!***

To appreciate the aesthetic revolution inaugurated by *Freeman's Mind* in mid-2011, it is important to understand that Ross Scott was employed at the time at Machinima.com, a startup firm whose business plan was to transform the individual works of machinima or machinima series broadcast on Google's Youtube platform into an arm of the commercial publishing industry. This plan had only limited success, due to the inherent contradiction between machinima's non-commercial production and distribution networks, and the commercial advertising strategy pursued by Google.<sup>1</sup>

Scott's period of employment thus inadvertently spurred the radicalization of *Freeman's Mind* between 2011 and 2012, in much the same way that the limited stabilization of the worldwide bailouts and government stimulus packages between 2008 and 2010 unwittingly triggered the worldwide anti-plutocratic protests of 2011-2014. These protests did not occur because these bailouts succeeded in restoring the capitalist world-system to its pre-2007 level of economic growth, which they most assuredly did not. Nor were they triggered solely because of the experience of economic immiseration, although this was certainly a contributing factor. Rather, these protests exploded precisely because transnational audiences had the digital tools to watch plutocrats bailing themselves out at everyone else's expense, to access the citizen journalists who critiqued those plutocrats, and to organize the biggest spontaneous mass protests in human history.

This global protest wave reached *Freeman's Mind* on June 10, 2011, the publication date of episode 35. This was approximately six months after the outbreak of the Arab Spring protests in December 2010, but three months prior to the initial Occupy protests in the US and Europe in September 2011. The episode commemorates this moment by remixing the opening of *Half Life's* "Residue Processing" chapter, wherein the player has been knocked unconscious by a military death squad and must escape from a room-sized trash compactor seconds before the walls close in.<sup>2</sup> Freeman regains consciousness in the unexpected persona of the graduate teaching instructor:

Freeman: *groggily*: "Okay people, listen up. Today we're talking about fermiats. Fermiats have a half integer spin, not a full integer spin, those are bosons." *Freeman's vision clears as we wakes up inside a trash compactor, surrounded by trash and debris. The walls of the trash compactor begin to close in.*

Freeman: "Where am I? Uh, hold on, I – I think we're gonna have to move to another room." *Freeman climbs boxes and escapes from the moving walls, but remains trapped by an overhead metal grate.*

Freeman: "Somebody's renovating this place... I guess... so confused... my head hurts... man, I'm sore all over. I feel like I got my ass kicked." *Freeman watches the compactor crush the last of the debris.*

Freeman: "Jesus Christ. What was I doing in there? How did I even get in here? I want a drink. It doesn't have to be bourbon, I'm not too picky. You know, anything at least eighty proof. It smells like dog vomit in here. Oh, a hatch -- there's the answer. Oh, I don't know if I can reach it. I'll find a stick or something." *Freeman starts searching for a stick.*

Freeman: "...The hell did I do last night? I remember there was some guy with an eye patch, and a

midget..." *He sees a crowbar.*

Freeman: *picks up crowbar: "Oh, perfect. What were they talking about?" Freeman hits the metal grate with the crowbar, but cannot open it. He continues searching for an exit.*

Freeman: "And some sort of scam involving corn dogs..."<sup>3</sup>

What mediates between the rarefied discourse of particle physics and the plebian farce of the carnival is the labor of the graduate teaching assistant, a nod towards the spate of successful union organizing campaigns by graduate teachers at a number of US universities during the first decade of the 21st century.<sup>4</sup> Scott thereby transforms the symptoms of Freeman's recovery from a physical concussion -- temporary disorientation and memory loss -- into an allegory of political awakening. After a moment of virtuoso word-play (after bashing open a flimsy grate covering the exit, Freeman comments: "Hey, the ruptured rusty rods reveal a rift!"),<sup>5</sup> Freeman explicitly names the plundering of workers by the transnational plutocracy as the class warfare it indeed is.<sup>6</sup>

The transnational consciousness of class glimpsed as early as episode 16, and given its first geopolitical context in episode 26, now begins to turn into a coherent transnational class consciousness. Consider this sequence in episode 36, which links the contemporary struggles of transnational industrial workers, digital media producers, consumer rights and human rights activists with the historical struggles against maritime colonialism and imperialism:

Freeman: "Christ, where am I? This is just some chemical processing facility. I don't remember what I was planning to do today, but I'm sure this isn't it. Black Mesa is not a tourist trap." *Freeman opens a door, revealing a corridor he previously explored.*

Freeman: "Of course, I've already been here. It's not just me. Noone should be here. Noone comes to a half-abandoned warehouse unless they work there, they're trying to film a low budget horror movie, or they're a photographer taking bullshit black-and-white photos trying to be artsy. That's it. And I'm going the wrong way again!" *Freeman doubles back.*

Freeman: "I suppose I shouldn't expect the red carpet treatment breaking and entering into the site of a chemical plant, but I still find the building layout confusing and I'll lodge a complaint with the administration if I find a front desk." *Freeman notices a row of giant vats filled with glowing green liquid.*

Freeman: "Well, not this way." *Freeman turns and follows giant pipe further.*

Freeman: "Oh, and I would also like to file a complaint about the number of locked doors here, and about the mutant animals that appear to be eating people. Trespasser or not, I have rights. I'm entitled to a reasonable expectation of safety and comfort when I break into a place. This is America, after all. I need to get an attorney. This whole situation is completely unreasonable for someone of my stature. And there is... Jesus Christ, this is the wrong way, too!"

*Freeman doubles back to previous acid bath room.*

Freeman: "Alright, I'm going to have to start thinking outside the box here. I should think less like a human being that uses doors and more like a... squirrel that has anger problems. Besides, I think it's entirely possible I'm the first person to ever set foot here. My name will be in history books. Therefore, as these are new territories discovered by the nation of Freeman, any and all claims shall henceforth be named after me. Me." *Freeman looks at another giant acid bath and continues.*

Freeman: "The official name of this monument will be... uh... Freeman Industrial Strength Mixer... With Green Crap Inside Of It."<sup>7</sup>

It is no accident that this explicit critique of empire goes hand in hand with the rewriting of the transnational occupations and professions previously mentioned by Freeman's monologues into a series of interactive experiences. For example, in episode 37 Freeman refers to the parlous conditions of the waste disposal and food processing industries<sup>8</sup> as well as the struggles of democratic mass movements against despotic governments.<sup>9</sup> In episode 38, Freeman satirizes the neocolonial anthropology which formed a key ideological plank of the post-2001 US War on Terror,<sup>10</sup> while episode 39 pokes fun at the transnational sports and fitness industries<sup>11</sup> while shining a spotlight on the environmental and human rights abuses of the corporate pharmaceutical and medical industries.<sup>12</sup>

In retrospect, it was probably inevitable that Scott would turn the lens of this transnational class consciousness onto his own class position as a skilled digital media producer.<sup>13</sup> The process was considerably hastened, however, by the dispute which broke out at some point in 2011 or 2012 between Scott and his employer, Machinima.com, over the terms of his compensation and the legal ownership of his series. While management missteps may have exacerbated the dispute, the root cause was the structural impoverishment of the digital artists who depended on Youtube's system of advertisement revenue sharing with media creators, and the consequent pressure on firms such as Machinima.com to extract increased revenue from their artists.

This system of revenue sharing suffered from three major flaws. First, average compensation constantly decreases relative to the total amount of viewable material over time. This is because the total footage uploaded on Youtube and other free-to-view sites increases at double-digit exponential rates each year, mirroring the exponential growth of the production and distribution of data on all devices and platforms. However, total advertising expenditures increase at the far lower rate of world economic growth, which averaged about 2.9% between 2010 and 2014.<sup>14</sup> Advertising expenditure per unit of footage viewed thus had to drop.

Second, the majority of the growth in online audiences after 2008 occurred in the industrializing nations. Since the consumers of these nations had significantly lower per capita market incomes than those of the fully industrialized countries, the advertising expenditures devoted to those consumers were correspondingly lower, sharply reducing the potential income of Youtube media producers relative to page views or other metrics of audience engagement.

The third and most important reason was the structural contradiction between the non-commercial institutions and practices of the digital commons, and Google's core mission of maximizing returns to its shareholders. Hector Postigo provides this useful summary of this contradiction in his study of the genre of Youtube videogame commentators:

It is worth noting that as UGC [user-generated content] ventures like YouTube strive to find reliable funding streams based on targeted advertising, the idea that a centrally produced content catalog can provide the audience for advertising is having to share its place as a priority with production that is increasingly dependent on individual users and community-based sets of practices and norms that may not be always in institutional control. As the description of video game commentating and its integration into YouTube's digital labor architectures will illustrate, as much as commentators must bend to the forces of production dictated by audience taste and organizational structure (legal, economic, or technological) they are themselves agents of these forces. Therefore, the digital labor described here takes the passionate form described previously as part of production in digital networks (Postigo, 2009; Campbell, 2011). The

architecture that affords it takes the form of a “capture and conversion system” (Postigo, 2012), an architecture that both affords play and techno-social practice while converting it to value that is (1) situated in the YouTube gaming community’s cultural form and (2) found in the economic value that production has for commentators and YouTube, the business venture. The takeaway from observing the flows of gaming culture as it becomes the producer of UGC for platforms like YouTube (or Twitch TV) is that all forms of cultural practice traversing through architectures framed by algorithm and affordances are similarly captured and converted to inventory and enter the organizational logics of platform owners, be they YouTube, Facebook, Tumblr, or Twitter.<sup>15</sup>

On the one hand, Youtube's users upload thousands of videos each minute and watch billions of videos each day, making the platform one of the largest institutions of cooperative cultural production humanity has ever devised. On the other hand, Youtube generates comparatively small advertising revenues relative to this vast media archive. Although Google does not release exact figures, an independent analyst estimated total Youtube revenues reached \$3.5 billion in 2013.<sup>16</sup> This is a tiny fraction of the \$64.2 billion in advertising expenditure for US television recorded in 2012.<sup>17</sup> This miniscule revenue base is why even the wealthiest Youtube creators of 2015 received compensation in the low tens of millions of dollars, as compared to the hundreds of millions of dollars received by the top tier of cinema directors, popular musicians, athletes and other celebrities.<sup>18</sup>

In Scott's case, the convergence of these three factors drove his income far below the US poverty level, threatening to halt the production of *Freeman's Mind* completely.<sup>19</sup> Due to this revenue crisis and the dispute with Machinima.com, Scott was able to produce only five episodes during the nineteen months between the release of episodes 39 and 45.<sup>20</sup> This is approximately one episode every three months, far lower than the series average of one episode every five weeks.

Scott's response to this crisis was to double down on the theme of transnational labor. While *Freeman's Mind* had always contained scathing references to workplace antagonisms and poor management, the tone of its satire sharpens considerably during episodes 40 through 44. Episode 40 refers openly to the phenomenon of digital sweatshops<sup>21</sup> and the devaluation of professional credentials by means of outsourcing,<sup>22</sup> while episode 41 refers to workplace safety hazards.<sup>23</sup> A passage in episode 42 employs an ingenious triple pun to express Scott's sense of frustration with the obstacles blocking independent digital media artists,<sup>24</sup> whereas the beginning of episode 43 describes the subjective experience of transnational immiseration -- the feeling of being hunted by the entire planet -- with remarkable clarity.<sup>25</sup>

At the precise moment *Freeman's Mind* was teetering on the edge of extinction, the series was rescued by the transnational audience in the most literal fashion imaginable. Scott acknowledges this rescue in a sequence near the end of episode 44:

*Freeman enters bunker.*

Freeman: “This is a step up from the death-slide trail. Is that...? Oh my God, it's a rocket launcher.”

*Freeman picks up launcher, aims its red tracking laser in several directions.*

Freeman: *in soft voice*: “The perfect gift for the man who has everything. Ohhh... you and I are gonna go places. My mind is spinning with new possibilities. You are the first good news I've had all day.”

*Freeman picks up rocket ammunition.*

Freeman: "Yes, I'll bring your friends." *Freeman attempts to open door. Door is locked.*

Freeman: "Locked!" *Sound of helicopter in distance.*

Freeman: *in mock medieval accent*: "Hark! Dost thou hear with thine ears what I hear with mine? Interloper! No quarter shall be shown hither, fiend. Anon -- show thineself, churl. Have at thee!" *Freeman fires rocket. Laser guidance system causes it to miss target.*

Freeman: "Hah! Curses. Fie upon me! But ho -- the laser on mine rocket launcher be not a mere target, but a guidance system. Where art thou?! Come hither that I may smite thee!"

*Helicopter circles back into view. Freeman uses laser pointer to guide rocket to helicopter, destroying it.*

Freeman: "Thou shalt not be missed."<sup>26</sup>

What makes this sequence so startling is Freeman's unexpectedly calm and self-confident tone after discovering the rocket launcher, combined with the ensuing mock-heroic dialogue which pastiches the fantasy role-playing videogame genre.<sup>27</sup> This was the first time Scott employed these particular modes of vocal characterization in the series, and they signify the beginning of Freeman's transformation from a paranoid survivor into an active agent of collective resistance.

The nature of this resistance would be revealed eight months later, when Scott made two important announcements to the fan community on May 4, 2013. Firstly, episode 44 was the last to be published under the auspices of Machinima.com's Youtube channel, which meant that Scott was now a fully independent media creator. Secondly, Scott had moved permanently to the Eastern European nation of Poland for personal as well as professional reasons.<sup>28</sup> Poland was a propitious choice for a number of reasons, ranging from the country's strong economic growth since 1993, its adoption of democratic institutions via its accession to the European Union in 2004, its low cost of living relative to the United States, and its thriving digital media culture.

Scott's simultaneous declaration of artistic independence and relocation to Poland unleashed an extraordinary wave of aesthetic innovation in *Freeman's Mind*. The first example of this occurs in episode 45, published on May 18, 2013, when Freeman wages an epic battle against a group of soldiers while singing "Modern Major General" from Gilbert and Sullivan's *Pirates of Penzance* (1879). After singing the first four verses of the original song, Freeman improvises three new verses, transforming one of the icons of Victorian mass culture into a satire of US imperial decline.<sup>29</sup> This wicked parody of a parody is followed by a reference to the transnational logistics worker,<sup>30</sup> and finally by this artful pastiche of a popular subgenre of the late 20th century Hollywood romance film:

Freeman: *while battling soldiers*: "Hey, what's up guys, you hanging out, that's cool, I'm not intruding or anything am I, I figure you guys are cool and all... I'm just going to kind of chill out here if that's cool, I figure it's like, my place is your place and the other way around and stuff so I'm just cashing in on that, hey I'm just going to borrow this gun, I'll give it back, I swear you can ask anybody, I'm good for it I just need it for a little bit. Like, you won't believe this but there's like this big misunderstanding and something going on with me, I know, right, and I have to set the record straight and stuff so you know how that is. Like I don't know what this guy's deal is but he's really pissed at me, like I was trying to start something with him. As if. I mean, everybody knows me and I would totally not do something like that so this is all bullshit. Like I've never tried to piss anyone off in my life so why should I start with him. Does

he think he's special or something, because he's not, I just don't go around doing something like --"  
*Tank round explodes. Moment of silence.*  
Freeman: *gloomily*: "Shit."<sup>31</sup>

This sequence is the gender-bending satire of the "valley girl", a.k.a. romantic dramas centered on a seemingly empty-headed but ultimately good-hearted upper middle class young woman, a trope memorialized by a 1983 Hollywood film starring Nicholas Cage.<sup>32</sup> Scott accurately captures the vocal intonations of the valley girl, namely the accent-free diction of the mass media English which bears no trace of the regional accents prevalent in most areas of the United States.<sup>33</sup>

What mediates between the late 19th century Victorian music-hall number and the late 20th century Hollywood romance, in short, is the class subjectivity of the 21st century transnational logistics worker. There is an even more radical version of this strategy in episode 48, which triangulates between the Edgar Allan Poe detective tale *Murder in the Rue Morgue* (1841) and the most progressive action-adventure films of the late 1970s and early 1990s<sup>34</sup> via the labor of the transnational airport staffer:

Freeman: *initially speaking to security guard, then to himself*: "On a lighter note, I never told you the second part of my plan. The cop car is just the beginning. The next part would take awhile because I would have to pay somebody to train a chimpanzee in hardcore karate and attack people on sight. I mean, he would have to be loyal to me, of course -- and the trainer -- but everyone else would get a beat-down. Then we could ride around at night and I could just let him loose on the street for awhile watching him beat the crap out of people. Nobody would be prepared for this. I could have a little whistle or something I could blow to get him to come back to the car."

*Freeman notices a military transport helicopter circling the landing field.*

Freeman: *yelling while firing at helicopter*: "Hello, this is ground control. Please approach my signal. Do you see my signal? Let me try another one." *Freeman fires rocket at helicopter, scores one hit.*

Freeman: *yelling while firing a second rocket*: "How about now? Do you see that one? Hello?" *Second rocket hits helicopter. Soldiers start to rappel out of helicopter onto landing zone, Freeman shoots them.*

Freeman: *yelling*: "No, no. Please stay inside the aircraft until after you've landed. Thank you."

*Alien soldiers demolish a nearby set of doors and attack the landing zone, Freeman turns to fight them.*

Freeman: *yelling*: "Hold on, we're having some technical difficulty. I'll be right with you."

Freeman: *yelling while shooting them*: "Excuse me, sirs? Sirs? You're not allowed back here. Thank you."

*Freeman defeats them, then takes ammunition from bodies of human soldiers.*

Freeman: *yelling*: "Okay, you're going to have to check these through customs."

*Helicopter circles around.*

Freeman: *yelling*: "This is ground control again. You're flying south. Follow my signal. If you decide you want to keep flying to another airfield, that's fine by me. Just keep going... somewhere."

*Freeman attempts to open hangar bay doors. They creak but stay closed.*

Freeman: *yelling*: "We're going to need maintenance down here. We've got a problem with the hangar doors. Okay, you're heading back east? Ah, you're coming around. Okay, let's line it up then." *Freeman fires rocket at helicopter.*

Freeman: *yelling*: "Your approach looks good, I'm just going to guide you in. Just follow my signal. Looking good!" *Freeman fires another rocket. Helicopter explodes in a shower of metal parts.*

Freeman: *yelling*: "Perfeect!"

Freeman: *normal voice*: “Welcome to New Mexico. Ground temperatures are 88 degrees with clear skies. Thank you for flying with us.” *Pause*.

Freeman: *normal voice*: “Those aircraft didn't have the best safety records anyway.”<sup>35</sup>

Scott rewrites Freeman's absurd vision of felonious animal training, a fantasy of aggression seemingly modeled on the media stereotype of the serial killer or terrorist, into the interactive experience of transnational class rage. This rage is partly rooted in one of the most notorious moments of US labor history, namely the firing of 11,000 striking air traffic controllers by the Reagan Administration in 1981. However, this class rage draws in equal measure from the experiences of the service and transportation workers who work in the international air travel and tourism industries of the late 20th and early 21st century.<sup>36</sup> Freeman pays back the plutocrats in their own service-sector coin, by remaining calm, polite, and committed to the highest level of customer service in the midst of a frenetic battle.

The theme of class rage is developed still further in episode 50, when Freeman cites the malevolent ghosts of Kubrick's *The Shining* (1980), one of the most skillful and subtle cinematic critiques of political revanchism in the post-1973 US.<sup>37</sup> This is followed by a sequence which satirizes the post-2001 US War on Terror,<sup>38</sup> and by Freeman's prediction of the open deployment of violence by transnational corporations against US workers on US territory in episode 51.<sup>39</sup>

What helped to transform these episodes of class rage into a sustained strategy of resistance was Scott's serendipitous discovery of a new long-term funding model. The crucial event here was the online fundraiser Scott announced on March 15, 2014, just after releasing episode 54. The original goal of the fundraiser was to purchase the computer equipment necessary to produce all further episodes of *Freeman's Mind* in high-definition video format. As an additional incentive, Scott bet fans that if he failed to complete *Freeman's Mind* by the end of 2014, he would return double the amount of their pledge money. In later interviews, Scott revealed that he did not expect to raise more than a couple thousand dollars from the entire campaign. Instead, the fan community donated a sum in excess of \$16,000, a fortune in middle-income Poland.<sup>40</sup>

This unexpected bounty and the subsequent stabilization of Scott's income via direct online fan donations did more than just guarantee the completion of *Freeman's Mind*. The resulting fan mobilization enabled Scott to test and refine a range of experimental aesthetic strategies between episodes 55 and 59. In episode 56, Freeman delivers a sophisticated critique of corporate-dominated science, research and development,<sup>41</sup> while pastiching one of the prominent tropes of the 1970s Hollywood paranoid thriller, namely the “China syndrome” by the film of the same name.<sup>42</sup> Episode 57 features a great deal of drug-related humor, something new to the series,<sup>43</sup> while episodes 58 and 59 remix the demo version of *Half Life* released by Valve as a stand-alone experience in 1999.<sup>44</sup>

What Scott gleaned from these five episodes was detailed fan feedback about how the series should conclude. For example, Scott discontinued the theme of Freeman's drug use after episode 58, due to negative feedback from fans with painful past experiences of drug addiction.<sup>45</sup> In like manner, fans were lukewarm towards monologues which were not interspersed with action sequences or other immersive game-play, but were appreciative of sequences wherein Freeman expressed doubt or vulnerability.

Equipped with these insights, Scott produced the final nine episodes of the series

(episodes 60-68) in just three months between September 26 and December 31, 2014, averaging one episode every eight days. These nine episodes synthesize the series' critique of plutocracy, the power of digital networks, the subjective experience of transnational immiseration, and the class consciousness of transnational workers into a new kind of mass mobilization. The first glimpse of this mobilization occurs in episode 60, when Scott rewrites *Half Life's* theme of interstellar teleportation into a metaphor of digital copying:

Freeman: *puzzled*: "This is the same thing, right? I already --" *Freeman touches orange plasma ball, teleports to nearby rotating machinery.*

Freeman: *yelling*: "Ohhh shit -- it's a teleporter! We invented f---king teleporters! The new age of man begins with me! And teleporters!"

Freeman: *normal voice*: "Oh my god, I am dizzy from this. Or maybe that's because I'm spinning. I've got to try it again. Does this work? It's orange." *Freeman touches orange plasma ball, teleports to supply room.*

Freeman: "Oh-ho-ho-ho. So this is what it's like to be a ninja. Amazing! Wonder what the power source is. Or why they hover. Yeah, I have a lot of questions." *Freeman collects supplies.*

Freeman: "Nice! Like, is this *Star Trek*-style where it's transmitting my matter as energy and reconstructing it on the other end? Or is it just creating an exact duplicate of me and I'm really just committing suicide over and over? Hmm." *Freeman touches orange plasma ball, teleports back to spinning room.*

Freeman: "Whoo... no, I don't feel dead. But am I me, or am I Gordon number six? I might not know the difference. Well, I should continue either way, even if that means making sacrifices for the Greater Gordon."<sup>46</sup>

This is a brilliant exposition of two of the most subversive and least understood aspects of digital copying. The first is the fact that all aspects of digital technology evolve at exponential rather than linear rates of change, i.e. the cost of replicating, storing and transmitting a given unit of data falls constantly over time in a curve asymptotic to zero, while the total volume of data increases exponentially to infinity.

The second is the concomitant expansion of the transnational workforce which builds, operates and maintains the hardware and software platforms through which all digital copying takes place. Scott gives us a broad hint by mentioning the matter-copying machines which have abolished economic scarcity in the *Star Trek* universe, as well as in the seemingly offhand quip about possibly being the sixth Gordon (Freeman's comment is accurate, a characteristic sign of the precision and rigor of Scott's scriptwriting).<sup>47</sup>

Yet instead of simply celebrating the advent of planetary digital copying, Freeman immediately questions how it works, ponders who benefits from its use, and makes a conscious decision to explore its social consequences. This is the moment transnational class consciousness turns into transnational collective action. Freeman is no longer concerned with restoring the lost privileges of high-skilled US workers, but instead begins to play the role of the 21st century citizen journalist: the quest to save the Freeman gives way to the mobilization on behalf of the Greater Gordon.

The effects of this mobilization are immediate and electrifying. Freeman openly mocks corporate digital monopolies,<sup>48</sup> savagely critiques the corporate monopolies which choke off

genuine scientific and technological innovation,<sup>49</sup> and celebrates the demographic preponderance of the transnational proletariat.<sup>50</sup> Most spectacularly of all, episode 62 links this mobilization to a momentous transformation of geopolitical space. This latter is revealed when Freeman is teleported into the realm of Zen, an intergalactic buffer zone connecting the Earth to various alien worlds. Freeman's reaction is priceless:

*Freeman pauses on rotating platform floating high above Zen.*

Freeman: *in a tone of rising hysteria*: “Okay, don't freak out... Don't freak out...”

Freeman: *yelling*: “I said don't freak out, dammit! Okay! Nah!” *Freeman jumps onto next platform.*

Freeman: *yelling*: “Nuh! I'm totally not freaking out right now! Because this is me not freaking out! What do I have to freak out over, anyway? Nothing! Because I'm not! I'm just navigating a floating obstacle course that looks like a giant... plate-balancing trick designed by H.R. Giger! F--- you, reality, you're full of shit!”

Freeman: *voice cracking*: “...and bone pillar things... and breathable atmosphere... Nyah!” *Freeman jumps onto next platform.*

Freeman: “...Ahhh! Reality's broke.”<sup>51</sup>

On the personal level, this is a compelling depiction of the experience of losing the last vestiges of one's imperial political, cultural and economic privileges, and it is no accident that this particular episode features Scott's biographical experience of the crisis of affordable housing in the US, one of the hallmarks of the post-1973 immiseration of the US middle class.<sup>52</sup> On a more general level, this is the prescient anticipation of the shock experienced by billions of citizens after the US election of fall of 2016, when a kleptocratic faction of the US plutocracy seized national political power from its elite financial wing through clearly undemocratic means.<sup>53</sup>

Freeman's arrival in Zen thus captures the vertiginous moment when transnational audiences had to acknowledge the end of the age of US hegemony and the arrival of the multipolar world. Although the US retains vast wealth and influence in this new era, it has almost no control over continent-sized polities such as the European Union, China and India, and the rapid spread of literacy, industrialization, and digital technology has made it increasingly difficult for even the most powerful of nation-states to impose their will unilaterally on their less powerful neighbors. To be sure, the decrease in the power of the US plutocracy relative to that of its geopolitical competitors does not signify the end of plutocratic rule altogether, but merely underlines the urgent need to create new forms of planetary economic, political and cultural solidarity against a henceforth transnational plutocracy.

The final six episodes of *Freeman's Mind* make an indispensable contribution to this solidarity, by rewriting the final two boss battles of *Half Life* into episodes of anti-neoliberal collective struggle. Freeman's two main antagonists are a giant alien spider which wields biological weapons, and an alien being called the Nihilanth which wields energy-beams and teleportation. Here is the opening of the spider battle:

*Freeman is in a standoff with a giant alien spider.*

Freeman: "I have a present for you. As the Ambassador of Earth, I wish to give you this gift on behalf of my people." *He tosses a satchel charge close to the giant spider without exploding it. The spider does not react.*

Freeman: "Actually, I have a few, you can have all of them. It's what my planet would've wanted, I'm sure of it. And more importantly, it's what I want. I guess I'm not really the best ambassador, come to think of it. But hey, I'm all you get. Okay now just keep standing there, this is a very important part of the ceremony. We have to get the photos and attend the luncheon... alright, say cheese!" *Freeman detonates explosives and fires rocket at spider, spider attacks him.*

Freeman: *sardonically*: "Diplomacy breaks out."<sup>54</sup>

Scott rewrites the late 20th century espionage thriller, the late 20th century Japanese monster film, and the early 21st century science fiction film into the epic saga of a new kind of people-to-people diplomacy. This diplomacy is not rooted in national governance structures or political movements, but in the alliance between digital citizen journalists and the transnational social movements of the post-2008 period against one of the key instruments of plutocratic rule. The nature of this instrument is revealed by the fact the giant spider attacks Freeman with venomous spittle, a.k.a. white ink reminiscent of old-style correction fluid, and with an endless stream of tiny spiders, or miniature biological copies of itself. The giant spider is an unmistakable avatar of the transnational media platforms of the plutocracy, ranging from Murdoch's news empire to the plutocrat-owned mass media of Brazil and Russia.

Freeman's pitched battle against the plutocratic mass media signals a final wave of aesthetic innovation in *Freeman's Mind*. This ranges from Freeman's meditations on the ambivalent legacy of the Cold War, cf. the fact that the information technologies developed by the US military-industrial complex have become some of the most important tools of democratic resistance against the plutocracy,<sup>55</sup> to the series' first depiction of a nascent intergalactic labor solidarity between Freeman and worker aliens.<sup>56</sup> When Freeman explores the shop floor of a stylized transnational factory, he encounters both intergalactic solidarity as well as xenophobic hostility from the worker aliens, just like any human workplace.<sup>57</sup> Eventually, he discovers that the aliens are exploited by an imperialist plutocracy just as monstrous as its human equivalent.<sup>58</sup>

This wave of innovation culminates in episode 67, when Freeman discovers a giant alien teleporter floating in mid-space. This teleporter is a media transmission device, and replays various lines of dialogue from past events in the game, a tongue-in-cheek reference to the digital music revolution of the late 1990s.<sup>59</sup> Scott takes this opportunity to incorporate one of the most significant innovations of the Occupy protest movement into *Freeman's Mind*, namely the call-and-response technique of the "mike check". This is a mode of public speaking wherein a member of the crowd is invited to tell their own story in the form of short sentences, each of which is subsequently repeated by the audience at large. The effect is to transform every audience member into a potential speaker, and to transform every individual speech into a democratic collective utterance. Freeman's version of the "mike check" triggers the final battle:

Freeman: *examining alien teleporter*: "Huh. This is just random chatter. This is an intergalactic CB, but I think it's just getting old signals. Is there a switch in the back? Maybe I can set it to broadcast. No... well, I have plenty of time to learn how to use this, don't I? Okay, let's try this center orb here. Maybe it does something. Check-check, mike check, hello --" *Freeman teleports to the Nihilanth's conical lair. The*

*Nihilanth floats high above Freeman.*

Nihilanth: *in a voice like distant thunder*: “Freeemaaaannn...”

Freeman: *yelling*: “Aaaugh --”<sup>60</sup>

It is no accident that the Nihilanth has the appearance of a gigantic deformed human baby, and draws life-energy from giant glowing crystals located in its lair. This is the grotesque figure of the late 20th century and early 21st century authoritarian kleptocrat, a.k.a. the lumpen-billionaires embodied in the Presidential monarchies and energy-rent oligarchies of the Middle East, Eurasia and Central Asia, as well as in the authoritarian kleptocracy which took power in the US in 2016. During a pause in the battle against the Nihilanth, Freeman finally grasps the collective stakes of his battle, namely the fact that he is merely one of thousands of others caught up in the struggle against interstellar plutocrats:

Freeman: *while jumping to top of cavern*: “Well, hey, now I know all the big secrets. This is why security was so tight at Black Mesa. We were killing people by the hundreds. The best part is there would have been no evidence at all. None! Now I'm not even sure if these were Science Team members. I think they might've just been spare security guards. 'Hey, you want to make an extra fifty bucks? Just put this suit on and walk into that chamber.' That's probably why we had advertisements for security guards all over the damn place. They might not have even been guards, not all of them.”

*Freeman notices supplies left by a previous researcher, takes ammunition.*

Freeman: “Yeah, I'll take that. We were in f---ing New Mexico, they could've just thrown migrant workers in here. Because hundreds of scientists disappearing? There's no way they could've gotten away with that! That would send shockwaves. What was it that guy said to me? I know more than any one man should? He must've been dead serious when he said that.”<sup>61</sup>

Against interstellar plutocrats, only the solidarity of the digital workers of the universe will do. Scott subtly reconfirms this insight by reappropriating the horror fiction of H.P. Lovecraft, one of the most influential but ideologically reactionary writers of the 1930s, in a progressive turn.<sup>62</sup> This leads to this extraordinary sequence which directly channels the energies of the mass protest movements of 2011-2014, the first great episode of transnational resistance against the world plutocracy:

*Freeman battles Nihilanth in its lair.*

Freeman: *yelling while firing*: “Yeah! Feel the sting of Defense Department funding! I don't know what this gun is, but it's very, very expensive!”

*The Nihilanth is defeated, its head splitting open to reveal a giant teleportation portal at its core. Green portals begin to fly in all directions from its body.*

Freeman: *yelling*: “Oh my god, his head is a portal! He keeps a universe in his head! I want it! Yes! It's breaking apart! That means I get to be the new God! That's how it works, right? I've got to get up there!”<sup>63</sup>

The ambivalent nature of Freeman's triumph mirrors the fundamental ambivalence of the

2011-2014 protest movements. These latter could chase individual Presidential monarchs and energy-rent autocrats from office and enact limited electoral and social reforms, but they could not challenge the plutocracy's control of the world economy as a whole. These movements were, in short, only the beginning of a much bigger and longer-term struggle against the plutocracy, not the end-point of such.

This is a lesson delivered with magnificent aplomb by the conclusion of episode 68. To appreciate just how extraordinary this finale is, it should be noted that in the original version of *Half Life*, the G-man delivers a monologue to Freeman after the latter's defeat of the Nihilanth, offering Freeman the choice between a life of cooptation or death in exile. Scott rewrites the G-man's monologue into a tongue-in-cheek dialogue, replete with satirical references to the US espionage thriller and the British science fiction franchise, *Dr. Who*.<sup>64</sup> Scott concludes this dialogue by showing Freeman choosing to cooperate with the G-man. Just as in the original *Half Life*, this choice results in the "good ending" of the game, wherein Freeman survives and the player hears the G-man say, "Wisely done, Mr. Freeman! I will see you up ahead."

After this dialogue, however, Scott pulls off one of the greatest aesthetic masterstrokes of the early 21st century, by transforming *Half Life's* good ending into an allegory of transnational fan media. At first, the episode displays the standard credits for the episode. However, the screen suddenly switches to two simultaneous streams of media content. On the left side of the screen, a series of uproarious Youtube comments on the series delivered by the fan community scrolls by slowly on the screen, allowing viewers to read each comment. This fan commentary is especially entertaining due to the satirical user names employed by commentators, some of which are comic gems in their own right.

On the right side of the screen, a video stream showcases footage of the various bugs in Valve's open source engine which Scott had to battle or work around (Scott added explanatory subtitles describe the effects of each bug). These two combined streams, curated to showcase the most amusing comments and the most bizarre bugs, run for approximately four minutes.<sup>65</sup>

Conversely, the last sixty seconds of *Freeman's Mind* rewrite *Half Life's* "bad ending" by means of a fan-created game modification called "G-invasion".<sup>66</sup> In Scott's version of the bad ending, Freeman is devoured by a variety of monsters which are all grotesque variants of the G-man -- the nightmare, in short, of regressing to an unending and endless realm of plutocratic domination.<sup>67</sup> But whereas the final player choice in *Half Life* was limited in scope to the fate of the individual player, the collective choice at the end of *Freeman's Mind* between transnational fan media and plutocratic monopoly is still playing out to this day on every digital platform, every online community and every social media site.

The true significance of *Freeman's Mind* is that it is the first work of transnational fan media to break the shackles of plutocratic rule and transform the products of digital labor back into the solidarity of digital play. In doing so, it raised fan media from a marginal phenomenon to a motive force of world history. Indeed, it is surely no accident that just four and a half months after the conclusion of Scott's series, CD Projekt's *Witcher 3* delivered the first blockbuster open world videogame designed to function as transnational fan media vis-a-vis its literary source material.

While we are still in the early stages of this transformation and can only dimly imagine its long-term consequences, what is undeniable is that the social consequences of transnational fan media will be as revolutionary as the popularization of print, telegraph, cinema and television

were in the past. While *Freeman's Mind* is arguably one of the best non-commercial web serials ever made and surely the single greatest machinima ever made, its single greatest achievement is to have opened a portal between contemporary videogame culture and the democratic media revolution of the 21st century.

1. The post-2008 expansion of Google, Baidu, Tencent, Facebook and a handful of other firms into transnational behemoths occurred due to their state-guaranteed capture of oligopoly advertising rents. This has structural similarities to the manner in which US and European banking oligopolies which extracted vast profits from the 1995-2006 US dotcom, real estate and securitization bubbles, and then had their losses conveniently socialized by the US Federal Reserve, the European Central Bank, and various other national central banks. To be sure, transnational audiences have far more power to evade or resist media oligopolies in the post-2011 period than banking oligopolies.

2. This sequence in *Half Life* was inspired by an iconic scene in the original *Star Wars* (1977), wherein the protagonists escape from being crushed to death inside a trash compactor on board the Death Star.

3. *Freeman's Mind*, episode 35, 0:20-1:32. June 10, 2011.

4. Between 2001 and 2006, successful unionization drives of graduate teaching workers occurred at the University of Massachusetts Boston, Oregon State University, Michigan State University, Temple University, the University of Washington, the University of Rhode Island, the University of Illinois at Chicago, the University of Illinois at Springfield, Southern Illinois University at Carbondale, the California State University system, and Western Michigan University.

[https://en.wikipedia.org/wiki/Graduate\\_student\\_employee\\_unionization](https://en.wikipedia.org/wiki/Graduate_student_employee_unionization).

5. *Freeman's Mind*, episode 35, 2:15-2:18. June 10, 2011.

6. *Freeman jumps down onto the descending platform.*

Freeman: "Well, I'm pretty sure this isn't the executive elevator. That would have carpeting." *Freeman shines light on the pipe entrance.*

Freeman: "Huh. This is kind of a crappy entrance." *Freeman enters the pipe and continues:* "Oh, well, I didn't see any rose petals waiting for me on the outside. Still, with our budget, this is kind of bullshit. I think there's some class warfare going on at this company."

*Freeman's Mind*, episode 35, 6:15-6:35. June 10, 2011.

7. *Freeman's Mind*, episode 36, 4:47-6:41. June 17, 2011.

8. *Freeman dodges organic debris from garbage chute.*

Freeman: "Ahhh... yuck... What is... That... that is nasty. I do not have to accept this."

*Freeman tries to open door, door is locked.*

Freeman: "Oh, you bastards. Fine... got to avoid the blood shower... This isn't the sort of thing I should have to worry about." *Organic debris continues to pour from chute.*

Freeman: "Jesus! Where's this coming from? Maybe we don't even ship in meat. We just slaughter the cows right here at the facility. And then just dump them in the water like we know what we're doing. Oh my god! This better not get in my hair. If I wanted to smell like McDonald's, I would've stayed in the trash compactor."

*Freeman's Mind*, episode 37, 0:55-1:25. June 24, 2011.

9. *Freeman is fighting off a number of alien animals called bullsquids.*

Freeman: *yelling:* "This is not a democracy. I have a gun, so I'm in charge. Many governments around the world function on this principle. And some of them last for months." *Freeman shoots the final bullsquid.*

Freeman: *yelling*: “This is not complicated. You're making it that way.”  
*Freeman's Mind*, episode 37, 6:52-7:07. June 24, 2011.

10. *Freeman spots a metal door in a nondescript corridor.*

Freeman: “Oh, hey, a door. This means that the builders of this temple were civilized.” *Freeman tries to open door, but door is locked.*

Freeman: “No... no, my mistake. They're savages. But who am I to question their ways. Maybe they play hide-and-go-seek here when it's a slow shift. Maybe... they're doing it right now.” *Freeman notices headcrab, takes aim.*

Freeman: “And you... are it.” *Freeman dispatches headcrab with a single shot.*

Freeman: “I win. Okay, so who's at more fault here. Me, for entering this place like I'm trying to break into the Pentagon, or... everyone else, for not giving me an exit to begin with.”

*Freeman's Mind*, episode 38, 4:24-4:57. August 19, 2011.

11. *Freeman climbs ladder into a room full of hopping aliens.*

Freeman: “Okay, I'm your dance instructor --” *Aliens attack, Freeman defends himself with crowbar.*

Freeman: *yelling*: “No, you're starting too early! Stop that! I said stop that! 1-2-3 left! 1-2-3- left! No, no, your rhythm's all wrong! Rrrgh!” *Freeman defeats the last alien.*

Freeman: *normal voice*: “I give up, I can't teach this class. Some people just don't want to learn, you know? Oh, hey, there's a box of ammo. Hell, these will fit the revolver. I guess being a teacher does have its perks.”

*Freeman's Mind*, episode 39, 3:23-3:47. October 21, 2011.

12. *Freeman discovers an alien soldier sealed in a glassed-in specimen chamber.*

Freeman: *pressing controls*: “Button's locked... computer's locked... well, I'm the locksmith!” *Freeman smashes glass and presses button, unwittingly releasing alien soldier. Alarm sounds.*

Freeman: “Alarms? You'd think I would --” *Alien soldier breaks out of glass, attacks.*

Freeman: *yelling while firing*: “Oh god! See, this is why people need to do their own work! When I have to do their jobs for them, this is what happens!” *Freeman fires once, retreats down corridor.*

Freeman: “Did I kill it?” *Alien reappears.*

Freeman: *firing while retreating down corridor*: “Waaah! Okay, the bullet test is inconclusive, so... let's see how it responds to a different set of stimuli.” *Freeman tosses satchel charge into corridor, waits for alien soldier to approach, then detonates charge.*

Freeman: “Hypothesis confirmed! Christ. I hate biolabs.”

*Freeman's Mind*, episode 39, 5:35-6:02. October 21, 2011.

13. One of the early signs pointing to this reflexive radicalization was an episode of Scott's machinima series *Civil Protection* titled “The Tunnel”, published on March 24, 2011. This episode is essentially the horror film rewriting of the original premise of *Civil Protection*, a series which starred two human police officers who are collaborators with an interstellar alien colonial occupation of earth. Midway through the episode, the narrative perspective shifts away from the two collaborators and towards a homeless inhabitant of City-17 who manages to find a secret living space in the city, a space which turns out to contain a dire secret.

14. World Bank. <https://data.worldbank.org/indicator//NY.GDP.MKTP.KD>.

15. Hector Postigo (2014). “The socio-technical architecture of digital labor: Converting play into

YouTube money.” *New Media & Society* (4).

16. <https://venturebeat.com/2014/07/07/youtubes-revenue-hit-3-5b-in-2013-report-says/>.

17. <https://www.statista.com/statistics/183852/total-us-television-advertising-revenue-since-2003/>.

18. <https://socialblade.com/blog/youtube-rich-list-highest-earning-creators-2016/>.

19. Scott described the fall in his earnings in a 2013 blog post as follows: “My views have been cut in half multiple times, despite adding more videos this whole time. While you could maybe blame this on the age of the show or not having more frequent updates, that would only account for a gradual decline looking like a wheelchair ramp, not the dive bomber maneuver that is this chart. So what’s causing this? The short answer is Youtube. Their algorithm 'tweak' in 2011 caused me to lose half my views. Not just in popular recent videos, in EVERYTHING [sic] from years back. I’ve read about many people losing up to 90% of their audience during this time.” Ross Scott (blog). <http://www.accursedfarms.com/escape-from-machinima/>. May 4, 2013.

20. Episode 39 was published on October 21, 2011, and episode 45 was published on May 18, 2013.

21. Freeman: “Okay, new job: find something to climb out of here. I'm doing a lot of jobs. Every employer I've had pulls this crap. They hire me to do one thing, and what they really mean is one thing plus fifty other things, because they don't have enough people. And guess what – I'm the new hire, so I do it. Forever.” *Freeman tries to open door, door remains locked.*

Freeman: “Riiight. Well, at least Black Mesa has a legitimate excuse, that most of their workforce is dead. Got to cover for the dead guys.”

*Freeman's Mind*, episode 40, 0:25-0:50. February 17, 2012.

22. Freeman: “I almost feel like my degree is being wasted here. I mean, what I'm doing now really has nothing to do with quantum mechanics or general relativity. There's just no crossover.”

*Freeman is attacked by patrolling soldiers, shoots back.*

Freeman: *yelling*: “Don't come near me! Don't come near me! No! No! I have a personal space zone goddammit! Personal space!”

*Freeman's Mind*, episode 40, 2:52-3:12. February 17, 2012.

23. Freeman addresses scientist, indicating he should follow Freeman past rotating machinery.

Freeman: “Okay, dopey, you come with me.”

Scientist 2: “All right.”

Freeman: *while dodging machinery*: “Okay, now this slicer is kind of dangerous. You ought to know, you designed it. Just take your time, it's only a cocentric circle pattern. All you have to --” *Crunching sound. The scientist had attempted to follow Freeman but ran into the machinery, resulting in instant death.*

*Freeman's Mind*, episode 41, 3:27-3:38. May 4, 2012.

24. The triple pun is on the epithet “damn”, the noun “dam”, and the verb “dam” (to dam something up, i.e. Freeman's progress through Black Mesa symbolizes Scott's career as a machinima producer):

*Freeman views a hydroelectric dam from atop a concrete tower located in the dam's reservoir.*

Freeman: "So, let's assess the situation. I'm in a damn canyon. I'm stuck on this damn tower. What's in this damn room, anyway? It's a damn button." *Freeman presses button.*

Freeman: "Sounds like that did some damn thing. So how am I going to get out of here? The soldiers blew up the damn bridge and that damn shark's still in the damn water." *Freeman notices giant alien fish.*

Freeman: "Ah ha..." *Freeman shoots alien fish.*

Freeman: "Maybe he's faking it." *Freeman launches grenade at body of alien.*

Freeman: "No, I think I got him. Well, that's one less damn problem to worry about. But how am I going to get up these damn walls? I don't see a damn ladder anywhere. There's no damn steps. This is a damn mess. Why did those damn soldiers blow that up, anyway? I bet they're trying to cut the damn power. That means all those scientists are going to get stuck underground in the dark. Well, that's their damn problem. Okay, my options look pretty damn limited this way."

*Freeman's Mind*, episode 42, 1:52-2:50. June 15, 2012.

25. *Freeman hears sound of helicopter circling overhead.*

Freeman: "Another helicopter? I get the feeling something doesn't want me alive. Besides the obvious." *Freeman notices aliens in distance.*

Freeman: "Yeah, okay. This is the wrong way." *Freeman turns around to head in a different direction.*

Freeman: "I mean, sharks, mortar shells, attack helicopters, drowning... some force wants me dead. Maybe that's why all of this is happening." *Freeman climbs on box to reach ladder, begins to climb ladder.*

Freeman: *climbing ladder*: "I was supposed to die yesterday in the test chamber. But I didn't because I'm hardcore. So now reality is slowly unraveling. That makes me the most important person in the universe. Still don't like getting shot at, though."

*Freeman's Mind*, episode 43, 0:19-0:51. July 13, 2012.

26. *Freeman's Mind*, episode 44, 8:18-9:23. September 9, 2012.

27. Three years later, Scott revealed to fans one of his long-term goals as an artist was to create a machinima movie best described as a role-playing fantasy adventure comedy. In hindsight, this sequence was the first test-run of this project. Ross Scott, "Accursed Farms 2015 Announcements", 2:54-3:01. January 30, 2015. <https://www.youtube.com/watch?v=BMSCAlv4ZsU&feature=youtu.be&t=174>.

28. Scott's then-girlfriend and current wife is a native of Poland. Scott announced his impending move to Poland to fans in September 2012. <http://www.accursedfarms.com/forums/viewtopic.php?f=19&t=3488>.

29. Scott peppers these additional three verses with one of the most subversive tropes of American culture, namely the call-and-response form typical of African American poetry, popular music and hip hop:

Freeman: *singing while battling soldiers*:

"I can fire at a target and hit it at least half the time  
or graph out an electron path while using only numbers prime  
I calculate the fall rate of a bullet shot a thousand yards  
and perforate the thick heads of a hundred military guards.

I can make a simulation of an atom bomb and build one too  
or flank a dozen men and ambush ten of them out of the blue  
from SMGs to RPGs I carry quite an arsenal  
and skip around a warzone like a subatomic particle.”

Freeman: *yelling*: “Still no chorus!”

Freeman: *normal voice*: “Okay, come on, sing and I won't kill you. Those of you that are left, I mean.” Freeman discovers Abrams tank, which fires a round at him.

Freeman: “Ah. Okay, there we go. Ahem.”

Freeman: *resumes singing while battling soldiers*:

“Every soldier out here wants to kill me for my curiosity

I wage war on the whole damn world because of my tenacity

in matters combat tactical and physics theoretical

I am the very model of a modern major general.”

Freeman: *normal voice*: “Alright, no one else is even trying to sing along. I quit.”

*Freeman's Mind*, episode 45, 2:38-3:22. May 18, 2013.

30. This satire is relayed by the mention of the M-1 Abrams tank:

Freeman: “Okay, delivery for Mr. Abrams.” *Freeman launches rocket-propelled grenade at tank, damaging it.*

Freeman: “Oh come on, I know someone's home.” *Freeman launches another rocket-propelled grenade, destroying it.*

Freeman: “No, I don't need a signature. You have a nice day.”

*Freeman's Mind*, episode 45, 3:26-3:35. May 18, 2013.

31. *Freeman's Mind*, episode 45, 4:17-4:56. May 18, 2013.

32. Martha Coolidge, director. *Valley Girl*. MGM, 1983. The original valley in question was the San Fernando Valley, one of the wealthier regions of Los Angeles. By the 1990s, the meaning of the slang term broadened to include upper middle class white teenagers from all over California and eventually the West Coast. Later directors rewrote the valley girl trope into more complex and ambivalent forms, most famously, as the heroine of Joss Whedon's television series *Buffy the Vampire Slayer* (1997-2003).

33. The only exceptions to this general rule are the West Coast states of Oregon and Washington, where the popular parlance is almost identical to that of mass media English.

34. The most prominent of these include Walter Hill's *The Warriors* (1979), Australian director George Miller's *The Road Warrior* (1981), John Carpenter's *They Live* (1988), and Hong Kong director John Woo's *The Killer* (1989) and *Hard-boiled* (1992).

35. *Freeman's Mind*, episode 48, 7:45-9:41. August 1, 2013.

36. While the number of world tourist arrivals increased from 529 million in 1995 to 1.1 billion by 2013, the privatization of previously state-owned airlines drastically reduced wages for airline staff. *UNWTO Annual Report 2013*. Madrid: World Tourism Organization, 2013 (10).

37. To be more specific, Kubrick's film shows how imperial white masculinity revanchism deploys

open forms of violence against women, children and non-white US ethnic groups in order to justify legitimate the rule of the plutocracy. Freeman intuitively grasps the underlying message of the film:

Freeman: “No, I think a ghost just let me out of there like Jack Torrance in 'The Shining'. Where am I going? So a ghost let me out. Does that mean I have to kill people now, or... wait.” *Freeman notices metal pipe with a valve hatch.*

Freeman: “Oh, there's another pipe. Yeah, why not? I won't get stuck. The ghosts have my back now. Wish they'd showed up sooner.” *Freeman jumps onto pipe to open valve hatch.*

Freeman: *opening hatch and continuing through giant pipe*: “Yeah, look at this hatch. There is no way something like this opens by accident.” *Freeman opens valve hatch and continues through giant pipe.*

Freeman: “So it's confirmed: I've been chosen by ghosts. Well, in 'The Shining', they let him out so he could kill his family, but that doesn't really apply to me. Maybe I've been looking at this the wrong way. I'm doing the world a favor by killing these people because I'm stopping their horrible timelines from continuing. I don't know. I mean, the ghosts haven't been especially clear with me what their message is. So if I get confused and kill a bunch of people, am I really to blame?”

*Freeman's Mind*, episode 50, 1:24-2:16. November 12, 2013.

38. Freeman: “You know, this [targeting] map is great, but it has one severe flaw -- and it's too small. I need one of the whole world.”

*Freeman's Mind*, episode 50, 7:35-7:43. November 12, 2013.

39. Freeman: “Although I have to say, this is just a taste of what the future holds. Like right now, if you walk in the parking lot of Walmart, there are dozens of surveillance cameras watching you. I think in maybe fifty years, there'll also be roof-mounted turret guns in order to gun down shoplifters.”

*Freeman's Mind*, episode 51, 1:15-1:32. November 27, 2013.

40. *Accursed Farms* (website), March 15, 2014. <http://www.accursedfarms.com/forums/viewtopic.php?f=19&t=3488>.

41. Freeman: “Let's look at the evidence. We have a staff member getting snippy with me about a reactor. We have that intercom talking about biological contaminants. We have those red pump warning lights. And we have the building literally falling apart. I think we have a nuclear reactor down here, an alien teleported inside it, now it's broken, and is going to melt down unless I flood it with coolant. I mean, somebody tell me I'm wrong, that a team of top researchers are not so tragically obtuse that we pass off a f---ing China syndrome as just 'one of those things'! The scientist trying to give me orders was slightly annoyed. He wasn't somber or panicked at all. Yeah, a meltdown is really annoying. I get it! I think I'm the only person here who understands how serious this is. I hope I'm wrong, but this is all too plausible. Even though we have a dam, we use as much power as a city. I can believe we have a nuclear reactor here also. Plus, these are my colleagues who thought sealing off the entrance would contain random teleportations. They drew straws to decide who would let me in. Now that I am in, I'm sure the prevailing theory being discussed behind my back is that all these aliens just showed up during the two minutes they left the door open and I walked in. This is my fault. Of course. I know what's happening here. I've seen this a hundred times. This reeks of groupthink. You have one normally brilliant person make a stupid decision and everyone else just falls in line, doesn't question anything. These people aren't scientists, they're cultists with advanced degrees.”

*Freeman's Mind*, episode 56, 4:02-5:46. April 25, 2014.

42. This is the notion of an unstoppable meltdown inside a nuclear reactor which would presumably cause radioactive materials to sink into the Earth's crust, like an out-of-control machine which is digging to China. James Bridges, director. *The China Syndrome*. Columbia, 1979.

43. The original *Half Life* allowed players to replenish their health with somewhat unrealistic health packs, consisting of morphine and first aid. Due to Scott's narrative strategy of narrative realism, Freeman had avoided using these packs until episode 57.

44. The playable demo is titled "Uplink" and is available at the following locations:

<https://www.fileplanet.com/10360/download/Half-Life:-UpLink-Demo>.

<http://www.moddb.com/games/half-life/downloads/half-life-uplink>. Viewers are advised that due to technical issues, Scott recorded episodes 58 and 59 with a much smaller field of vision (FOV) than all other episodes of the series. This narrow FOV can induce motion sickness in a significant subset of the viewing audience. All other episodes of the series feature a normal FOV, greatly reducing the risk of motion sickness.

45. In a note to fans, Scott explained: "The other big change made is based on the feedback from the last episode, I decided to drop Freeman's morphine tripping as many people were finding it annoying. While I try my best, I see no reason to adhere to consistency if it hurts the overall impact of the show, so this episode is much more the standard Freeman you're probably used to." Accursed Farms.

<http://www.accursedfarms.com/freemans-mind-episode-59/>. September 19, 2014.

46. *Freeman's Mind*, episode 60, 1:53-3:00. September 26, 2014.

47. Freeman was teleported once at the end of episode 57, once at the end of episode 59, and then three additional times prior to this comment in episode 60. It is possible that the reference to being number six is a lateral reference to No. 6, the hero of Patrick McGoochan's classic science fiction television series *The Prisoner* (1967), one of the touchstone works of the late 20th century.

48. At one point Freeman nearly falls to his death due to the wholly irrational placement of the teleporter spheres, which rotate at odd angles for no discernible reason. Freeman survives, but has this reaction:

Freeman: *with rising fury*: "Why would they put the exit point there? Especially when there are rotating platforms? Why are there rotating platforms? It's not like they're needed for the teleporter balls. They're all over the place! Yeah, what the f---!? Look at this place! All that's missing are the bobbing horse rides and calliope music. There's no goddamn reason for this! We've invented teleporters! That's 'F--- you, pay me' research! We don't need to pad our costs with high-tech carousels!"

*Pause.*

Freeman: *sardonic normal voice*: "Oh, I get it. It's to double the experiments so if the teleportation doesn't make you vomit, then the platforms will."

*Freeman's Mind*, episode 60, 3:13-3:47. September 26, 2014.

49. The original *Half Life* contained a number of satirical references to Microsoft, the most famous being the infamous "Blue Screen of Death" on Black Mesa's computers (this blue screen would be triggered by the crash of Microsoft's Windows operating system). Scott's version of this moment:

Freeman: *yelling while navigating teleporters*: “So what happened? Did they make this off our research? Or were we duplicating work for no reason at all? I thought we were all the same company! Why are divisions backstabbing? Are we Microsoft?!”  
*Freeman's Mind*, episode 60, 6:08-6:20. September 26, 2014.

50. This is the subtext of cloning or the mass-produced biological copy in episode 61. The demographic preponderance of the proletariat has always terrified oligarchies and plutocrats, who have responded with everything from the toxic ideology of Malthusianism in the early 19th century to the racial ideology of eugenics in the late 19th century, and from Fascist ideologies of racial-imperial conquest in the early 20th century to the ideologies of financialization and revanchism in the late 20th century. In contrast, Freeman celebrates the extended reproducibility of the subject:

Freeman: “Man, it's too bad these teleporters aren't the duplicating kind, then we can just tell it to not destroy me on this end and I can create copies of myself. Now, the conventional wisdom is if you see a clone of yourself you should try to kill it, but I think that's the view of a small mind.”

Scientist: “Hello, Freeman!”

Freeman: *jumping*: “Dah!”

Scientist: “I'm up here! Practice your long jump if you must, but hurry up!”

Freeman: “All right, all right. I'm coming, just hold on. Hah!” *Freeman jumps to scientist*.

Freeman: “You know, a ladder wouldn't kill you, this catwalk has poor support as it is. There's too much stress on the beam. Actually, hold on. Is there an exit here? Like is there a snack machine in the back or something? Because I could use that.” Freeman tries to open door, door is locked.

Freeman: “No... hey, I don't know what they told you but I need you to teleport me to Massachusetts. If you can't swing that, just get me to the nearest city like Los Alamos or Santa Fe would be fine. I should be able to hijack a ride, no problem.”

Scientist: “All right, I can open the portal now. The process is complicated and once it's begun, I must not be interrupted or I will have to start all over again. Don't enter the beam until I give the okay. Understood?”

Freeman: “Yeah.”

Scientist: “I will begin.”

Freeman: “I'll get out of your hair. Just don't screw up.” *Freeman jumps down*.

Freeman: “Man, if the teleporter could make a copy of me I should have a plan how to unite myself in the future so I need to have a plan now before I make the jump, just in case. I guess... I'll leave contact info where I buried the gold. That'll work.”

*Freeman's Mind*, episode 61, 8:22-9:40. October 20, 2014.

51. *Freeman's Mind*, episode 62, 2:32-3:11. November 26, 2014.

52. Freeman: “This actually isn't the worst apartment I've ever had. It's close, though.”  
*Freeman's Mind*, episode 62, 5:45-5:51. November 26, 2014.

Later in the same episode:

Freeman: “Okay, this apartment is definitely the second worst I've had. It's still not infected with bed bugs.” *Freeman's Mind*, episode 62, 6:16-6:22. November 26, 2014.

The WHO has observed that after almost disappearing from the US in the 1940s, bedbugs reappeared

on a mass scale in the US in the 1980s and became epidemic after 2004. Xavier Bonnefoy, Helge Kampen and Kevin Sweeney. *Public Health Significance of Urban Pests*. Copenhagen, Denmark: World Health Organization Regional Office for Europe, 2008 (131-135).

53. It is worth emphasizing that the winning candidate for President in the US election of 2016 received only 62 million votes, whereas the losing candidate received 65 million. The winner was appointed by the Electoral College, an institution created by 18th century US slave-owners to count slaves as three-fifths of a citizen for purposes of representation. The US elections for the House of Representatives are fundamentally flawed due to gerrymandering and the restriction of voting rights by ethnic minorities, while the elections for the Senate are flawed due to the fact that each US state receives two Senate seats, with no regard for the vast differences in their population (e.g. Wyoming has 650,000 citizens and elects two senators, while California has 37 million citizens and elects two senators). The result was an unprecedented decline in the credibility of the US around the world. See: Richard Wike, Bruce Stokes, Jacob Poushter and Janell Fetterwolf. "U.S. Image Suffers as Publics Around World Question Trump's Leadership." Pew Research Center. June 26, 2017. <http://www.pewglobal.org/2017/06/26/u-s-image-suffers-as-publics-around-world-question-trumps-leadership/>.

54. *Freeman's Mind*, episode 63, 4:37-5:09. December 5, 2014.

55. Freeman: "A wise man once said, Jesus tap-dancing Christ. You know, I have a new theory. I think, instead of teleporting me, maybe the scientists just blew up the universe. We found a way to do it -- we were really motivated -- but since I was wearing this suit, I survived and that's why all I see are other people wearing this suit and the laws of reality and everything else just got scrambled a little bit."

*Freeman jumps down into small cave.*

Freeman: "Whup! No, that can't be right. Then my weapons wouldn't still be here."

*Freeman's Mind*, episode 63, 6:27-7:03. December 5, 2014.

56. Freeman: "You're actually not trying to attack me. This is a first. Okay! Wow. You are doing everything right for someone who wants to live. I wouldn't want to discourage the learning process here. Looks like some of you can be domesticated after all. Good! I mean, what's the point of being king if you don't have any subjects? I feel like we're making some real progress. Eventually, I'll need you to kill your own kind who would harm me, but that's still a ways off."

*Freeman's Mind*, episode 65, 2:31-2:59. December 15, 2014.

57. Freeman: "Yeah, we have lifts, barrels, lighting. This is some sort of manufacturing or processing. They're still not wearing any clothes, though, so I'm not that impressed. Yeah, I'm pretty sure I can take this place over. It's ripe for colonization. I just need to find the leader, blow his head off, then they'll start bowing to me."

*Freeman's Mind*, episode 66, 1:59-2:19. December 19, 2014.

58. Freeman: "Man, I really hope I did kill their prophet or oracle or whatever. That actually would explain this elaborate and impractical architecture, if this was a temple. Why not? Just build it right next to the manufacturing plant. Floating island space is limited after all. If I get up there and find some religious symbols, I'm going to wear them as a hat. If I'm lucky, they'll bow down to me. But if not, I might at least demoralize them. If I want to go the extra mile, I could cut off the leader's head and wear it around my neck. I think even among complete aliens, that still sends a pretty universal message."

*Freeman's Mind*, episode 67, 7:15-7:51. December 27, 2014.

59. Jonathan Sterne. "The MP3 as Cultural Artifact." *New Media Society* 2006:8, 825.

60. *Freeman's Mind*, episode 67, 11:56-12:30. December 27, 2014.

61. *Freeman's Mind*, episode 68, 1:31-2:30. December 31, 2014.

62. Freeman's first coherent comment after teleporting to the Nihilanth's lair:

Freeman: *yelling*: "Lovecraft was right about everything! How did he know?!"

*Freeman's Mind*, episode 68, 0:23-0:27. December 31, 2014.

Later, Freeman fleshes out this insight with a reference of Lovecraft's mythical Elder Gods:

Freeman: *yelling while battling Nihilanth*: "Okay, keep moving! I'm totally not fighting an Elder God! Nope! No no no! That's not what's happening! It's just really big... levitates and... looks like an Elder God! But I should try to and keep perspective! Nuh! We had dinosaurs bigger than you! Or at least taller! Wuaah! And Earth gravity's way higher, so what's your excuse?"

*Freeman's Mind*, episode 68, 2:46-3:15. December 31, 2014.

63. *Freeman's Mind*, episode 68, 10:05-10:27. December 31, 2014.

64. G-man: "I have recommended your services to my... employers."

Freeman: "What, you're CIA?"

G-man: "And they have authorized me to offer you a job. They agree with me that you have limitless potential."

Freeman: "Well, you're right, but CIA? God, I don't know."

*G-man and Freeman are teleported to interstellar railcar.*

Freeman: "Man, CIA is hardcore."

G-man: "You've proved yourself a decisive man so I don't expect you'll have any trouble deciding what to do."

Freeman: "I want a pardon."

G-man: "If you're interested, just step into the portal and I will take that as a yes."

Freeman: "A pardon signed by the President."

G-man: "Otherwise, well..."

Freeman: "I want lab work in Hawaii."

G-man: "I can offer you a battle you have no chance of winning. Rather an anticlimax after what you've just survived."

Freeman: "So you're threatening me? I'm not hearing a 'yes' to my conditions."

G-man: "Time to choose."

Freeman: "Seriously, I want Hawaii. And I'm a physicist. I'm done being shot at. You understand that, right?"

G-man: "It's time to choose."

Freeman: "You're threatening me, you took my weapons, and you're a f---ing Time Lord. This is bullshit."

*Freeman enters portal.*

Voice of G-man: "Wisely done, Mr. Freeman! I will see you up ahead."

*Freeman's Mind*, episode 68, 11:24-12:39. December 31, 2014.

65. Most of these fan comments were archived by a group of fans, who Scott credits at 12:47 of the episode. *Freeman's Mind*, episode 68, 12:47-16:52. December 31, 2014.

66. The mod was created in 2007 by a group of Russian *Half Life* fans.  
<https://www.moddb.com/mods/g-man-invasion>.

67. *Freeman's Mind*, episode 68, 17:04-18:04. December 31, 2014.