Playing the End: Tensions of the Apocalypse in Digital Games

A Thesis Submitted to the Committee on Graduate Studies

in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

in the Faculty of Arts and Science

TRENT UNIVERSITY

Peterborough, Ontario, Canada

Cultural Studies Ph.D. Graduate Program

May 2025

Abstract

Playing the End: Tensions of the Apocalypse in Digital Games

Yaochong Yang

This research examines the digital game through the subject of the Apocalypse, both in its literal revelatory form and its colloquial disaster form. To accomplish that, it employs Louis Althusser's concept of structural causality as a springboard for a structure-based interrogation of interlocked systems. Drawing a comparison between Ian Bogost's definition of black-box analysis and Althusser's concept of ideology, I suggest the apocalypse is a valuable subject matter for understanding digital games, and in turn digital games provide media-based insight on complex systems of subjectivations. These positions are accomplished in two ways. First, I focus on five different apocalyptic games - *The Last of Us* (2012), *Tokyo Jungle* (2012), *Mass Effect* (2008), *Doki Doki Literature Club* (2016), and *Persona 4 Arena* (2012) – and how they express radically different visions and scopes of apocalypse. More specifically, I focus on the digitality of these games and how their technical construction in light of their suggested themes reveal hidden relations between apocalypse and ideology. Second, I expand on a research-creation project focused on the production and dissemination of a game, specifically as a means of using what has been discussed in previous chapters to attempt to expand on the subject matter of ideology and apocalypse. The aim of this is to discuss the process of expressing a procedural argument following several chapters interpreting them. It is also to expand on additional tensions between human and system which are underplayed or obscured in the playing process. It concludes that apocalypse, in the process of using systems, remains an elusive topic and to produce meaningful texts as commentary on ideology requires different, difficult considerations.

Keywords: Apocalypse, Eschatology, Bogost, Althusser, Jameson, Kermode, Berger.

Acknowledgments

Table of Contents

List of Figures

Introduction

  I began this work on the eve of an apocalypse. The first chapters began as the world fell into lockdown. This piece, as it stands, began in the midst of a battle with depression and the first steps in examining my own asexuality. It started as an examination of long times and long futures in moments of alien stillness. It then took shape in the wake of attempts to get everyone back into offices, back to work, back to relations of pre-apocalyptic relations of productions. Those attempts stressed the power of imagination. After all, one might ask the purpose of studying virtual apocalypse when we are living apocalypse. Why should we focus on something imagined when something real barrels and destroys so many lives around us? Despite the seeming power of a real apocalypse, the virtual seems more important than ever; we watched as businesses fail and people go back and pretend like it never happened. But for virtual apocalypses, the experiences are iterative and constant. As I distributed vaccines and tested people to stay financially afloat during the height of the pandemic, I saw firsthand, intimately, what people wanted – they didn't want to see a new order. Nobody wanted to envision apocalypse. Yet in all of our media, there is an insistence on realness of ending, that it truly *is* over.

  The virtual, therefore, is arguably more important because it gives people a way out, a means to look at themselves in the mirror as long as they feel as if it doesn't matter. When it matters, when it's real, there is a concerted effort to resist change. Nobody wants to see beyond the veil unless it has no real consequences. In some ways, the revealing power of apocalypse is strongest – and sometimes only effective – when it is envisioned, imagined, over there. A real apocalypse, when it arrives brings electricity, a jolt that pulls them back.

  In a way, the difficulty of studying apocalypse is like studying what Wark calls gamespace, the world around us of unfair rules and engagements, the space which forces the

player back into the cave because the rules of the cave are intelligible and consistent. A real apocalypse, like a global pandemic, generated something similar, but instead of rules it is imaginations of relations of production. Stimulus cheques, a war between workers and companies on remote work, and an emboldened antivax movement which has, until recently, largely existed as a fringe ideology – they're examples of people and forces of history resisting the alchemical burn of an apocalyptic order.

In this sense, to see so many desire – and yet resist – apocalyptic change in the real world, perhaps the only thing that can be done is to envision the former. How does apocalyptic desire manifest? What does it tell us about ideology? And when faced with a real apocalypse, what can we at least learn from our imaginations of it?

Imagining the apocalypse also brings up questions of context. The topic is so broad that any engagement is always bracketed by a specific set of questions and concerns. Here, my concern focuses on the apocalypse of digital games, especially in terms of how these texts grapple with questions of ideology, a subject matter often intertwined with the apocalypse. There are a few ways these elements connect. One, we produce and play video games as ideology black boxes, as often impenetrable devices allowing both freedom of access and engagement, but also defined by their hard-coded restrictions. Two, the apocalypse is an analysis of how subjects envision the end of ideology, serving as a mirror reflecting the subject's beliefs back onto them. Together, the apocalyptic game acts as a compelling case on the question of ideology – and its limits – performed in media; players are engaging with a black box to interpret worlds beyond ideology.

However, definitions of ideology and apocalypse are extremely broad and often contested, so I begin with a brief literature review on the discussion of ideology as a structure,

which has been a focal point primarily of Marxist analyses. At the same time, the literature review is necessary because Marxists do not necessarily agree on ideology. I argue that digital games are texts with compiled systems bearing similarities to Louis Althusser's concept of structural causality, or an interlockingnetwork of linear causal mechanisms. Since games are taylorised systems, by which I mean products of multiple specialized skills, Althusser's structural causality applies to both developers and players. For players, games are instructional machines that exist on a bedrock of hidden code. For developers, games balance technological and economic limitations that end up influencing the end product. Still, I do not limit my argument to a game's final code. I argue that games, through Wendy Chun's concept of a daemonic interface, are ideological in their graphical designs and narratives,.

I then focus on what I mean by a 'game', specifically in the context of digital games. The reason is because the act of playing demands a participant, emphasizing the scope of what constitutes a game keeps the project manageable. Is it a space of play? Its mechanics? I argue that while we can most clearly understand how games run based on their mechanics, we should not ignore the role of noninteractive elements and how they inform these mechanics. I draw upon Ian Bogost and his concept of procedural rhetoric, that is, how a game's mechanics behave as a dialogue on its own. Not wanting to commit an erasure, I account for game narratives, visuals, images, and graphics through Azuma's database model. Here, players choose elements of a text they find valuable.

Second, I argue that the apocalypse is how we might imagine the end of ideology. Through Frank Kermode's The Sense of an Ending, I consider why and how apocalyptic imaginations, a subject's imagination of an end of an era or world, persists throughout history. Besides Kermode, I argue that James Berger's three senses of apocalypticism in After the End

explains how people see external disasters as apocalyptic, and how that affects the way culture generates apocalyptic visions. In other words, different interpretations of disasters can yield different apocalyptic imaginations. Through a brief outline of Judeo-Christian and Buddhist apocalypses, I argue that while the existence of an apocalyptic sentiment is universal, how they manifest and what they change or unveil varies between cultures and classes.

Finally, I settle on the apocalyptic literature, primarily because understanding how subjects imagine the apocalypse in digital games gives us information on how we think about the limits and nature of ideology. In imagining ideology's end, we are staking claims on what ideology is. Furthermore, analyzing fictional representations of apocalypse is even more pressing because the capitalist mode of production can strengthen its pre-existing relations of production by accounting for challenges to its structure. In this sense, fiction is an essential tool for understanding and interrogating ideology.

Then, I focus on examples of apocalypse in the digital game, and how boundaries of ideology as both a topic of discussion and a subject rendered by the digital game are negotiated through engaging with apocalypse. Through five close readings, I focus on how apocalypse is presented, what that apocalypse suggests about the subject's perception of ideology and their ideological position, and how the digital game deals with those questions.
 In other words, this work carries a few implications. One, it is a defense of Althusser's concept of ideology, arguing that a structuralist Marxist position on ideology is incredibly resilient, *especially* considering its relevancy in the field of software and games. However, if that is the case, then what are its limitations? Thus, my focus is to stress test the ludic and narrative connection through the apocalyptic game. How do digital games translate a concept as large and abstract as apocalypticism into compelling mechanical features? Noninteractive fiction might

4

represent or explore apocalypticism, but does – or can that – translate well into interactive

media?

Chapter 1: Mapping Ideology

This work refers to ideology as concrete actions which are informed by layers of relations of production, reflecting imaginary relationships of individuals to their real conditions of existence. These real conditions of existence are influenced by positions of class and culture. This definition is a condensed rendition of Louis Althusser's concerns on ideology, which I use as a springboard primarily because of its emphasis on structure, Althusser's focus on fuzzied relations of production, and an emphasis on decentered connections of control.

An issue with ideology is the vastness of its definition, almost to the point where such definitions can become useless. A challenge associated with defining ideology revolves around exactly what falls under the umbrella of ideology and what seems to not. Barbara Foley remarks that while information can be ideological, "not all explanatory or judgmental propositions are ideological."[1] However, at the same time, these claims can still be ideological within certain contexts. Foley uses the assertion that the earth revolves around the sun, arguing that while that claim is a "scientifically agreed-upon fact,"[2] declaring this several hundred years ago would be considered ideological. What matters, Foley argues, is that ideology frames information in ways leading to public discourse forming notions about claims in the world. For example, ideologies can shape narratives so that subjects have value judgments around specific topics or ideas. In doing so, ideology naturalizes certain relationships between groups, especially classes.[3] Thus, ideology is less a distinct, declarative proposition condensed into a singular moment or position than a fluid framing that informs, often unknowingly, the thoughts and actions of its subjects. While I will mobilize this basic interpretation of ideology in my reading of apocalyptic

---

[1] Barbara Foley, *Marxist Literary Criticism Today* (Pluto Press, 2019), 57.
[2] Ibid, 57.
[3] Foley, *Marxist Literary Criticism Today*, 57.

videogames, I need to do two things. One, I need to refine it by situating it in the long and changing history of the term. Second, to explain why out of all the competing definitions, why I believe Althusser's concept is the most relevant.

Situating the history of the term ideology is helpful in outlining the fluidity of the term, in that my emphasis on Althusserian ideology is not to adhere to a strict, orthodox definition but to springboard off Althusser's definition into more digital-friendly renditions of the term. Furthermore, charting through how the term changes serves as a reminder of a theoretical concern at the heart of studying ideology: to study ideology is itself ideological. While the subject might not necessarily escape ideology, they may envision pathways in which they themselves are ideological. With these two reasons in mind, I briefly outline several theoretical developments of ideology.

I begin with a look at contemporary conceptions of ideology from its origins to its analysis through Marxist structuralism, culminating in one of my project's major emphases, that these discussions can find bedfellows in digital games, empowering new lanes of analysis. I start with a brief outline in which the term ideology has been used, its application in non-Marxist circles, and then, ultimately, its application in Marxist theory. Then, I focus on how ideology has been studied by several well-known theorists, beginning from Gyorgy Lukacs to Slavoj Žižek, before ultimately settling on Louis Althusser and Frederic Jameson, with a more involved focus on the former. I argue that Althusser is particularly relevant to this discussion considering how his vision of structural causality can be applied to digital systems. This connection is possible through Wendy Chun's concept of daemonic interfaces, or hidden relations of empowerment and control webbed into our interactions with systems. Through Chun, I then chart similar challenges of systems analysis thanks Bogost's discussion on the black-box element of games analysis.

Origins

The term ideologie was a means for scholar Destutt de Tracy to revive metaphysics in

Napoleonic France.[4] In this context, ideology refers to a survey of ideas, and ideologues studied

such ideas. However, Napoleon Bonaparte ended up ensuring ideology was synonymous with

charlatans or untrustworthy individuals. Napoleon blamed the ideologues to deflect attention

from his disastrous campaign in Russia. He argues that the ideologues, rather than focusing on

studying a method to support and strengthen the French people (with the state at its heart), spent

too much time finding things to blame.[5] Napoleon's criticism of the ideologues reflected

ideology's eventual standard definition: ideologies were a bad or untrustworthy collection of

ideas, a shaping mechanism for an intellectual other, and often, secondary to intellectual,

political, religious, or social groups.[6] Ideology's definition changes based on a field, groups, and

time periods, and those changes remind us not only of the flexibility and malleability of ideology

but also that of studies of ideology. This section also aims to outline precisely why Louis

Althusser's conception remains a helpful framework, specifically that despite criticisms of

Althusser's concept of ideology, a structuralist perspective sharpens pre-existing procedural

analyses of digital games. The two subject matters, in short, work together exceptionally well. In

this section, I will focus primarily on how ideology is discussed and understood in Marxist

theories, specifically through the lens of Karl Marx and Fredrich Engels, Gyorgy Lukacs, Slavoj

Žižek, Louis Althusser, and Frederic Jameson, primarily because these are some of the major

Marxist thinkers who interrogate ideology on the basis of it as a system rather than a political

---

[4] Emmet Kennedy, "'Ideology' from Destutt de Tracy to Marx," *Journal of the History of Ideas* 40, no. 3 (1979): 354, https://doi.org/10.2307/2709242.
[5] Raymond Williams, *Keywords* (Oxford University Press, 1985), 154.
[6] Terry Eagleton, *Ideology: An Introduction* (Routledge, 2016), 67.

other. I conclude, through Wendy Chun, that when we are discussing ideology in software and digital games, we are specifically referring to a largely Althusserian conception of ideology.

Karl Marx and Friedrich Engels

Ideology was and is not the focus of just Marxists, but the reason why Marxism forms such a crucial bedrock of this project's analysis on ideology is because Marxism – especially structural Marxism – has developed a long set of theoretical concerns which serve as a springboard to discussions on media. As Terry Eagleton stresses, ideology would find a separate set of thinkers through what he called the "sociology of knowledge,"[7] typified by thinkers like Karl Mannheim and Lucien Goldmann. Here, ideology is conceptualized as an object with an internal unity, a shorthand for specific social and political positions highlighting one's thoughts, habits, and dispositions. This thread of ideology is primarily focused on the social organization of people.

In comparison, Marxism would develop its own concept of ideology with Karl Marx and Friedrich Engels in *The German Ideology*, in response to Hegelian idealism, by which I mean the belief that one's thought and thought of being determines action. Hegel argues that our understanding of the world is limited by our perception of how it is, or in short, it's *logic*. That limited perception, to Hegel, is the only consistent element in philosophy and thus is its ideal. Therefore, the world is an undertaking of the ideals of humans, and social, political, and economic challenges are a result of ideals that shape material conditions in certain ways. Instead, *The German Ideology* proposed a dialectical materialist argument, or the idea that economic conditions drive beliefs and actions. *The German Ideology* sought to answer a driving question:

---

[7] Eagleton, *Ideology: An Introduction*, 108.

why had a Revolution succeeded in France, a strong industrial unification occurred in Britain, and yet nothing succeeded in Germany?[8] Marx and Engels believed that while the French sought political change, and the British sought economic prowess, the Germans sought ideas. Moreover, they suggested that Germany suffered from an ideological overdevelopment compared to its historical underdevelopment.[9] Thus, Marx and Engels stressed an alternative: material conditions. *The German Ideology* thus marks a shift away from a focus on idealism and towards a focus on economic conditions.

To emphasize the material process that underlies human consciousness, Marx and Engels liken ideology to a camera obscura. The camera obscura is a device with a pinhole. Light conveys information about the colour and brightness of an object. Therefore, when it enters the pinhole, it reflects certain rays from distinct points to form an image on a surface. However, the image generated by the camera obscura is inverted. In this example, Marx and Engels are describing a central relationship between ideas, humans, and their material conditions: "If in all ideology men and their relations appear upside-down as in a camera obscura, this phenomenon arises just as much from their historical life process as the inversion of objects on the retina does from their physical life-process."[10] The metaphor of the camera obscura is twofold. One, Marx and Engels stress that ideology represents, but does not reflect, reality. The camera obscura is an apparatus that provides an image that does not - and cannot - capture the entirety of a physical location. Marx and Engels' camera obscura is a metaphor for a false consciousness, or an imperfect (or misleading) representation of a truth. Second, the camera obscura illustrates Marx and Engels' focus on material life-processes, that lived conditions precede human consciousness.

---

[8] Louis Althusser, *On Ideology* (Verso, 2020), 75.
[9] Ibid, 76.
[10] Karl Marx and Friedrich Engels, *The German Ideology* (Prometheus, 1998), 42.

However, because the camera obscura - a device that works in a darkened room - becomes the only representational tool of an extant reality, then its representation cannot be altered without altering the nature of the object it represents. In other words, to Marx and Engels, the nature of the object is based on this representation. Thus, changing the way the object is represented changes the object itself because we can only understand the object through its representation. Changing how the object is represented does not necessarily reveal or clarify a greater, innate truth to the object, but risks swapping one representation for another. The Hegelian Idealist would argue that this is a natural process of consciousness as ideals change. For Marx and Engels, the object is inexplicably tied to its representation, carrying its own representational logic. This is what Althusser would refer to as the unified problematic. Since we must consider a totality as a real whole, we fall into an issue of mixed interpretations on a system's own internal operations.[11] A change in an ideology does not negate ideology. Instead, that change presents a different ideology altogether. By focusing on the material life-process, Marx and Engels avoid the entire problematic. Instead of presenting a means of understanding variations of ideas, Marx and Engels argue that what underlines these ideas are material conditions.[12]

In this sense, Marx and Engels evoke and undercut Tracy's original outline of ideology as a science of ideas. Broadly, Tracy's original project reflects Marx and Engel's criticism of Hegelian idealism. Rather than arguing for a specific idea, Marx and Engels propose that these economic conditions underpin ideas and consciousness. In turn, these conditions shape humans into believing that such ideas are natural representations of the world. However, despite their emphasis on materialism, not every definition of ideology rejects Hegelian idealism. To Lukacs and Žižek, consciousness plays a pivotal role in ideology.

---

[11] Althusser, *On Ideology*, 62
[12] Karl Marx and Friedrich Engels*, The German Ideology*, 42.

György Lukacs

  György Lukacs' ideology builds on Marx and Engel's materialist emphasis by focusing on ideology as consciousness in relation to what he deemed an objective outline of class relations. For Lukacs, ideology is not "merely a consequence of the economic structure of society but also the precondition of its smooth functioning."[13] Lukacs sought to clarify Marx and Engels' writings in the face of what he deemed to be "vulgar materialists," or a strict materialist approach to history - and sometimes nothing else. Lukacs stresses that Marxists should aim to find some intellectual common ground with Hegelian dialectics.[14] In this line of reasoning, Lukacs does not reject Hegelian idealism per se, but folds it into a discussion on Marxism itself. Recall idealism: The subject's interpretive standpoint is the beginning for meaningful action on material reality. Consciousness of an idea is a necessary driving force for said action. In comparison, Marx and Engels argue that it is material conditions that shape ideals. Therefore, Lukacs is attempting to reconcile what he finds to be a contradiction between the two positions. His conclusion is that material reality and consciousness are not arranged in a hierarchy where one precedes the other. Rather, material and conscious forces operate concurrently. A group might believe or identify a specific way because of material conditions, but to act in such a way requires a realisation of those conditions.[15] However, if that is the case, why do poor working-class individuals not realise their poor material conditions and develop revolutionary consciousness? Impeding the proletarian realisation, Lukacs argues, is the process of reification.

---

[13] Gyorgy Lukacs, *History and Class Consciousness* (Mit Press, 1972), 261.
[14] Ibid, xiv.
[15] Lukacs, *History and Class Consciousness*, 50.

To Lukacs, the capitalist mode of production is effective (and unique) at reifying its subjects, or the process of when objects and subjects are perceived based on fragmented relations of capital, leading to abstract concepts carrying value and power. Since capitalism prioritizes exchange-values (when a good's value is determined in a market), subjects and objects become reified. Here, subjects can become objects, and objects can become subjects. Reification acts as a node of ideological control; the working class sells their labour because they can only perceive it based on what the market demands. In return, because capital depends on an output greater than its labour input, the commodities carry an exchange value greater than their use value. For instance, a luxury car commands a higher price because we might interpret it as more valuable, but also because we perceive the nature of a luxury car as more valuable. The social character of a reified object/subject operates as an abstract concept outside of the labourer's control.[16] Reification, therefore, legitimises capitalism's relations of production. More broadly, reification is how ideology maintains existing relations of production. Thus, to Lukacs, wrestling free from ideology demands two things. One, subjects must realise the power of reification in capitalism. Second, that realisation must then be harnessed into political power. These two steps lead Lukacs to come to a theory of ideology via class consciousness.

In this context, class consciousness is a mass awakening to the totality of the exploitative nature of capitalism. In realizing capitalism's operations, subjects can now engage in praxis, or meaningful, transformative action. To Lukacs, class consciousness is not the social consciousness of a particular class but a class' transition toward realizing its own objective condition in relation to human totality, which Lukacs refers to as history. What does this mean? In other words, modes of production generate subjects unique to these modes. Lukacs argues that

---

[16] Lukacs, *History and Class Consciousness*, 87.

compared to feudalism, the bourgeois class unleashed capitalism without understanding its ramifications.[17] The totality of capitalism is so impenetrable, in fact, that even the members of the bourgeoisie themselves are not masters of capitalism; they're a byproduct. However, because capitalism depends on the exploitation of labour, the sheer existence of capitalism births the group it exploits: the proletariat. Therefore, to Lukacs, the proletariat is not so much a class that exists, but a class with an end mission - the realisation of their exploitation and the revolutionary upheaval of the system perpetuating exploitation. Meaningful actions, therefore, not only comprise the act of revolution but also the realisation that one must act. The members of the proletariat cannot ascend to becoming bourgeois on their own, since capitalism demands the exploitation of a new proletariat class; only by dismantling the entire system of capitalism can society achieve its end state of a post-capitalist world.[18]

Why is this important in the context of this short history of the word ideology, and what place does this hold with regard to ideology, the apocalypse, and videogames? By intertwining idealism and materialism into a motor force for driving history, Lukacs' ideology draws attention to an incessant partiality at the heart of ideology. Because consciousness and material conditions depend on each other, they form synchronic instances that end up representing larger systems. However, because they are instances, they are partial by nature and therefore ideological. Though material conditions affect all classes, they do so unevenly, and each class comes to different conclusions on how they are affected. Therefore, each group, each class, and each culture develops different interpretations of their own social role in relation to capitalism. This is ideology. Even science, Lukacs argues, isn't immune to ideology. Lukacs argues that economics, in attempting to build a model of scientific economic totality, is still a social act endeavour, one

---

[17] Lukacs, *History and Class Consciousness*, 19.
[18] Ibid, 72.

14

that favours (though is not commanded by) the bourgeoisie.[19] Instead of looking at how each

class exploits, in understanding what each class contradicts (in relation to other classes), we can

understand the broader totality, and thus drive human action even further. Therefore, even as a

subject might have a subjective imagination of their condition, the nature of their condition is

objective. For example, people in different socioeconomic groups will have different

interpretations of suffering. Wealthier individuals might experience suffering as an alienation of

the family or workplace, whereas less well-off individuals might suffer financially. It is the

existence of suffering itself that is an objective condition. To Lukacs, the realisation that

suffering exists and that we must address it is what will drive society forwards in eliminating it.

The same with the proletariat in that their labour exchange is objective. A proletarian, regardless

of their political dispositions or their religious beliefs or any other conscious position, is a

proletarian because their labour is exploited. In this line of reasoning, Lukacs makes the opposite

claim about bourgeois ideology. He argues that the bourgeoisie has no incentive to come to a

realisation of their own ideology - they gain from it because that is the nature of bourgeois

society.[20] Woven throughout both discussions is a broad emphasis on class. In terms of individual

ideological subjects, Lukacs' writing is scant.

Slavoj Žižek

Whereas Lukacs sought to ally with Hegelian idealists and focused on class, Slavoj Žižek

sought to save Hegel through Lacanian psychoanalysis.[21] For Žižek, ideology is a false

consciousness, but through Žižek, we must also understand false consciousness through Freudian

---

[19] Lukacs, *History and Class Consciousness*, 15.
[20] Ibid, 54.
[21] Slavoj Žižek, *The Sublime Object of Ideology* (Verso, 2009), xxx.

and Lacanian psychoanalysis. How did Žižek come to this conclusion? Žižek's discussion on ideology is partly built on Peter Sloterdijk's *Critique of Cynical Reason*. Sloterdijk argues that the cynical ideological subject realises they are in an ideology, but they still continue to act as subjects of that ideology.[22] To Žižek, the cynical subject is at odds with Marx's ideological subject. To Marx, the ideological subject "do[es] not know it, but they are doing it."[23] However, to Sloterdijk, the cynical subject goes further: the cynical subject knows it, but they do it anyway.[24] To Žižek, this cynical attitude is a byproduct of what he considers ideological fantasy, or the unconscious illusion that takes place. Ideology thus carries a double illusion.[25] On one level, ideology is a representation, similar to Marx and Engels' camera obscura. On another level, the illusion is itself illusory. The cynical subject draws attention to their own subjected position, and that reaffirms their subjecthood. For example, a young person may choose not to vote because "their vote doesn't matter." Now, a politician running for office has no incentive to cater to young people because they don't vote. This mentality creates a cycle that keeps subjects locked in a cynical, ideological trap. In acknowledging the illusion, the subject commits acts that naturalize them as a subject of that ideology. Thus, to Žižek, the ideological subject par excellence is the one that knows they are subjects of ideology, yet behave so anyway.

While the cynical subject might reinforce ideology's control over its subjects, we can also trace ideology back to libidinal relations of power and representation. By emphasizing the libidinal aspect, Žižek's ideology makes two unique claims. One, in acknowledging the illusion, ideology is on the level of a Freudian fetish, or a target that prevents a subject from having to confront the consequences of the fetish's lack. Two, such a fetish points at ideology's true purpose, that is, a

---

[22] Peter Sloterdijk, *Critique of Cynical Reason* (University of Minnesota Press, 1988), 25.
[23] Žižek, *The Sublime Object of Ideology*, 25.
[24] Sloterdijk, *Critique of Cynical Reason*, 26.
[25] Žižek, *The Sublime Object of Ideology*, 31.

power that structures and shapes a subject's everyday life as they navigate reality.[26] This definition of fetish, Žižek notes, is at odds with Marxist descriptions of fetishism, which he defines as something that "conceals the positive network of social relations."[27] Thus, there exists an important distinction in Žižek's articulation between the two definitions: Marx's fetish seeks to hide something; Freud's fetish seeks to efface it. Ideology, therefore, is not something we can peel back, revealing the true material world that shapes it. Rather, like a Freudian fetish, ideology's very existence is necessary, since it helps the subject understand the world around them. The alternative is to imagine the unimaginable. Recalling Sloterdijk, subjects can be aware of ideology's effects on them. What is the alternative to dismantling ideology if we need it? What lies beneath it?

To Žižek, at the heart of ideology is a kernel, a floating center, around which ideology wraps its layers of control. This kernel, Žižek argues, is a sublime object on its own. The sublime is a process we experience when presented with something that seems indescribable. The utmost magnitude or grace of any object can prove challenging to represent - words can escape us. Žižek argues that very challenge is a paradox lying at the heart of ideology. In being unable to describe an object, we feel an anxiety that comes with that inability. To address that anxiety, we give an approximate description while acknowledging that description is inadequate. This is the sublime. He argues that the sublime is a way to peer at the unrepresentable.[28] The sublime becomes an object on its own, and ideology orbits it. The heart of ideology is not a clear relationship to material conditions, but a contested relation to Real conditions (in the Lacanian sense, where extant elements cannot be effectively interpreted and communicated through language). Some

---

[26] Žižek, *The Sublime Object of Ideology*, 45.
[27] Ibid, 50.
[28] Žižek, *Sublime Object of Ideology*, 230.

elements of these Real conditions cannot be exact in their representations. Thus, instead of pure

representations, we create partial representations, which are then ideologies. We cannot escape

from these representations because we lack alternative methods of interpreting the real

conditions we have to face. And ideology will continue to exist, orbiting around the sublime

object as kernel because, as Žižek notes, ideology, like a fetish, masks the full impact of the lack

that we seek to avoid.

Louis Althusser

Like Žižek, Louis Althusser incorporates elements of psychoanalysis on his work for

ideology but ultimately favours a materialist position. Unlike Žižek, Althusser had no intention

of saving Hegel. Whereas Lukacs focuses on binding consciousness and materialism together in

favour of revolutionary action, and Žižek focuses on how ideology carries the power of fantasy,

Althusser is attempting to return to a materialist perspective on ideology. However, Althusser's

ideology is not an orthodox base-superstructure relationship, where the material conditions

(base) affect the social, legal, and cultural conditions (superstructure). Instead, Althusser argues

that the base and superstructure are intertwined, each informing the other. However, Althusser

differs from Lukacs in that he believes, ultimately, ideology is economic in the last determinant:

ideology is, at some unclear juncture, determined by materialist factors. To Althusser, ideology is

a natural byproduct of human behaviour.[29] Furthermore, because human behaviour is innately

ideological, Althusser is concerned with figuring out how to understand how ideology operates

while remaining an ideological subject. If we're stuck in this imaginary relationship, how can we

understand ideology? Three, can we escape ideology? Althusser provides answers to these

---

[29] Althusser, *On Ideology*, 45.

questions, though the answers may not be entirely compelling. One, he argues that ideology concretizes subjects through a process called interpellation, or hailing. Two, he argues that because of challenges associated with understanding ideology as subjects within it, subjects must consider ideology based on what he proposes as structural causality. Three, Althusser argues there is a way outside of ideology, through science, believing that Marxism is the science of History, the grand totality of human thought.

To Althusser, ideology interpellates individuals as subjects.[30] Like Žižek, Althusser argues that individuals are always ideological subjects. However, for Althusser, studying ideology means studying what subjects do, since we can only understand ideology because of a subject's fulfillment of its functional condition.[31] In other words, ideology can only be studied based upon actions. Althusser argues that the subject is "only constitutive of all ideology insofar as all ideology has the function of 'constituting' concrete individuals as subjects."[32] Whereas Lukacs focused on how consciousness enmeshes with material conditions to drive action, Althusser focuses on a subject's action in ideology. This brings up two questions: How does this happen, and why should we look at concrete function? To Althusser, ideology uses interpellation, a 'hailing' that recruits individuals into a situation where they become subjects of its control. He uses the example of a police officer: if the officer yells "Hey, you there!", and we turn around, several things happen. One, we respond to the hail, putting ourselves in a situation that subjects us to the police officer. Two, demonstrates that we were already under control: by turning, we acknowledge that the hail was meant for us.[33] Interpellation, therefore, is how a subject legitimises ideology's control over themselves. If society raises a boy to like 'manly' things (or

---

[30] Ibid, 44.
[31] Ibid, 45.
[32] Ibid.
[33] Althusser, *On Ideology*, 46.

vice versa), then they will act in a way that legitimises their own subjected condition. A man likes manly things, and the reason they do is that they're men. The subject is shaped by a system, but that system sells that decision as internally intuitive. This relationship, Althusser argues, is not cause-and-effect. A subject does not become a subject because they respond to a hailing: they are already subjects and the status of their subject-hood naturalizes the hailing. Interpellation demands individuals are always-already subjects,[34] meaning interpellation reinforces itself because subjects are always ideological.

Why should we focus on the way ideology concretizes individuals? Althusser's analysis of ideology is influenced by a term used in Freudian and Lacanian psychoanalysis, namely overdetermination. Overdetermination refers to a condensation of many factors represented by a limited image or artefact. Recall Freud: when we sleep, our dreams have many levels, both conscious and subconscious. Therefore, these diverse elements affect the dream or memory we can recognize. The challenge posed by overdetermination is that our dreams might not reveal all the liminal and subliminal forces that shape what we experience or remember about those dreams. For Althusser, something similar occurs in a social formation: underlying factors determine our daily actions and these factors resist clear, direct explanations (symbolization). The implication is that, atop the visible structure of society (one that we can study), deeper, uninterpretable layers exist. Ideology consists of these elements and thus brings up the problem of how a waking, conscious subject can dissect subconscious influences. If we're subjects of an ideology (since we're always-already subjects), and if large sections of ideology resist symbolization, how can we study it? Althusser argues that we can analyze ideology based on its structural causality.

---

[34] Ibid, 50.

Althusser's structural causality is a response to what he considered to be two dominant conceptions of causality and the only workable method of understanding ideology. To Althusser, when we discuss causality, there have been two dominant conceptions. One is linear causality. Linear causality is direct cause-and-effect. Imagine two balls on a billiard table. Ball A hits Ball B. Ball A's kinetic energy leads to Ball B moving. Here, an object acts directly on another. This is linear causality. The next form of causality is expressive causality. Expressive causality is where an act's meaning is immanent to its totality. It expresses something larger, often a grand narrative. Here, Ball A hitting Ball B is expressive in the context that it expresses the game of pool. Ball A, in that instance, hits Ball B since a set of rules in pool dictates that hitting Ball B is a logical end point. To Althusser, expressive causality could lead to abhorrent acts in the name of a totalizing dogmatism. With an expressive understanding of action in mind, actions – including destructive actions – can be framed as a result of a larger, ideal. For Althusser, his focus was on whether the oppressive Stalinist regime was truly a way forward for social transformation. Here, suffering might be tolerated because it is a byproduct of a larger, revolutionary ideal. Compared to studying linear causality (which Althusser deems too limited for structures) or expressive causality (which Althusser considers to be theological) Althusser argues the only piece that matters is ideology's effects, and through an analysis of its effects, we can study its structure. This is the argument in Althusser's structural causality - the structure is immanent in its effects.[35] Althusser illustrates this through Darstellung, the theater. Suppose we witness a play: we understand there is a system involved in the play: actors, stagehands, assistants, theater staff. Each one follows a set of rules - mise en scene of the theatre, scripts, etc. If we sought any 'intention' to the play, its purpose, its meaning, how would we accomplish that? Althusser claims

---

[35] Louis Althusser and Etienne Balibar, *Reading Capital* (Francois Maspero, 1968), 188.

the Hegelian might argue that it is the Spirit, or God. However, Althusser argues that we can only understand the structure of the play in its effects. These effects lead to a representation of a structure, a network determined by mechanistic, linear relationships creating a semblance of a structure. Even if a leader exists, they depend on actors, machinery, practices, and elements outside of their control (and even in their control, limited), the play is an authorless theatre.[36] We can understand it through the body. James Dowling notes that when we think of ourselves, we imagine ourselves holistically, even though we are a collection of distinct operations with no clear hierarchy.[37] Each of our internal organs fulfills a function that makes it essential for other organs, and thus there is no dominant organ. The human heart needs the brain needs the lungs needs the skin. Understanding how each organ relies and impacts the other is structural causality. And it is through this structural causality Jameson would build on his concept of horizons of ideology in *The Political Unconscious*.

Frederic Jameson

Frederic Jameson argues that narratives form the foundation of all ideology.[38] Because history (events) are imagined, the structure of a narrative reflects History, or the grand totality of human thought. The narrative helps us interrogate the conditions of a particular period in time by dismantling the logic inherent within it. For Jameson, the text falls back to a variation of Marxist thought because Marxism is the only science that has developed a model for understanding History. Thus, texts bear a central role in interrogating ideology: a text is where groups clash, both in terms of historical time and in terms of classes. Jameson argues that when we read a text,

---

[36] Althusser and Balibar, *Reading Capital*, 188.
[37] William Dowling, *Jameson, Althusser, Marx* (Routledge, 2016), 68.
[38] Frederic Jameson, *Ideologies of Theory* (Verso, 2009), 240.

we can parse out a dialogical process. One, the text consists of social and political reasoning that makes sense at the time of its conception. Two, the reader also invokes their own social and political reasoning in interpreting it. That dialogical work is why Jameson encourages readers to "Always historicize!" (9). If we interrogate the conditions of how a text is created, read, and re-read, we can come to a better understanding of underlying assumptions of the world. Jameson refers to these assumptions as horizons, or imagined totalizations. For Jameson, texts have three horizons. The first horizon concerns the artefacts of ideology, or the historical and social conditions that make up a text. The second horizon refers to what Jameson calls a "master fantasy,"[39] or the collective imagination that underpins the logic of society. Discussions of class occupy the second horizon. The third horizon is what Jameson considers being the realm of pure content, where material intermingles with form, the ink in a novel or pixels on a screen become units that shape our belief systems. These units, through each horizon, manifest as two relevant artefacts: ideologemes and symbolic acts.

On the first horizon, Jameson argues that texts try to resolve their own inherent contradictions, or as Barbara Foley defines, "the unity and conflict of opposites that drive development within a given entity or process, causing it to come into being, and over time, go out of being, while retaining aspects of its former mode of existence."[40] These resolutions are possible through what Jameson calls symbolic acts. Since texts are expressions of ideology, narratives demand that texts must resolve any "determinate contradictions,"[41] or elements that stand contrary to a subject's perception of how an ideology operates. Jameson argues that because texts are ideological, these texts will, on some levels, erect questions that reveal

---

[39] Frederic Jameson, *The Political Unconscious* (Cornell University Press, 1982), 79.
[40] Foley, *Marxist Literary Criticism Today*, 11.
[41] Jameson, *The Political Unconscious*, 80.

preferences that, for ideology to operate, must be resolved or else they will not make sense in the broader totality of class discourse. The symbolic act thus operates as an imagined closure and sewing shut these contradictions. The naming is purposeful: a symbolic act is both symbolic and an act. It is symbolic in the sense that it leads to no direct praxis or revolutionary force. It is an act in the sense that it draws attention to itself.[42] In other words, a text will reach a point in which the narratives must reconcile their own ideological conflicts. As a result, the symbolic act is a denouement that closes off these contradictions, if only temporarily.[43] A hero's sacrifice at the end of a novel, for example, can be a symbolic act because it closes off many concerns raised in a text: why this hero? Why was a sacrifice necessary? Why can't the country do something else? How about the system that naturalized the idea that sacrifice is necessary? These questions are 'resolved', leading to an image of completeness. The role of the symbolic act is to lead us to the second horizon. Understanding the presumptions that underline these contradictions and why they are contradictions gives us insight into another layer of analysis. The symbolic act leads us to seek another layer of analysis - how the text interprets its social, political, and economic conditions, revealing ideologemes.

Ideologemes are ideology's basest, most comprehensible unit of analysis and appear in the second horizon, where "collective or class discourse" is unveiled.[44] Jameson frames them in the context of class,[45] because ideologemes are signals in a text that lead people to interrogate the text's underlying presumptions. However, this does not always mean that ideologemes are physically small or simple. Because ideologemes must be comprehensible (noticeable) and because they manifest in narratives, ideologemes ending up priming and signaling specific

---

[42] Ibid, 66.
[43] Ibid, 143.
[44] Ibid, 80.
[45] Jameson, *The Political Unconscious*, 76.

beliefs to their readers. Looking for ideologemes means looking for legitimation of a pre-existing

social order. When a symbolic act resolves a contradiction, the means in which that resolution

occurs reveals the presumptions that normalize those beliefs. These resolutions are incredibly

pronounced in fiction because in fiction, authors have an incredible amount of flexibility in

storytelling while at the same time are hampered by ideological presuppositions that shape

internal logic of the text. This is particularly relevant when considering that we're concerned

with digital games, which are works of complete fiction. For example, Takumi Yanai's *Gate:*

Jieitai Kano Chi niite, Kaku Tatakaeri (*Gate: Thus the JSDF fought there*), a portal connects

contemporary Japan to a fantasy world. The Japanese Self-Defense Force (JSDF) is tasked with

surveying resources. Contradictions in the text arise in the role of the Japanese government -

should they govern this other world? How? To reconcile this dilemma, the Japanese government

creates an outpost that sells goods, its symbolic act. The natives of the other world enjoy those

goods. The symbolic act of Gate suggests that modernistic progressivism legitimises an imperial

attitude. When we look at the text's social, political, and economic conditions (its first horizon),

we find out that Gate was written on the eve of the 2003 Iraq War, and thus reflects a thinly

veiled imperialism in the guise of progressivism. This underlying attitude is one example of an

ideologeme, the logic that underpins the symbolic acts of the text. Jameson uses the example of

ressentiment - hostility born from frustration with one's own inability - and how it [unmasks the]

ethics and ethical binary opposition of good and evil" in nineteenth-century western culture.[46] To

Jameson, ressentiment, like all ideologemes, depends on a series of underlying assumptions

upheld by ideologies of a period or a class. For the analyst, ideologemes become the unit of

---

[46] Jameson, *The Political Unconscious*, 87.

analysis. The ideologemes draw attention and outline the political peculiarities that exist in a text, group, or period, and start the process of analysis.

Concluding on Ideology

The strength of these Marxist perspectives on ideology is the continued insistence on ideology's role as a pervasive substance on human subjectivity. From Marx and Engels to Althusser and Jameson, ideology constitutes and filters the experiences and relations of its subjects, to the extent in which it is so deeply ingrained that discussions about ideology are ideological. While each would suggest different ways to interpret and understand it, I focus on ideology through its interactions. Though each theorist engaged with ideology as a force around us, the moments in which ideology becomes visible is in said interactions, and no theorist has approached the study of ideology as a cluster of interactions as steadfastly as structuralist Marxists, Althusser in particular. Althusser's outline of ideology leads me to the symptomatic condition of the analysis of ideology, that ideological actions, positions, and beliefs reflect complex networks of relations which define said actions, positions, and beliefs. The second is that those networks are often hidden, that interactions are themselves clusters of interactions continuing further and further down to acknowledged economic determinants, but where the entire map of interactions are never fully diagrammed.

But ideology would not be the only subject matter where systems and interactions are a mainstay of relations of engagement and production.

Chapter 2: Ideology and the Digital Game

If ideologies are systems worth breaking down and analyzing (i.e. Althusser), and fiction is particularly useful tools for analyzing ideology (i.e. Jameson), then why digital games? Why not focus on ideology through novels (i.e. Lukacs) or cinema (i.e. Žižek)? What about *digital* game makes it particularly valuable, and how can we think about ideology in games? This chapter takes the previous discussion on ideology and interlocks it with what I argue to be an appropriate object of analysis: the digital game. This chapter argues that digital games are a valuable tool for understanding ideology precisely because the computational nature of digital games reflects ideology but also serves as a waypoint for further analysis of ideology. I begin with Wendy Chun's outline of the daemonic interface - the hidden ideological fabric of graphical user interfaces that belie networks of backend calculation – and how in many ways such a technological formation bears many resemblances to structuralist analyses on ideology. Then, I transition into how said issues are addressed in systems, specifically through both Ian Bogost's focus on black box analysis and Hiroki Azuma's databasification. Both are discussions on issues of incomplete information, and both serve as helpful blueprints how digital games provide a more complete understanding of ideologies and ideology in general.

When studying ideology, the digital game is an essential text because digital games not only bear the ideological traits and challenges of digital software, but also broader, abstract ideological traits and challenges that arise from games as systems we play. In *Programmed Visions*, Wendy Chun argues that software is both a space that mimics ideology, but also a space that immanently critiques it.[47] How does this work? Chun notes that the language of code is instructive; code mediates between an electronic machinery and an interpretive device (an

---

[47] Wendy Chun, *Programmed Visions* (Mit Press, 2013), 18.

27

assembly) to enact a series of instructions. The difference between programming languages, Chun notes, is that natural language operates differently from instructive languages. Natural languages (eg. English, French, etc.) operate organically, constantly negotiating with their operators. Natural languages develop cultural and subcultural differences (eg. slang, dialects), and word choices and grammatical structures are constantly changing (eg. ebonics, internet slang). Though natural languages have general rules of operation, these rules can change. The problem, Chun argues, is that we as users might mistake code as a performative, enunciative language, one that develops organically rather than as a series of calculations and commands.[48] Operators apply a "subjectively performative or enunciative" projection, or a "rubric of psychology" onto that.[49] In short, the process of coding is an interpretation of one type of language through the lens of another. This projection is similar to Jameson's ideologeme. For example, consider the Fox and Rabbit diagram. One such predator-prey simulator, the Fox-Rabbit program, is an entry-level coding exercise that helps coders apply object-oriented ontologies in their code. Coders are to make three classes (a group in which code operates): the fox, the rabbit, and the simulation. The program contains a count of the fox and rabbit population. In a grid, each square carries either a fox, a rabbit, or an empty plot. The program runs on a turn-based time sequence. Each turn usually represents an arbitrary length of time, and inputting a higher number will run a sequence that occurs over a more extended period. At the end of every turn, a certain number of foxes and rabbits die, leading to empty plots in the program. The goal of the coder is to find a formula that leads to a sustainable ecosystem where the death and birth rates of foxes and rabbits reach an equilibrium. The program attempts to mimic a projected, complex goal: achieve sustainability. The code, however, never interrogates,

---

[48] Chun, *Programmed Visions*, 22.
[49] Ibid.

and is never meant to interrogate, extant factors in sustainability. In the exercise, coders never implement humans, pollution, deforestation, outside species, or other factors hugely influential on native ecosystems. Therefore, in this situation, the code is an exercise of ideology - the coder must navigate the instructive code to apply a certain imagined 'logic', but the logic cannot account for all factors. The code sets up a space in which an event or idea must be translated into a network of processes, leading to programmers declaring what does and does not get translated. The anthropocentrism in implementing the Fox-Rabbit diagram is an ideologeme, and speaking more generally, every piece of digital software is, by nature, an ideologeme.

Broadly, Jameson's ideologemes also operate as platforms upon which narrative contradictions can discuss and resolve their issues. In this way, ideologemes are reminiscent of batches of code. Nowhere is this more visible than through Wendy Chun, who likens code to sorcery. She argues that a coder is akin to a sorcerer. The sorcerer manipulates mana, chants an incantation, and something happens. Code is the same thing: by writing a line of code, one can compile something, and then it happens. If what happens is unintended, debugging follows. Following this comparison, software results from a collection of sorcerers making new magic. So, while coders must navigate the rules of instructive code, they must also navigate rules placed by other coders. Recalling Althusser's structural causality, the only way to interpret a structure (while part of it) is to interrogate the structure based on its interconnected linear mechanics. A program is similar. The program is a compilation of many linear mechanics that exist, much like a body, between each other. A function, a re-iterable block of code to do a specific thing, might connect to other functions. These functions depend on each other to form a script. Such scripts can form a set of operations. Eventually, there emerges so many iterative functions that a library of scripts becomes necessary for complex operations. Through this preloaded database of

instructions (natural in high concept languages), the complexity of instructive code leads to complex abstractions, forming a dense operative network. The metaphor of code illustrates a similar challenge with ideology, even through a structuralist perspective: even if the basic units are intelligible, the increasingly complex relations between units make intelligibility difficult. Ideology, like code, is exceedingly difficult to parse in its small units, as the interaction between even the smallest divisible units of operation quickly become building blocks for more complex meshes of interactions.

In addition to the complexity of operations, Chun also argues that programs depend on interfaces, becoming another layer of ideological control. She argues that interfaces "have become functional analogs to ideology and its critique - from ideology as false consciousness to ideology as fetishistic logic, interfaces seem to concretize our relation to invisible (or barely visible) "sources" and substructures. This does not mean, however, that interfaces are simply ideological."[50] In short, the interface is a metaphorical system. It is a stand-in for complex tasks that, for users, might be too difficult to entirely comprehend. There are two aspects to note. One, the interface is a readable manifestation of lower-level assembly data. Two, the interface is a throughput of traceable instructions. The results are systems of what Chun refers to as a daemonic quality[51] - hidden, working in the background, almost never under the user's direct control. To Chun, nowhere is this clearer than in the graphical user interface or GUI.

The general purpose of the graphical user interface is to maximize the software's appeal to as broad an audience as possible, which is similar to how ideology interpellates its subjects. Chun argues that GUIs offer an imaginary relationship to hardware: "They do not represent

---

[50] Chun, *Programmed Visions*, 59.
[51] Ibid, 60.

transistors but rather desktops and recycling bins."[52] The end goal is to produce users. To achieve

those goals, interactions adopt an ethos of 'user-friendliness,' but Chun argues that the user does

not realise the constriction and interpellation until the GUI becomes nonintuitive. The programs

are, in many ways, meant to 'make sense,' and when they do not, they show their underlying

forms of control. Additionally, programs provide positive and negative feedback, reinforcing

specific ways to use them. Bells, whistles, colour, font choices, and naming schemes ("My

Documents" to reinforce a sense of ownership) reinforce how a piece of software expects a user

to behave. In striving for an intuitive interface, programs often reinforce a particular sense of

intuitive design, replicating these actions throughout most adjacent systems. For example, to

navigate multiple Windows applications, users might click on an application and then scroll. In

comparison, on OSX, users do not need to click on windows. On a tablet, page swiping might

use rubber-banding (where the page bounces back with elasticity) because of a design decision

influenced by skeuomorphism. In comparison, rubber-banding might not exist on a Windows

Internet browser on a computer because users work with a mouse or a trackpad. These examples

seem minor, but Chun argues that ideology works similarly: interfaces - like the ones we see in

software, in an operating system, etc. - depend on fetishistic logic.[53] In this sense, these elements

create a sense of enclosed, imagined self. When we remove these features, users notice that

absence. Users know they are not actual desktops, physical documents, or physical scrolling

pages. However, users develop a unique imagined relationship with these interfaces as if they

were. Tablet users are unlikely to experience rubber-banding in page scrolling and declare they

were the same as real page scrolling. However, removing that feature creates a noticeable lack in

the interface, drawing attention to its absence.

---

[52] Chun, *Programmed Visions*, 66.
[53] Ibid, 67.

The graphical user interface is also daemonic in the context that software begets software, leading to increasing layers of accepted obfuscation and control. Chun argues that as interfaces become more straightforward to use, increasing levels of separation between the assembly code and the user emerge. Notably, as interfaces become more complex and intent on driving distinct images of a user-device relationship ("This is YOUR account") and as more and more processes are hidden from users, software naturalizes its obfuscation with increasing ease. For example, in the animation and composition software *After Effects*, the program carries its own internal code with its own internal interpretive kernel. Dan Ebberts from animation and scripting website *Motionscript* describes explains the differences between mapping oscillation versus how a program would interpret oscillation.[54] If someone wants to use the program to animate a bouncing ball, they do not use a sine wave oscillation formula, which might look like this:

```
amp = 80; freq = 1; decay = 1;
        t = time - inPoint; ampMath.sin(tfreqMath.PI2)/Math.exp(t*decay);[55]
```

Ebberts' formula here is much shorter because this represents how a computer would calculate the position of a ball, mimicking a simple bounce animation. Yet because After Effects is working with material in a 2D space (or virtual 3D space), and because it must render these results out in a framerate, the program obfuscates the bouncing ball utilizing its own interpretive system, what might loosely be called a kernel. Therefore, the parabolic movement of a ball might be written like this:

```
n = 0;
        if (numKeys > 0){
        n = nearestKey(time).index;
        if (key(n).time > time) n--;
```

[54] Dan Ebberts, "Realistic Bounce and Overshoot," MotionScript, 2012, https://motionscript.com/articles/bounce-and-overshoot.html.
[55] Ibid.

}[56]

Because *After Effects* works with keyframes, an animator would need to index keyframes. The result would be a much longer formula since the animator would need to factor in video length, height, and initial values, among other things. For example, if a clip needs to show a realistic bouncing ball for three seconds, then an animator would need to change the formula to shorten the animation or the oscillation dynamically.

The After Effects bouncing ball expression is an example of representational logic. As animation software, After Effects needs to translate the physics of the ball into keyframes that its operator can dynamically control. How it translates the bounce is hidden; what matters is that we adopt the logic of the program to mimic what we want to accomplish. If the program changes, then the expression changes. The software plays a direct role in how users interpret messages (through its interfaces), as well as how they construct messages (through the way these programs interpret freedoms of expression and choice).

While Chun argues that software is ideological because it adopts the fetishistic logic (like Žižek), I argue that we can also understand the daemonic nature of software through structural causality (like Althusser). Like ideology, a piece of software's entire network of operative relations is impenetrable. By analyzing its operations (linear causality mechanisms) and what we believe is its structure, we can make claims about how this larger structure works. This micro-to-macro process has been a practice in highly asymmetrical breakdowns of programs. For example, in 2018, developer GalaXyHaXz reverse-engineered the entirety of *Diablo*'s source code through an available symbol file (a file that indexes functions and strings) and assertion

---

[56] "Realistic Bounce and Overshoot."

statements (statements that check whether certain assertions hold true).[57] From there, GalaXyHaXz could see how these values interact with each other and, as a result, reconstruct the original game's source code. However, the system is still overdeterministic. Even if coders can break down the code in software and have the system do what they want, there is still the assembly language (how it talks to the computer), drivers (how hardware and software can translate instructions), and instruction explosion (where higher-level languages link with numerous, complex networks of lower-level processes). Though we might think of the software as a standalone piece, any given program makes a series of calls and recalls that are hidden from coders and operators. What matters, Chun argues, is what users - and subjects by extension - do.[58]

Yet that brings up a corollary: why not focus more broadly on software? Why focus on digital games in particular? Unlike production and analysis software, digital games leverage mechanical relations to express abstract, conceptual issues as intrinsic to their operation. Therefore, digital games exist at a crossroads between two relevant conceptions of ideology: ideology as a complex fiction and ideology as a system which shapes us. This is where Jameson is crucial: Jameson's three horizons outline a basic approach to analyzing a game's narrative in relation to its mechanics. For example, because digital games are spaces of play that often (not always) carry win-and-lose states, there are multiple interpretable symbolic acts. Multiple end narratives and ways to reach those end narratives allow us to witness the transition to the second horizon more easily. Also, because the game must juggle an instructive system (its programming) with a space of exploration (the game as we can actually play it), there are additional symbolic

---

[57] Modern Vintage Gamer, "How Diablo was completely Reverse Engineered without Source Code," YouTube, July 1 2019, https://www.youtube.com/watch?v=5tADL_fmsHQ.
[58] Chun, *Programmed Visions*, 67.

acts revealed through analyzing how the game operates. In looking at how the game is created and played, we can reach for Jameson's third horizon, the imagination of the totality, a system made out of a network of contradictory processes reaching towards some transitional period of history.

The unique position of the digital game is that it's both a system and a narrative, neither taking precedence over the other. Moreso, what distinguishes digital games from tabletop games is that digital games are, by their nature as digital games, always filtered through prisms of technological relations. Certain digital games only run on certain consoles, need certain types of hardware, can only be interacted with using certain peripherals, and at each stage, constantly checks for compatibility with other, broader systems. A tabletop game can fail due to material (not having enough pieces) or through player actions (cheating), but a digital game can fail or present a completely different experience entirely through conditions of its own operation (frame rates, crashing, poor optimization). Additionally, digital games are interfacial artifacts, making digital games very good at showing and omitting underlying processes. Chun's outline on the effects of daemonic interfaces on software applies equally to digital games. Digital games incorporate interfaces of their own, how they work with kernels, and their production and their play can involve taylorized systems reflecting capitalist relations of productions. Digital games also depend on narratives even if they do not necessarily need stories. They are complex machines straddling the line between layers of interaction and expression, and it is in those spaces where we can find numerous political vantage points.

Chapter 3: Ideology and Games as Politics

To say digital games are political is not innovative, instead I aim to outline some of the ways political and ideological tend to be presented, specifically how the latter is often used as a shorthand for the former. Notably, I focus on how oftentimes discussions of the ideology of games generally describe its seemingly intended or interpreted political messages. However, this brings up an issue: if my argument thus far suggests that digital games can shed light on ideology, and ideology does not need to be political (in the colloquial sense), then what exactly does an examination through this structuralist springboard provide us beyond political implications? I argue that games can be loosely considered as compiled manifestations of Althusserian ideology, in that they depend on rote interaction so players can internalize practices alongside more hidden examples of interpellation. Additionally, games emphasize operations between processes. Because we can rarely see and understand the entire network of processes, we study games using a black-box analysis method, strikingly similar to Althusser's emphasis on structural causality as a structure of linear causal mechanisms. I demonstrate how this can happen by looking at a rules file in Westwood Studios' 2002 game *Red Alert 2,* demonstrating how digital games can carry ideological connotations. At the same time, I also argue that we should not restrict ourselves to just focusing on processes. Recalling Chun, digital games, like software, also depend on graphical user interfaces to hail their users. Likewise, even though processes comprise games, those processes inter-implicate visual, audio, and storytelling, and fan cultures. Using Azuma's database model and visual novel representation, I argue that not only can a game's visuals borrow a computational logic of its own, but the rules-based processes, as explained in Bogost's section, can be driven in turn by visual, audio, or narrative representations.

If software is ideological and digital games, being software, are ideological texts, what has been said about ideology in games? In game studies, ideology is often used as a shorthand for political inclination. In this situation, ideology is often colloquial - the ideology of a game also refers to its politics. Ian Bogost in *Persuasive Games* uses ideology in this fashion. Though Bogost begins with an outline of ideology by recalling Žižek, Althusser, and Gramsci, Bogost's use of ideology is primarily based on the game's political messages rather than an overall analysis of ideology. Through procedural rhetoric, a focus on rule-based representations and interactions,[59] Bogost argues that games, as a system of interactive processes, are couched in socio-historical influences. In this situation, Bogost's analysis falls into Jameson's first horizon, reaching the point of the symbolic act, though Bogost does not pursue further.

Instead, Bogost describes ideology as a form of expressive discourse, a regular occurrence in game studies.[60] Here, games are tools for mapping out a particular worldview which ends up being the closest he gets to an in-depth analysis of ideology.[61] While Bogost acknowledges Althusser and Žižek's theories of ideology, he acknowledges them based on their Repressive and Ideological State Apparatuses and Žižek's false consciousness more than an involved analysis of how both scholars' differing perspectives on ideology inform the way system processes are operated, created, and played. Ideology, in this case, is political. Bogost is not alone. Ideology, when mentioned, often appears as a shorthand for political inclination. Nick Dyer-Witheford and Grieg de Peuter in *Games of Empire* and Joel Penney in *Joystick Soldiers* both incorporate ideology into their central discussions, but neither focuses on ideological structures. Like Bogost, Dyer-Witheford and de Peuter reference Althusser, though they focus on

---

[59] Ian Bogost, *Persuasive Games*: *The Expressive Power of Videogames* (Mit Press, 2007), ix.
[60] Ibid, 52.
[61] Ibid, 75.

interpellation, arguing that "games, like other cultural machines, hail…us in particular 'subject positions.'"[62] Here, ideology refers to upholding the presumption that games—like all other texts of ideology—make subjects in a specific fashion, though Dyer-Witheford and de Peuter do not focus on how that interpellation occurs. Furthermore, ideology is presumed to be natural, yet instead of examining how ideology behaves, Dyer-Witherford, de Peuter, and Penney are more focused on acknowledging that it is ideological. By establishing that games are ideological, more emphasis is placed on what specific ideology these games might represent or propose.

At the very least, Dyer-Witheford and de Peuter's *Games of Empire* mentions ideology, even if only to reaffirm that games are political. In some texts, especially about games presenting or proposing ideas and values, ideology is scarcely mentioned. Nowhere is this clearer than in Mary Flanagan and Helen Nissenbaum's *Values at Play in Digital Games* and Katherine Ibister's *How Games Move Us*. For the former, the only mention of ideology refers to a historical note on Lizzie Magie, the creator of *Monopoly*. Though *Values at Play in Digital Games* argues that games have embedded political and ethical values and that the role of a conscientious designer is to be aware of what values are embedded,[63] Flanagan and Nissenbaum never relate those values to any ideology. Here, games are expressive artifacts, and to Flanagan and Nissenbaum, designers imbuing their games with good values will invariably lead to games with good values. In fairness, Flanagan and Nissenbaum are largely focused on games that lead to more significant social action, and thus, values are more propellants to action than values that emerge as a result of system subjectivation.

---

[62] Nick Dyer-Witheford and Grieg de Peuter, *Games of Empire: Global Capitalism and Video Games* (University of Minnesota Press, 2009), 192.
[63] Mary Flanagan and Helen Nissenbaum, *Values at Play in Digital Games* (Mit Press, 2014), 11.

Whereas Flanagan and Nissenbaum focus on games as engines for political and social expression, Katherine Isbister's *How Games Move Us* is working from the perspective of players rather than developers. Though Isbister's text does discuss design, much of her analysis is couched in player-centric interaction. Like Flanagan and Nissenbaum, *How Games Move Us* lacks any reference to ideology. With regards to ideology, *How Games Move Us* and *Values at Play in Digital Games* carry a common thread that represents a significant portion of game studies: despite a drive for understanding how games shape – and are shaped – by subjects, there is little discussion about the implications of that subjectivation that could fold back to broader discussions on ideology. In short, despite the differences in their vantage points, neither approach ideology as a serious topic of analysis.

However, I am not arguing that this non-use of ideology is incorrect or misguided. Instead, I argue that, instead of using ideology as a shorthand for politics, we can wed games into complex systems of subjectivity concerning those systems. Using ideology as a shorthand for political positions means we risk making a few problematic claims on games as systems. One, arguing that the politics of a game is its ideology suggests that simple changes in games will change its ideology. The problem is that it ignores digital games as products of taylorized production. Neither *Values at Play in Digital Games* nor *How Games Move Us* go into significant detail about the development of games but rather suggest that game design is a primarily expressive exercise whereupon social and political responsibility of messages ends at the designer. Two, by conflating the game's perceived politics as its ideology, we risk underplaying a game's ability to entertain multiple, *simultaneous* vantage points. Games are closer to a diorama, a snapshot of an event, idea, or belief that can be witnessed from many different perspectives. However, like a diorama, a game still carries a substrate. Combining the

39

politics of a game with its ideology risks conflating its operations and how its operations came to

be with a utopian end goal. Only by interrogating the game as a system can we look beyond the

immediate political messages and see how these games seemingly crop up these messages.

Chapter 4: Ideology and Games as Systems

Compared to Flanagan, Nissenbaum, and Ibister, there are attempts to analyse the ideological element of games as a form of percolative maachine. Jonathan Bailes and Matt Garite have looked at games as ideological systems, though the former has devoted much more time than the latter. In *Ideology and the Virtual City*, Bailes argues that games such as *Grand Theft Auto V* and *Saints Row IV* reinforce neoliberal structures because of their internal contradictions. As a space of both critical and conformist elements, games end up failing to confront the prevailing neoliberal order, yet privileging actions that seem to undermine that order.[64] The trouble, Bailes argues, is that games allow players to explore, wander, and mess with the game's system itself. This leads to moments of ludonarrative dissonance, where the gameplay and the narrative clash, and thus games become sites of political non-commitment. That non-commitment betrays a sense of dissatisfaction with neo-liberalism, but that dissatisfaction is built upon a series of mechanics that ultimately uphold those neoliberal values.[65] Here, Bailes' analysis of ludonarrative dissonance as a site for potential symbolic acts is one method that argues for the relevance of Marxist discussions on ideology in digital games.

In comparison to Bailes, Garite presents a more generalized discussion on games as ideological systems, especially through Althusser. Garite, in *The Ideology of Interactivity,* focuses specifically on interpellation, arguing that the digital game is a system that incentivizes and internalizes its own cultural logic of action and reaction. The code of the game, Garite argues, sets up a series of fluid rules in favour of a driving end goal, whereupon proper reiteration of the code's demands leads to distinct outcomes. "Players," Garite notes, "are made

---

[64] Johnathan Bailes, *Ideology and the Virtual City: Videogames, Power Fantasies, and Neoliberalism* (Zero Books, 2019), 153.
[65] Ibid, 153-154.

to feel like these decisions matter or have consequence, since the imprisoning code that determines such options always remains hidden from sight."[66] The obfuscating nature of the firmware makes that imprisonment even more pronounced. Similar to Chun's argument on daemonic interfaces, firmware forms a bedrock of out-of-sight computational narratives. In this sense, software is like Althusserian ideology, economic-in-the-last-instance, though the process to reach that last instance is demandingly complex. Instead, what takes precedence is how the game acts, not only in relation to player inputs, but also how it sets up expectations on player behavior.

Both Bailes and Garite make important claims in their respective analyses, especially when it comes to the conclusion that games are interpellation machines. For instance, Ubisoft's *Far Cry 4* shows how games are both spaces of internal contradictions and devices hailing players. A first-person action-adventure game, *Fry Cry 4* has players assume the role of Ajay Ghale. Ghale is returning to his native homeland, Kyrat, a fictional country. The purpose of his visit is to spread his mother's ashes. Unfortunately, the Kyrati Royal Army intercept Ghale's bus. Shortly after, he meets the ruler of Kyrat, King Pagan Min, at his mansion. Min tells Ghale (whom the player can control) to wait. Here, the game directly demands the player to deny it. However, on another level, denying the request in the narrative reveals the hailing. If the player denies Min's request and explores the compound, they run into Golden Path, the resistance army. This sets up the main series of events in Far Cry 4. If the player heeds Min's request and waits, Min eventually returns. He then takes the player to his half-sister's shrine, where the game ends. Fittingly, the end credits plays *Should I Stay or Should I Go* by The Clash.

---

[66] Matt Garite, "*The Ideology of Interactivity* (Or, Videogames and the Taylorization of Leisure)," *LEVEL UP Digital Games Conference Proceedings* (DIGRA, 2003), 5.

Here, the game presents both discussions Bailes and Garite discuss. The game is an examination of contradictions in that as an open-world RPG, players come in expecting to explore. To "break out of the compound" is a suggestion players familiar to the genre will know. However, it is precisely by breaking the request of the antagonist that players also become interpellated: as a *Far Cry* game (known for open-world exploration), it suggests (but never outright requests) to the player that they should wander around the compound, thus triggering the inciting incident. The game uses its narrative (Min's request to wait) as a signal to its player. Players internalize their decisions as natural and, when choosing to wander, reject Min's request. Doing so, the player is interpellated since the game's main arc begins when players wander the compound. Here, we find the multi-layered dimension of interpellation but also the role of games as contradictory. Games, by their nature of choice, allow players to ruminate and position themselves in a system that makes demands of them, even if these demands might lead to similar outcomes. But the rejection of the narrative quest ("stay here") is at odds with the mechanical quest (explore), and only in the realisation of both factors (its contradiction) do players set in motion their exploration. Yet by realising it as a contradiction (in that nobody will stand around waiting for Pagan Min to return), players become interpellated by the game's design. It is also worth mentioning that this relationship is built on a layer of unrealness; *Far Cry 4* writer Mark Thompson argues that the alternative ending is the true ending, that players – had they behaved like real people – would have waited and not risked Min's ire.[67] Games, by their nature, are texts that have developed a robust language for directing players while convincing them that these

---

[67] Chris Harding, "Far Cry 4's Alternate Ending is Actually the "True" Ending According to Narrative Director," The Games Cabin, https://www.thegamescabin.com/far-cry-4s-alternate-ending-is-actually-the-true-ending-according-to-the-games-narrative-director/.

decisions are fundamentally *theirs*. We expect the request to be broken because breaking the request is part of a more subliminal request in the game's design.

Ian Bogost and Black Box Analysis

However, just as Althusser's claim that ideology is economic-in-the-last-determinant, we can also say that digital games are material-in-the-last-determinant in that we can easily acknowledge that digital games bear several levels of overlapping planes of instruction but how much of that can be analyzed is up for debate. After all, both Garite and Bailes' primary focus is on a game's mechanics, but if games are systems, especially ideological systems, and games are useful because they can be opened tinkered and studied and tinkered with, why not go as deep as possible? Why not strip it down to its source code? There are two reasons why. One reason is that prioritizing code risks ignoring how code works with non-code elements like graphics and sound. Another reason, as Bogost argues, is that games have an additional layer of complexity because of their digital obfuscation. Since games are products of complex, specialized, skilled labour whose complexity is hidden in the end product. Analyzing games in their totality demands some familiarity with animation, programming, structure, psychology, and, usually, business. Rather, as Bogost stresses, a core component of games is not the existence of code alone, but the codes as it relates to rules: digital games are cultural artifacts which depend on ongoing processes to present arguments. To Bogost, this happens through procedural rhetoric, or "the art of persuasion through rule-based representations and interactions rather than the spoken word, writing, images, or moving pictures."[68] To Bogost, digital games are unique in terms of their expression, in that they can only be expressed by being played. In digital games, processes lead

---

[68] Bogost, *Persuasive Games*, ix.

and exist as the artifacts they express.[69] Therefore, understanding processes is crucial, but how to

do so is challenging since games are nearly impossible to break down to their code,[70] and game

companies keep engines a secret. Therefore, if we analyze a game, how much emphasis should

we put on the code, and if we cannot see the code, what do we do?

Bogost argues that instead of a code, we can break down the game's procedural rhetoric

through its visible operations, a method known as black-box analysis. Because we often cannot

"open up" games, Bogost proposes focusing on extrapolating potential approaches or problems

through an analysis of a game's effects.[71] Compared to white-box analysis, which is a direct

breakdown of its code, black-box analysis is more applicable to digital games, given that

companies often go to great lengths to keep engines and how their engines compile a secret. The

lack of structural immanence bears similarities to Althusser's concerns with ideology, in that

disassembling a piece of software and understanding its code can be such an obfuscating process

that anything that can be gleaned from the code does not always reveal the structure. Rather, how

it operates in the structure could be as far as we can understand it.

However, this does not mean that analysis of some level of code is impossible; to recall

Chun, code is sourcerous, in that it *does* something. This is the double element of code that

Alexander Galloway calls an enactive and legible state, where the former is the coder's attempt

to express or set in motion something, and the latter attempts to use proper recalls within a code's

given library.[72] Thus even though black box analysis is the preferable method, analysis of

performed code and the rules it reflects still sheds light on ideological connotations. For instance,

ideology remains in documented subcomponents, by which I mean code associates a deeper

---

[69] Bogost, *Persuasive Games*, 10.
[70] Ibid, 62.
[71] Ibid, 75.
[72] Alexander Galloway, *Procotol: How Control Exists after Decentralization* (Mit Press, 2004), 228.

engine with an interpretable set of components. This interaction-oriented analysis of a system is at the heart of modding: most modders do not have an intricate understanding of a game's underlying engine, but modding requires a workable understanding of how a game uses its subroutines (tasks that operate as a unit). Westwood Studios games illustrate how ideology remains in code. Consider their real-time strategy game *Red Alert 2* (2003). Set during a campy Cold War, *Red Alert 2* pits nine states against each other. These nine states are grouped into two major political factions: the Allies (consisting of America, France, Great Britain, Germany, and Korea) and the Soviets (consisting of Russia, Libya, Cuba, and Iraq). In-state differences revolve around their unique units, but are otherwise mechanically and graphically indistinguishable from other nations in their respective factions. On the surface, this is a straightforward situation of placing subsets for unique units. Setting up the two factions gives more options for different strategies.

Yet a look into the modding process of *Red Alert 2* demonstrates a commonplace practice in digital games, in that their designs are built on practices and protocols to reflect specific relations that preceded them, demonstrating how their rules are by design ideological. The modding process of *Red Alert 2* depends upon homebrewed extraction software which does not engage with the engine directly, but breaks down compiled proprietary file formats into editable components. Here, we can find one such extracted file - rules.ini – to understand how the game interprets its values. Like all digital games, *Red Alert 2* holds master lists connecting units through indexed labels called strings. Each string refers to a set of changeable values. When a function calls on a certain string, it will always call upon the string that's indexed in the master list. As a result, the rules here communicate with the game's engine. For example, the Allied

power plant has the string labelled GAPOWR. If a building can only be constructed when there is an Allied power plant present, then the rules can be modified as such:

[Building String]
Prerequisite=GAPOWR

For the Soviets, rules.ini labels the power plant as NAPOWR. Because these strings can also hold values on their own, they can link to other subroutines. Cost and build time are two examples. Modders can change the nature of the game to whatever they wish by modifying these strings and the corresponding master lists. At the same time, how the file structures the naming convention reveals information on the development of the game and its presuppositions. In the expansion, *Yuri's Revenge*, the game introduces a third faction, the titular Yuri. The strings in rules.ini shows that Yuri's power plant string is YAPOWR. In comparing the naming scheme from the Allied and Soviets to Yuri, the pattern continues. However, why are the allies listed as GAPOWR and not, for example, AAPOWR? Why are the Soviets listed as NAPOWR and not SAPOWR? The reasoning is that this is not the first time Westwood has set up this string grouping. A year before, Westwood Studios published a post-apocalyptic game titled *Tiberian Sun*, a sequel to their 1995 RTS game, *Command and Conquer*. *Tiberian Sun* pits two factions against each other in a world ravaged by an alien plant known as Tiberium. Like *Red Alert 2*, it pits two main factions against each other: the Global Defense Initiative (GDI) against an evil fanatical terrorist organization known as The Brotherhood of Nod. Going through the rules for Tiberian Sun's own rules.ini file, we find something familiar. GDI power plants are listed under the string GAPOWR. Nod is listed under NAPOWR. Given the one-year gap between Tiberian Sun and Red Alert 2, it is unsurprising that Westwood Studios would carry over similar codes for

47

RTS games with similar play styles. Yet the similarity is important: while in *Tiberian Sun* the GDI are unequivocally presented as good and Nod as evil, the same rules bear traces of traces of which faction Westwood Studios deems the canonical good and which as evil. A sense of Othering has, in effect, remained in the code.

In the case of *Red Alert 2*, if we believe that the game is a set of processes, then how such processes are made might imply how code transfers traces of an ideology. In *Red Alert 2*, the Allies are taking the GDI codes; the Soviets are taking Nod. The naming implies a parallelism between the two, but none of that is narrative: the parallelism is hidden in the game's rules. The code sets up an ideological position: the Allies are the good guys (just like how the GDI are the good guys) and the Soviets are the bad guys (just like how Nod are the bad guys). This is even more notable in defunct parts of the old rules file, where old superweapons are retrofitted into new superweapons, some of them carrying similarities. The technologically advanced and futuristic Allied weather control device shares a similar string to the technologically advanced GDI Ion Cannon. The Soviet nuclear missile bears a similarity to the Nod cluster missile. This example, while minor, shows that code is not a clay-like, pure object which is then shaped or sculpted by an ideological subject. Instead, code begins as ideological, bearing the influences and patterns preceding it. The repetition of the names in the code suggests that even if Westwood established no clear narrative relationship between *Tiberian Sun* and *Red Alert 2*, the developers have already staked out claims on who the "good" and "bad" guys are in the very process of how the game operates. The ideology of a game, in short, can extend into its hidden components.

Hiroki Azuma and Database

Though processes will play a major focus going forward, I must also caution that games are not entirely based on their processes, but an interlocked set of relationships between those processes and the representational elements which help engender their meaning. There is thus a cycle between interactive and noninteractive components at play, forming a meaning-making feedback loop where one depends on the other. Recall Chun: users do not engage with software directly; they engage with software through graphical user interfaces or GUI. GUIs, therefore, turn users into subjects. While processes underline GUIs (clicking a button suggests the user knows that something will happen), the visual, audio, and narrative representation also shapes people into users. This is not aside from the underlying calculated processes in a game, but work alongside them. This is crucial since noninteractive elements can adopt a representational logic that does not need complex processes but levies cultural and subcultural reading methods to subjectivate users.

This is the strength of Azuma Hiroki's concept of databasification. While Bogost's black-box analysis recollects Althusser's structural causality, Hiroki Azuma's database concept demonstrates how objects turn into processes on their own. This concept is influenced by the text which forms the site of his analysis, the visual novel. Visual novels are digital games with character portraits with limited animation, minimal player movement, and a heavy focus on dialogue. This style of representation creates a mechanical genre that is very simple on a process level. Characters often have re-used portraits, relationships and plotlines follow linear pathways, and variables are frequently boolean (returning true or false values). Most actions in visual novels are menu-driven, with gameplay boiling down to dialogue options. However, a standout element of visual novels is an emphasis on many endings, often with no emphasis on a 'canonical' ending. Though some visual novels can have what players consider a "good ending"

49

or an optimal ending where players receive positive results with no significant compromises, visual novels can have multiple "good endings." The implication, therefore, is that visual novels can have numerous, often contradictory timelines with no direct indicator of what the game suggests is the proper, "correct" ending. Because visual novels are simple in process complexity, they often lean on a complex network of meshed boolean variables as part of complex gameplay and narrative. For that reason, visual novels often lock endings behind a need to force the player to go through many play-throughs and narrative paths. I will revisit this in the section on Dan Salvato's *Doki Doki Literature Club*, but what is essential to this discussion is that according to Azuma, we can extend these design decisions of the visual novel to how users conceive of media as non-holistic entities with intertextual connections, approximating a form of nonmechanical process. The consequence of Azuma's databasification is a reaffirmation of the importance of nonmechanical elements in understanding the structure of digital games.

This outline of the visual novel is, to Azuma, emblematic of an increasingly common reading pattern where consumers no longer engage with texts as enclosed texts, but rather negotiate their meaning through components, a process he calls database consumption. This concept was meant to describe what Azuma saw as a development beyond scholar Eiji Otsuka's concept of "world consumption," or visions of text as inhabiting a world which gives it contextual power.[73] The act of reading, or narrative consumption as Azuma calls it, is an act of inhabiting the worldview: elements of text, such as the actions, characters, and themes, all draw from a culturally and socially determined context that drives the imagination of the text, and readers, in response, interpret that underlying imagination.[74] Database reading departs from the grand narrative scaffold and instead emphasizes a decentralized cluster of conventions. Here, the

---

[73] Hiroki Azuma, *Otaku: Japan's Database Animals* (University of Minnesota Press, 2009), 61-62.
[74] Ibid, 62.

database is a subcultural and socially dialogic collection of signs with unclear but often exercised boundaries. Readers subconsciously dissect a text and focus on elements of a text in relation to elements of another text, irrespective of either text's setting. Instead of a text as a manifestation of a worldview, to Azuma, the text lacks any deep layer on its own. Facets of a text connect like a network to other facets, and readers consume these elements instead.

Azuma uses the example of media property *Di Gi Charat* and its character Digiko, who was originally designed as a mascot for a game store in Akihabara, a ward in Tokyo famous for geek-related goods. Meant to sell goods in a specific market, Digiko's character design consists of intertextual signs recognizable to specific audiences. The cat ears, maid uniform, bells, and gloves are all drawn from other texts. The purpose, therefore, is not to pay homage to those texts but to create a visual connection with those texts for the sake of consumption. Because hardcore fans use these visual indicators, and because they will seek similar indicators, Digiko's presentation does not hail back to some underlying ethos but exists as a combination of floating markers that define her as an instanced combination. Therefore, to Azuma, when consumers look for stories, they do not look for stories involving specific ideas or themes, but traits such as girls with cat ears, curves, outfits, and while reading these texts, compare these traits to how they're portrayed in other stories.[75] Therefore, the implication is that games can express aesthetics that take advantage of the database.

---

[75] Azuma, *Otaku: Japan's Database Animals*, 73-74.

Figure 1. Digiko and a list of the character's elements.[76]

Azuma's database is loosely reminiscent of Lukacs' reification, in that images become a form of data point. Here, sliding layers in a game relate to specific subcultural and social meanings. Characters that have very specific character designs do not have just those designs simply because the designers prefer them. The designers are signalling to specific groups. As a result, these are fragmented images, sold and re-read as their own product. The database reading, a social relationship, manifests in the visual novel's computational aesthetic. The expectation that players will traverse multiple narratives, timelines, and reused assets is underlined by the belief that narratives are not abstracted just as stories but as commodities to be consumed.

---

[76] Azuma, *Otaku: Japan's Database Animals*, 62.
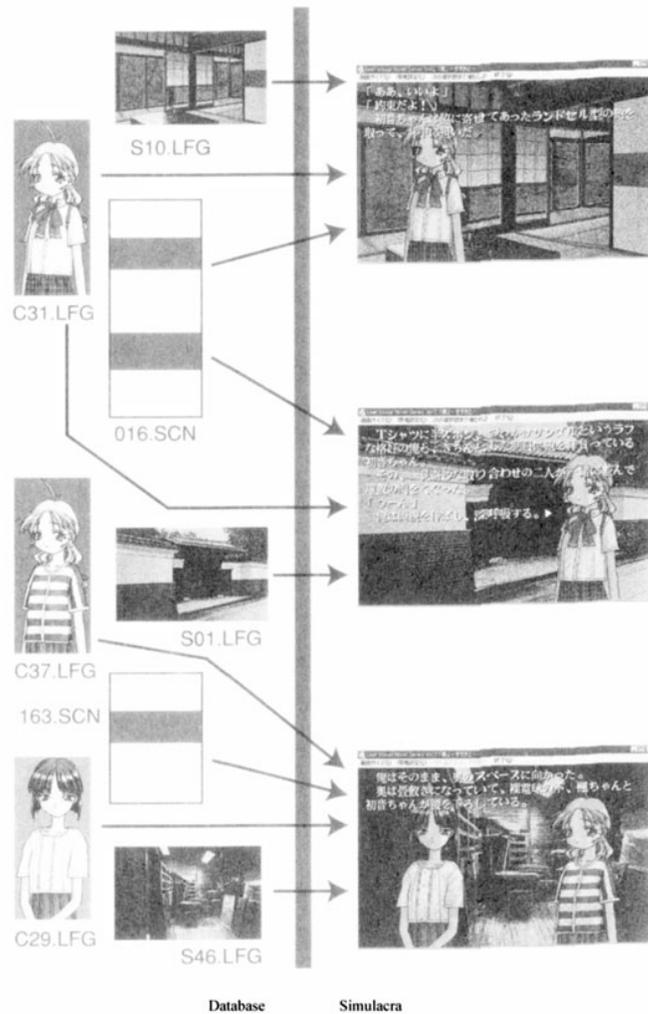
Figure 2. The screen of the visual novel is a composite of character elements to form a single component.[77]

As seen above, Azuma's example shows how these assets stack together to form a composite, and it is the configuration of said composition that empowers new ways of understanding the scene. The game, in short, encourages a process-like engagement, where composite images are beholden to rules tied to external social and subcultural reading strategies. With visual novels, this is what Azuma refers to as the double-layered structured,[78] where the

---

[77] Azuma, *Otaku: Japan's Database Animals*, 81.
[78] Ibid.

game is interpreted both as a compiled narrative but also at the same time an object to be dismantled. Database reading does not suggest that games do not care about their processes. Instead, database reading argues that games, like all texts, contain a complex, non-coded reading process that games are particularly capable of taking advantage of. The case of database reading does not suggest that aesthetics take precedence over processes. Instead, database reading suggests that processes operate alongside aesthetics, and even more so, we can interpret aesthetics as a quasi-process on its own. However, Azuma's database reading is primarily informed by a specific, subcultural text: visual novels and the otaku that read them. What about non-coded elements outside of database reading?

Jesper Juul and Screen Space

Azuma's database demonstrates how non-mechanical elements can create a rules-based reading practice, but similar discussions can extend to broader discussions of screen space. In arguing that processes can make arguments, Bogost also places less emphasis on a digital game's aesthetics, sound, and story. While Bogost argues that games make arguments based on their rules and mechanics, he sometimes underplays how intertwined aesthetics, sound, and story are to how these rules and mechanics are interpreted. This detail is vital as database reading suggests that while players respond to processes, these same processes are interfaced through non-processes. Therefore, the space where play occurs is not a direct, linear mechanics-to-player relationship, but a series of interactions negotiated by interlocking and interfering elements.

This set of interlocking relations drives Jesper Juul's emphasis on spaces, which form a bedrock on how non-process elements inform the processes which underline procedural arguments. In *A Casual Revolution*, Juul notes that games use three spaces: 3D space, Screen

space, and Player space.[79] 3D-space is the diegetic world of the game, where the character model exists. The Player space is the space where the human player exists. Screen space is the information on the television set's flat screen, the top layers that interface between the 3D-space and the Player space. Screen space is crucial because it is a representational space; it rarely depends on an input-output relationship with the player. Instead, the player interfaces with the 3D-space. Thus, the Screen space is a representation of the player's relationship with 3D-space, often in a quantifiable fashion. The Screen space is an essential element of games because while Screen spaces are relatively simple processes, they play a vital role in how a player navigates and interprets more complex processes. Though Juul focuses specifically on screen spaces in casual games, I would argue that interfaces and designs of games as visual markers operate similarly to Screen spaces.

We can see how these elements become impedances in the example of *Shaq Fu*, emphasizing the need to consider non-interactive elements in our analyses of interactions. *Shaq Fu* is an example of how animation, visuals, design, and non-processes can affect interaction in that despite adopting processes and rulesets orthodox to its genre, the composition of the screen space impedes how players relate to the other spaces. A fighting game on the *Super Nintendo* and *Sega Genesis*, *Shaq Fu* is a critically panned 2D fighter pitting a small roster of characters against each other, including former professional basketball player Shaquille O'Neal. The reason the game is critically panned is not because of its processes but because of its animation and design. Regarding animation, *Shaq Fu* uses overly fluid roto-scoped animation that does not sync with its controller inputs. In an analysis video explaining why *Shaq Fu* feels awkward and unresponsive to players, Youtuber *Core-A Gaming* notes that *Shaq Fu* carries nine frames of

[79] Jesper Juul, *A Casual Revolution: Reinventing Games and Their Players* (Mit Press, 2009), 183.

startup animation for its jumping and landing sequence.[80] *Core-A Gaming* compares this to *Street Fighter V*, another fighting game with four frames of startup and landing recovery. *Core-A Gaming* argues that *Shaq Fu*'s nine frames jump animation is because developer Delphine Software International came from a background in platformers, a genre that had more leniency with cinematic animation. Regarding design, *Core-A-Gaming* also mentions that *Shaq Fu*'s character sprites (a self-enclosed image integrated into a larger scene) are much smaller than most fighting games, making visual hit registry much more difficult and, therefore, seemingly unresponsive. Like animation, Core-A juxtaposes *Shaq Fu*'s character design with *Street Fighter V*'s, where characters have purposely large fists and feet so players can visually register when moves connect with an opponent. Neither components are processes, yet these elements are so interlocked in how players register processes that their presence cannot be undermined.

The case of *Shaq Fu* also reinforces how games depend on flow, of which presentation and aesthetics play a critical role. In *How Games Move Us*, Katherine Ibister argues that games have two unique elements when it comes to media immersion: choice and flow.[81] Flow is a state where one becomes so involved in an act that they lose a sense of time and operate at their best (loc 360). *Shaq Fu* is an example of how a game's processes are an insufficient indicator for players being engaged in a proper flow state. *Shaq Fu* is not a poor fighting game because of its processes. In fact, *Shaq Fu* is an orthodox fighting game with no major deviations from fighting games of its time. Rather, *Shaq Fu*'s flow is constantly interrupted by its design and its animation. Therefore, players rarely enter a flow state, a necessary condition for higher-level play in fighting games, and thus that limitation plays a crucial role in making a game feel "bad." Its visuals, in short, affect how players register its processes.

---

[80] Gerald Lee, "Shaq Fu: Analysis," YouTube, July 14 2016, https://www.youtube.com/watch?v=L-6GM6UVZSQ.
[81] Katherine Isbister, *How Games Move Us: Emotion by Design* (Mit Press, 2016), loc 317.

The example of *Shaq Fu* emphasizes the value of a structural analysis of ideology, specifically in that the technical composition of digital games bears a meaningful similarity to ideology. Both are non-hierarchical threads of cultural and technical considerations that, in the moment of engagement with the system, act as zones of both and expression and subjectivation. Delphine Software International's design language comes from a longstanding practice in one genre (platformers) which runs at odds with expectations of another genre (fighting games), and in doing so an entire host of connections fail to connect. Juul's emphasis on screens is important in this sense, in that non-processes are precisely what informs analysis of processes.

This shift to Azuma and Juul is essential because both stress, in different ways, why the ideology of the digital game is not divisible to its processes, despite this research's outsized emphasis on rules. As argued, because of the necessity of black-box analyses, games are, unwittingly, a defense of Althusser's concept of structural causality. Game processes, therefore, are a way in which we can tinker and understand with ideology, which penetrates right to its code. Yet such processes makes arguments through non-processes. Through Azuma, non-processes can adopt a process-like argument of its own. Through Juul, non-processes extend and inform processual arguments. Though digital games are helpful and insightful sites of analysis specifically because of their rules, the digital game is not solely its rules. Those rules always mean something, and it is in that interplay where ideology starts to emerge.

Chapter 5: The Subject of Apocalypse

Why Apocalyptic Games

If digital games are ideological black boxes, then why focus on apocalyptic games? This section looks at the apocalypse, its brief history, relevant theoretical elements, and how it connects to ideology and digital games. It begins with an overview of Frederic Jameson's shared code, arguing that the apocalypse serves as a shared code between two different cultures in digital games development (American and Japan), but also between processes and narratives. It then looks at the apocalypse as we understand it over time, focusing on the works of Frank Kermode and Motoko Tanaka. The section concludes that the apocalypse, defined as revelations and endings, is how a subject can imagine the end of a capitalist mode of production. Also how digital games must negotiate these imaginations with questions about uncertainty and scarcity might outline a subject's beliefs on a post-ideological world. Additionally, the apocalypse as an outline works specifically because it is a shared code.

A shared code is a general unity that links various dialogical, antagonistic struggles in a text into a manageable, analyzable field.[82] For Jameson, because a text is a collection of contradictions, the shared code acts as a focal point to address contradictions and differences when cross-analyzing texts. Here, Jameson's shared code is reminiscent of Mikhail Bakhtin's carnival, a space where relations of class struggle come together, and in their interactions, reveal greater messages on society. For Jameson, in *The Political Unconscious*, when he focused on Anglican literature, his shared code in 1640s England was religion. Despite cultural and class differences, even if contradictory, a unifying set of demands boiled down to religious perspectives framing the discussion. In this sense, the shared code is both a fulcrum and a filter,

---

[82] Jameson, *The Political Unconscious,* 84

an element upon which disagreements and differences *must* orbit around, and how they deal with these irreconcilable demands reveals more about their underpinning ideologies. In discussing the various ethnic, political, and social groups in 1640s England, Jameson believed that they shared an understanding of Anglican Christianity. How we resolve these questions, to Jameson, leads to symbolic acts.

I argue that the apocalypse is a similar shared code: it is a general unity linking both American and Japanese game development, but it also can link mechanics and narrative. The apocalyptic imagination is yearning for the destruction of an old system in favour of a new one. However, can digital games accomplish that if digital games are systems? Or are digital games adding on another layer of ideological control, possibly making them even more ideological? Is the apocalypse just another ideology? It is possible that how games set up routes to save the end of the world and what must be sacrificed is also a commentary on what subjects must sacrifice and believe in to defend their ideologies. But before even discussing what the apocalyptic imagination might mean for games, I need to explain the apocalypse.

Types of Apocalypse

Apocalypse can often engender images of vast swathes of destruction and chaos, thus closing alternative readings outside of a specific biblical, Judeo-Christian perspective. The Revelation of John is one of the most famous apocalyptic accounts in Judeo-Christian societies, including North America. Here, the apocalyptic image refers to the descent of Jesus Christ, the annihilation of wickedness, and the ascendance of the faithful. Originating from the Greek apokalypsis, meaning unveiling, the apocalypse is a callback to revelations. These revelations

unveil what Norman Chon considers "secrets hitherto known only in heaven."[83] Therefore, the origins of Judeo-Christian apocalypse draws from Hellenistic prophecies, or revelations authenticated by fictions passed down from the gods.[84] One of the most famous revelations is the Book of Revelations of the apostle John. It refers to Jesus Christ's return on Judgment Day, heralding a future for Christians and Jews.[85] Additionally, God's intentions are revealed to the people of Earth, so while the apocalypse involves Christ's descension, the Christian apocalypse also involves the unfurling of God's ultimate plan for humanity, hence the revelation.

This form of revelation (arrival of a deified figure and revealing the world's purpose) is not unique to Judeo-Christian hermeneutics. Motoko Tanaka notes that even in the most famous of western apocalyptic texts (John's revelation), the event draws upon Zoroastrian apocalyptic sentiments.[86] Especially noteworthy is that apocalypticism is not unique to a specific culture, and apocalyptic messages can cross between cultures, classes, and be used to form new signifiers for new apocalyptic sentiments. For example, Aum Shinrikyo, a terrorist cult that launched impure Sarin gas on the Tokyo Subway in 1994, drew from a mix of western and eastern apocalyptic texts to craft their own imagine of how the end of the world unfolds. In fact, apocalyptic imaginations, or the expressed form an end of a world takes, do not even have to follow John's Revelations. Eastern apocalyptic imaginations can eschew the chialistic concept entirely. For example, Tanaka argues that Japanese apocalyptic thought follows Buddhist eschatology, which follows extended periods of moral and institutional decay. Known as mappo, the ages of increasing anxiety in the face of corruption, the Buddhist apocalypse reflects three primary ages,

---

[83] Norman Cohn, *The Pursuit of the Millennium: Revolutionary Millennarians and Mystical Anarchists of the Middle Ages* (Pimlico, 1993), 163.
[84] Cohn, *The Pursuit of the Millennium*, 164.
[85] Ibid 214.
[86] Motoko Tanaka, *Apocalypse in Contemporary Japanese Science Fiction* (Palgrave Macmillan, 2014), 15.

with the first two ages comprising 500 years while the third - the age we live in - lasts 10,000 years. Unlike a dramatic event such as the descension of Christ and the Rapture, Buddhist apocalypticism interprets the end times differently, with very different time registries.

Additionally, returning to Althusser's claim that ideology is economic in the last instance, we can find that a subject's registry of their material conditions can change, especially based on cultural relations and class. The role of material conditions thus implies apocalypse as having some level of symptomatic element. Consider mainland Chinese Han apocalypticism. Tomas Swinburne notes that Chinese apocalypses herald new governments.[87] In this situation, governance seems perennial. Part of this lasting belief, Swinburne argues, is because of the Mandate of Heaven, or the belief that the gods hand down the ruler's legitimacy, and their performance reflected in the size and frequency of natural and administrative disasters. Here, the apocalypse refers to a political shift. Han Chinese apocalypticism does not always emphasize a broad, totalizing destruction, but instead suggests a new change, a heralding of something different. On a broader level, this suggests cyclicality in the apocalyptic cycle: the government changes, but there will always be a government. Thus, the situation focuses more on recycling a system for greater efficiency. Mingwei Song makes a similar point, noting that while "Christian tradition is linear, (in China), there is a circle, a change of dynasty, but not a change of the world."[88] Here, cyclicality legitimizes some level of permanence. The Han Chinese apocalypse is not a literal, physical undoing but a change in attitudes, peoples, and culture. The process therefore not only focuses on a continual remaking, but a particular form of remaking.

---

[87] Tomas Swinburne, "The Apocalypse Pysche: A Look at Chinese Eschatology," The Diplomat, November 10 2015, https://thediplomat.com/2015/11/the-apocalypse-psyche-a-look-at-chinese-eschatology/.
[88] Isaac Stone Fish, "The End of Days is Coming – Just Not to China," Foreign Policy, July 29 2016, https://foreignpolicy.com/2016/07/29/the-end-of-days-is-coming-just-not-to-china-apocalyptic-fiction-movies/.

The apocalypse can also vary by class. Because subjects have slightly different relations to their material conditions, their beliefs about how to change or destroy existing relations of production and exploitation will also change. Tanaka notes that in Japanese apocalypticism, there is the practice of yonaoshi ikki, or "riots for remaking the world."[89] These were riots based on the imaginations and acts of poor farmers. In comparison, the upper class' apocalyptic imaginations were much more abstract.[90] In fact, apocalyptic imaginations from the upper and noble classes would filter down to the middle and working classes, but due to material conditions, they would often be re-imagined.[91] Therefore, the apocalyptic imagination not only manifests differently between cultures but also classes. These differences can extend even further into subcultures. The main point is to stress that different conditions, classes, and subcultures will reflect the apocalyptic imagination differently. Even more so, within those groups, their imaginations remain highly up for debate.

Frances Ferguson and the Nuclear Sublime

Despite these critical cultural and subcultural differences, there is nevertheless a shared code in apocalypse, aided mainly by an increasingly globalized vision of material relations, and subsequently, visions on how to extend beyond that. Regardless of how it manifests, there are generally some basic ideas about what apocalyptic thought is meant to entail. The apocalypse often comes with the caveat that what people imagine after the end of the world is unimaginable. The system that lets subjects imagine their position and role in an ideological system no longer works after the apocalyptic event (in theory). Things have changed, but to what degree is unclear.

---

[89] Tanaka, *Apocalypse in Contemporary Japanese Science Fiction,* 34.
[90] Ibid.
[91] Ibid.

The shift and continuation of apocalyptic thought can be seen in Frances Ferguson's commentary in 1984 on the nuclear sublime. Ferguson muses that when he looked at his State Farm Insurance notice, he noticed it did not cover nuclear events: "Under no circumstances does your policy provide coverage for loss involving a nuclear incident."[92] Ferguson's commentary is drenched in the realistic possibility of nuclear war, as the Cold War was ongoing. Simultaneously, Ferguson makes an important distinction in that compared to natural disasters, State Farm Insurance draws the line at nuclear disasters. The nuclear disaster became the ultimate disaster, a moment beyond the pale where even insurance brokers cannot survive the post-nuclear fallout. Of all of the disasters, a nuclear disaster is the one in which something is truly apocalyptic.

Though amusing, Ferguson's commentary shows the intended sheer totality of the apocalyptic event. The complete annihilation or transformation of society must be complete in the sense that it bears no resemblance to society before the event. Even if there is no apocalyptic event, the scenario leading up to an apocalypse can suppose an inevitable change. In *After The End*, James Berger notes that, on the eve of Y2K, the apocalyptic mindset is

> …[a] semantic, alchemical process; it burns and distills signs and referents into new precipitates. The study of post-apocalypse is a study of what disappears and what remains, and of how the remainder has been transformed. It is a study of the ideological and psychological forces that direct the apocalyptic fissions and fusions. The apocalypse would be the "definitive" catastrophe - not only final and complete but absolutely clarifying.
> [93]

In other words, the apocalyptic event is only apocalyptic if it is clarifying and final. The subject believes that something about the way in which they think about society has changed or is changing, and as a result, makes predicting the future impossible. Peter Paik makes a similar argument, in that the apocalypse is final, dramatically declaring his book to be "a study of

---

[92] Frances Ferguson, "The Nuclear Sublime," *Diacritics* 14, no. 2 (1984): 4, https://doi.org/10.2307/464754.
[93] James Berger, *After the End: Representations of Post-Apocalypse* (University of Minnesota Press, 1998), 8.

revolutionary change."[94] The apocalypse, to Paik, necessitates a dramatic, incontrovertible change by default. This concept of change ties both Berger and Paik together, but hidden in that expectation of change is a conceit that what is changing is uncertain. The world, is other words, is still changing, and what is supposed to be a new world remains opaque to the viewer.

Frank Kermode's Sense of an Ending

Though Ferguson's anecdote sheds light on elements of the apocalypse, the anecdote largely eschews why the apocalypse is such a continual process. Frank Kermode's *Sense of an Ending* focuses on why people continually imagine apocalyptic scenarios. To Kermode, apocalyptic thought arguably thrives not in end times but in the middle. The apocalypse is how a subject predicts the end times even as they exist in the middle of an event; as a result, it compresses a subject's sense of history. Instead of a linear future, the subject interprets the present as a future past. This rejection of linear futurity can be seen in climate change. In a national survey sample, Yale Communications found that "close to 1 in 10 Americans think the Apocalypse will happen in their lifetime."[95] Stefan Skrimshire, in engaging with Christian ecotheology, notes that political bodies such as the United Nations subsume body metaphors with biblical metaphors. In doing so, the belief changes the way people interpret the implications of climate change.[96] As a result, this apocalyptic mindset distorts policy communications - why care about the world if the world is going to end? This fatalist mindset, Skrimshire argues, harms all

---

[94] Peter Paik, *From Utopia to Apocalypse: Science Fiction and the Politics of Catastrophe* (University of Minnesota Press, 2010), 1.
[95] Connie Roser-Renouf, Edward Maibach, Anthony Leiserowitz, and Seth Rosenthal, "Global Warming, God and the 'End Times'", Yale Program on Climate Change Communication, July 26 2016, https://climatecommunication.yale.edu/publications/global-warming-god-end-times/.
[96] Stefan Skrimshire, "Climate Change and Apocalyptic Faith," WIREs Climate Change 5, no. 2 (2013): 238, https://doi.org/10.1002/wcc.264.

possibility of imagining alternative worlds.[97] In this sense, apocalypse is reminiscent of Walter

Benjamin's concept of the revolution. To Benjamin, revolutionary events subjugate the present as

citations to history.[98] Focusing on an event's history risks robbing the past's status as a collection

of present moments. Instead, these moments represent a past moment leading up to an event. The

apocalypse is an inversion, where the perceived end defines present moments. In this light,

subjects do not imagine institutions or state apparatuses that affect them in the present, but

imagine them as past objects in the present.

The insistence on a perceived end defining a present moment is because apocalyptic

thinking, as Kermode suggests, occurs when people believe they exist in the middle of a time or

event. Thus, the extension of that time or event serves as the core of apocalypse as a window into

ideology. The drive to witness an end is also an unspoken presumption on not only which events

doomsayers wish, but also the boundaries of these events on which they linger. As a result, they

end up fantasizing about the beginning of a new period or the end of their current one,

fantasizing about these periods are always accompanied by presumptions about what those

events entail. In *The Sense of an Ending*, he argues that:

> Men, like poets, rush 'into the middest,' in media res, when they are born; they also die in
> mediis rebus, and to make sense of their span they need fictive concords with origins and
> ends, such as give meaning to lives and to poems. The End they imagine will reflect their
> irreducibly intermediary preoccupations. They fear it, and as far as we can see have
> always done so; the End is a figure for their death.[99]

In other words, being born in the middle is the existential concern that fuels apocalyptic thought.

However, Kermode notes that we die *in mediis rebus*. There is an important distinction here. For

in media res, the world is already in motion. Subjects rush along a narrative. A subject, therefore,

---

[97] Skrimshire, "Climate Change and Apocalyptic Faith," 240.
[98] Doug Enaa Greene, "Benjamin, Blanqui, and the Apocalypse," Red Wedge, September 13 2016, https://www.redwedgemagazine.com/online-issue/benjamin-blanqui-and-the-apocalypse0.
[99] Frank Kermode, *Sense of an Ending* (Oxford University Press, 2000), 7.

receives a call to action. Though the subject still exists in the 'middest' of the world, in that the

world has always and will continue to exist after their actions, the call is an impetus for action.

However, the fear, as Kermode suggests, is that subjects aim to avoid dying *in mediis rebus*, or

the state where they witness a world in progress. Imagining the apocalypse, therefore, provides a

semblance of control. Additionally, this anxiety is ever-present. Kermode likens this concern to

the tick-tock rhythm of a clock. Humanity always perceives events in time in a tick-tock

relationship, and the end is a person's demand that there must be a tock. In other words, the

apocalypse is how humanity copes with directionless, meaningless death. Thus, how subjects

craft an ending reveals their own 'middest' anxieties. However, Kermode's apocalypse focuses

on why people, internally, conjure up apocalyptic imaginations. Kermode places less focus on

the apocalyptic events themselves. Kermode largely focuses on the reasons why humanity

constantly generates apocalyptic imaginations. In comparison, James Berger places more

emphasis on *what* different kinds of apocalyptic events might entail.

James Berger's Disaster and Apocalypse

Whereas Kermode examines how the apocalyptic imagination stems from people dealing

with existential anxiety, Berger focuses on how disastrous events can conjure an apocalyptic

mentality. This connection is worth noting since the thread between disaster and apocalypse can

subsume more abstract discussions on apocalypse as a revelation. The reason this occurs is that

to Berger, apocalypse is segmented into generalized levels of interpretation. One, there is the

eschaton, or the moment where a world ends. Second, there is the imagined eschaton, where the

event seems so world-shaping that destruction legitimizes its own condition as said eschaton.

Third, there is the explanatory event, a profound destruction of the system that ends up

explaining how the system works.[100] These levels generate a paradox, in that if disasters are associated with the end, and yet are so natural, they can undermine that sense of pure ending. In other words, "the end is never the end."[101] Therefore, while Berger acknowledges the existence of the eschaton on a conceptual level, he is more focused on what remains after a perceived apocalyptic event. Because apocalypses presuppose an end that precedes a different, unrecognizable world, it is vital to know how the world changes or transitions. Berger's apocalypse does not involve or demand an internalization of existential anxiety for it to be apocalyptic. Instead, Berger's apocalypse acknowledges that events separate from an individual's anxiety can still be seen as apocalyptic. By imagining those events as apocalyptic, humans reveal presumptions about society and how it operates based on how it has collapsed - or will collapse.

Berger's senses of apocalypse are much more culturally specific than Kermode's, and his reticence to apply a universalist position reaffirms his concept of apocalypse as a kind of continual shift rather than a persistent psychosis. More specifically, Berger's focus on the apocalypse as an alchemical shift of society emphasizes how society is imagined, and thus provides additional insight on differences in apocalypse based upon culture. This account for culture is crucial, as even the apocalyptic event is itself cultural. For example, Motoko Tanaka notes that because of Japan's natural disasters, catastrophic incidents have a different registry compared to the West. The frequency of natural disasters localizes apocalypse, with the Japanese rarely recording instances of world-wide apocalypses.[102] Here, apocalypse was a local, frequent event, something to survive through. Keiko Hirata and Mark Werschauer in *The Paradox of Harmony* note that Japan alone carries 10 percent of the world's total active volcanoes, is the site

---

[100] Berger, *After the End: Representations of Post-Apocalypse*, 5.
[101] Ibid.
[102] Tanaka, *Apocalypse in Contemporary Japanese Science Fiction*, 35.

of nearly 10 percent of the world's large earthquakes, and carries very little arable land.[103] In

short, "(the Japanese) seek to endure nature rather than conquer it."[104] This is not to entirely

reject Kermode's position, but to caution: when we look at the frequency and ubiquity of disaster

in Japan, Kermode's three senses are more applicable to explaining why and how the Japanese

people might look at an apocalypse. Here, the emphasis on disaster is less because there is a

concern with dying in the middest, but that disaster is so ineffectual as a marker of history

because it happens so frequently. As such, disaster is not a means to understand the end of a

narrative but to reveal pre-existing structures that underlie it.

Lee Quinby's Anti-Apocalypse

Despite Kermode's emphasis on apocalypse and Berger's connection with apocalypse

through disaster, both tend to speak on the generalities of apocalyptic thought, that even if the

end does not apply to everyone, therein still lies a sense of totalizing finality occurring. Recalling

Ferguson's State Farm Insurance anecdote, apocalypse can be contradictory, in that it represents

the end of an ideology but can also lead to inaction as highly ideological subjects accelerate

towards what they deem legitimate apocalyptic events. After all, if the apocalyptic event changes

everything, why bother? As Lee Quinby might suggest, the "everything" does a lot of heavy

lifting.

In *Anti-Apocalypse*, Lee Quinby stresses the seeming totality of the apocalypse and, by

doing so, mounts an important critique of the apocalypse: it is not total, but rather total for

specific audiences. Quinby is concerned with the proliferation of apocalyptic imagination, by

which I mean popularized renditions of disaster, and how said proliferations normalize defeatist

---

[103] Keiko Hirata and Mark Werschauer, *Japan: The Paradox of Harmony* (Yale University Press, 2014), 20-21.
[104] Ibid.

relations of control. Quinby argues that the apocalypse comes in three modes: the divine, the technological, and the ironic. Divine apocalypses are religious apocalypses. Technological apocalypses are the result of technological advancement or its destruction. Ironic apocalypses refer to a slow, nihilistic death, a bleak mapping of time that concludes at a dismal point at the end of human history. For Quinby, each ends up reinforcing pre-existing power relationships. However, Quinby's argument is not to shatter the apocalyptic imagination simply because it cannot be shattered. Instead, Quinby can only reject the apocalyptic imagination in its entirety. There is no negotiating with it. Quinby's argument is an invocation "to struggle against apocalypse, to know its logic, to say no to its insistence on an inevitable end necessary for a new order, its infatuation with doom, its willingness to witness cruelty in the name of righteous justice, and in belief in an elect with access to absolute truth."[105]

Here, Quinby's declaration is reminiscent of Žižek's cynical subject. The cynical ideological subject refuses to act because they assume there is no point in acting. As a result, they are the perfect example of an ideological subject. The failure to act because of their acknowledgment of their subjectivity to capitalism leads to their inaction in the face of capitalist exploitation. The apocalypse is similar. Unable to describe that moment, the subject cobbles together a makeshift representation of that sensation. In this case, the apocalypse is similarly sublime: the apocalyptic event has no further visible horizon. The disaster is the endgame space, where all knowable actions converge towards an unmappable future. Therefore, because what lies beyond it is unknowable and yet totalizing, the apocalyptic event becomes a reason for the subject to remain passive. Dealing with the apocalypse is not about changing it, but delaying it, avoiding it, or embracing it. The end is always bracketed with the question of to whom.

---

[105] Lee Quinby, *Anti-Apocalypse: Exercises in Genealogical Criticism* (University of Minnesota Press, 1994), 23.

Relating Apocalypse to Ideology

If the apocalypse is so essential, why look at apocalyptic texts? Why not study apocalyptic cults or real-life events (such as Y2K)? What about the apocalypse is relevant in the context of structure and, more broadly, ideology? How is a fictional text particularly helpful?

As subjects of capitalism, we also must deal with the challenges associated with understanding the limits and conditions of capitalism and how it affects ideology. In *Capitalist Realism*, Mark Fisher notes that the capitalist mode of production also doubles as a malleable super-ideology, an ideology that trumps and absorbs others. In short, capitalism can adopt whatever principles or concerns against it as elements of its own operation. A rejection of capitalism doubles as a critique of capitalism and as an affirmation of its ability to adapt. Fisher notes that "the role of capitalist ideology is not to make an explicit case for something in the same way that propaganda does, but to conceal the fact that operations of capital do not depend on any sort of subjectively assumed belief."[106] In other words, capitalism is an ideology that needs not exercise propaganda or a distinct directive upholding a worldview. In this sense, Fisher is drawing on Žižek's concept of the cynical subject: ideological subjects are at their most ideological when they are subconsciously acting, either through rejecting their own overt subjectivity (cynically) or projecting their fantasies onto an ideological structure. Subjects of seemingly disparate ideologies can still be subjects of capitalism entirely because the ideology of capitalism is so adaptable and amorphous that it can mutate to account for challenges and irregularities in its system. In Fisher's case, capitalism only faces challenges in its Real, or the extant (yet external) things that resist symbolization.

---

[106] Mark Fisher, *Capitalist Realism: Is There No Alternative?* (Zero Books, 2009), 18-19.

I argue that fiction operates similarly. While fiction can be a byproduct of capitalism (or any ideology), fiction can also serve as a tool for addressing issues that elude a subject's ability to make sense of them. For example, in discussing how capitalism relates to environmental degradation, Fisher uses Wall-E as a fantastical imagination of how capitalism is not only the structure that ends human life on Earth but also revitalizes it.[107] This connection between media and tangible concerns can be quite direct. For instance, Ueno Tsunehiro argues that Japan's young adults discuss their role in society in a neoliberal, post-9/11 Japan through survival-type stories. According to Ueno, stories where young people must fight each other (often to the death) for survival (survival fiction) are how young Japanese subjects understand the world around them. These narratives are "interpreted as games, supported by an impersonal system and operating under clear-cut rules. The game's players are on equal footing, and their battles therein are what is depicted."[108] Ueno's outline of survival bears some similarities to Wark's argument on the role of a game. To Wark, the world is like a game, but one that is fundamentally unfair. A game of fiction, therefore, acts as an exercise of expression and power entirely because we perceive it to be fair. On a broader level, both Ueno and Wark are tackling similar concerns with similar conclusions: there are limits to how subjects can really conceive of the world. By extension, there are limits to how subjects can conceive of ideology. Fiction, therefore, operates as an enclosed space where we can look at a specific, workable, cultural imagination and come to more significant conclusions about how specific groups and classes interpret their role in the world. Fiction is even more critical because of the additional limitation of the apocalypse. While

---

[107] Fisher, *Capitalist Realism*, 18.
[108] Ueno Tsunehiro, "Imagination after the Earthquake: Japan's *Otaku* Culture in the 2010s," *Verge: Studies in Global Asia* 1, no. 1 (2015): 131. https://doi.org/10.5749/vergstudglobasia.1.1.0114

real-world events can be seen as apocalyptic, fiction arms creators and readers with particular imaginations so they may think beyond ideology, whatever that entails.

Conclusion

The main contribution of this study is not just the study of apocalypse and ideology to a growing post-pandemic corpus, nor is it even just the implementation of digital games, but the study of these components through an analysis of their structure through a set of theoretical ideas which have focused on structure. Althusserian ideology certainly remains alive in discussions about games, but structural causality is a topic noticeably less discussed in games studies. This need not be the case. Structural causality can find bedfellows in the study of digital games, a field where the subject matter often contends with black-box analysis. Like Althusser's ideological subject, the player and analyst does not necessarily have a strong sense of the structure's location, limits, and goals (if these even exist at all).

Digital games are, at their core, Althusserian texts. Since ideologies are systems interpellating and guiding subjects to do or believe certain things, the digital game is an artistic device navigating snapshots of ideology. Ideology is a space that allows movement but within boundaries. Ideology sets down limitations that, while unclear, can be repressive when subjects stray from their central space. Furthermore, studying ideology also means thinking about *how* we study ideology. If we are part of an ideology, how can we study it? The digital game is a dioramic snapshot of the entire (assumed) structure, complementing Althusser's concept of structural causality. The digital game is a space that can be understood and registered but not necessarily (or always) understood in its entirety. Like ideology, the digital game is segmented through layers and layers of obfuscation. These layers of obfuscation, Althusser argues,

72

nevertheless end at an economic determinant. However, the pathway to that determinant is not necessarily apparent to any single individual.

A similar set of challenges survive in discussions about digital games. Digital games must balance an interlocking network of processes (mechanics, backend calculations) and non-processes (aesthetics, story) to set up a playing experience that must not only be enjoyable (thus to keep players playing), but can also set up a set of arguments which uphold a worldview. In this sense, structural Marxism – particularly Althusser – survives in digital game analysis: how can we understand these systems? How can we break them down? How can we figure out what is and is not worth parsing out and pointing to? These are questions revolving around both structural causality and games. Bogost's argument for black-box analysis is not only a suggestion that analyzing games demands understanding how it *functions* rather than just how it is built. In other words, there is always a hidden relationship (either between code and mechanics, driver and code, and hardware and driver). Althusser makes a similar claim in *Darstellung*, the theater without an author. At some point, a part is hidden away, making a complete image nearly impossible. What matters to both Bogost and Althusser is that we can approximate a system based on how it works and what we know it is doing. Digital games have developers, but are developers the ones who build a system that then guides and reacts to players on its own? The digital game is not only an avatar of a particular understanding of ideology; instead, by mapping what has already been understood through the digital game, we can find a robust development (and defense) of Althusserian ideology.

However, we must also consider questions of boundaries: if digital games can tell us more about ideology, are there limits or concerns to their usefulness? Just as importantly, in a capitalist ideology, which can change and adapt to challenges to its survival, what would – or can

73

– a digital game tell us about subjects in that ideology? The apocalyptic digital game, in theory, tackles both concerns. As an event predicated on destructive change, the apocalypse stands in for how a subject imagines the end of their own position as a subject of an ideology. Though Kermode makes large universal claims about the essential nature of apocalypticism, he nevertheless outlines several essential existential concerns the apocalyptic subject is tackling. Through a sense of an ending, Kermode's constant-apocalyptic subject expands on Jameson's second horizon. For Jameson (who is building on Althusser), ideology fundamentally does not 'make sense,' and thus, narratives of an ideology will suture such contradictions shut. The apocalypse is not only a symbolic act of an ideological subject but a symbolic act that draws attention to the fact that it is a symbolic act. The apocalypse is an event that makes (or betrays) claims that underpin ideology: what defines society, values, and, most importantly, its limits. For this reason, the apocalyptic act can be understood through Berger's alchemical shift: the apocalypse, ironically, is the symbolic act because the apocalypse burns away the trappings of ideology, revealing the 'pure' essence of human society beneath. However, that very alchemical shift betrays the symbolic nature of the symbolic act. Burning away the 'trappings' of society to reveal some innate, more profound element beneath might be how an ideology closes its contradictions. If the values of the apocalyptic imagination are precisely the values of its pre-apocalyptic ideology, then is that not just another layer of that ideology? How would we know? For Berger, the apocalypse *must* account for disasters, primarily because disasters are instances of real, visceral challenges to ideology. However, at the same time, this places more emphasis on a reactive understanding of apocalypticism; apocalypticism, to Berger, is often portrayed as a response to elements outside of the subject's imagination. For this reason, this project focuses on Berger and Kermode in tandem. The former focuses mainly on understanding apocalypticism

74

with regard to how disasters are registered and how they might change ideology (or force ideology to adapt to a challenge). The latter suggests why subjects might want to believe in apocalyptic imaginations when no such disasters exist.

Kermode's sense of an ending raises a critical question: is the apocalyptic imagination a suturing of ideology, or is it simply another tool the ideological system employs to keep subjects within an ideology? We can analyze how subjects of ideology think about the end of that ideology through the texts they read and generate. Whether the subject has escaped that ideology or escaped ideology entirely is outside of the project's scope. Instead, what matters is that the subject *believes* that, on some level, they are outside of their ideology. Even in this outside or new space, the subject will invariably believe in specific arguments and propose certain solutions to this supposedly post-ideological space. The apocalypse functions as a stress-test of the digital game's operation, and, by extension, ideology's operation. If the digital game is a reflection (as incomplete as it may be) of ideology as a system, then how that reflection envisions or has envisioned its end can tell us how ideology deals with challenges to its system. More importantly, this can be done in an environment where ideology does not necessarily push back or suture any such challenges. The digital game is thus both porous and self-enclosed. It is porous because, like Althusserian ideology, it is a seemingly endless array of material and immaterial factors stacked on top of each other, interlocked with technological and economic conditions. The digital game is also self-enclosed in that, as a text with arguments, it makes arguments about what it is proposing or what kind of worldview it is attempting to emulate. The apocalyptic digital game, therefore, is how ideology *beyond the game* bleeds into and affects the arguments proposed *in* the game.

Last, the apocalyptic game links and tests the limitations and challenges of rules-based systems alongside their interlocking narratives. Digital games as systems can make arguments through their code, but arguments have largely been focused on facets that these systems are already good at exploring. Spatial mapping (*Darkwood* (2014)), control (*Spec Ops: The Line* (2013)), and agency (*The Stanley Parable* (2013)) are some of the ideas digital games have already explored through their systems. However, how effective are digital games at exploring ideas that are much more abstract than rules-based argumentation? The apocalyptic imagination is one such example. Though apocalyptic games are numerous and popular, how effective are these systems at actually making arguments that complement their aesthetic and narrative propositions? How does – or can – a game tackle a concept as abstract as 'the end'? And if it cannot, then what does that imply for games as systems, but also as black boxes of ideology?

Chapter 6: Five Visions of the Apocalypse

What *does* the apocalyptic game tell us about ideology?

Instead of a general outline of apocalyptic games, I focus on five cases. There are several reasons for this. First, there are too many apocalyptic games tackling very different subjects to conduct an effective overview. The genre has been around as long as development for digital games were possible, especially since the availability of home computing. Games like *Balance of Power* (1985) and *Wasteland* (1988) allowed players to capture the feeling of the Cold War. Additionally, games with generally apocalyptic themes were a mainstay due to their exciting premises. *Cosmic Conflict* (1978) for the Magnavox Odyssey tasks players with defending Earth against alien invaders. Likewise, apocalyptic games are broad in their subject matter and mechanics. Games like *Dark Souls* (2011) or *Fallout Shelter* (2015) use the apocalyptic setting to firm up other gameplay elements like combat and base-building. The disaster acts as scaffolding upon which to build compelling experiences. Therefore, focusing on the apocalypse in a historical and general sense is too broad for the sake of this project.

Second, the apocalypse and post-apocalypse can be seen as distinct concepts of their own. Since people generally envision apocalypse as mass destruction, people often associate post-apocalyptic, with its apocalyptic event, despite both tackling different objects of analysis. The former focuses on the contours of an imagined space. The latter concerns unveiling the state of the world and revealing a supposed truth. Post-apocalypse is spatial: it is *after* apocalypse, and generally concerns lands, spaces, zones, and whether we should move on or reclaim them. This vision reveals assumptions about the world.[109] In other words, distinguishing between apocalyptic versus post-apocalyptic matters because one concerns a revelation of a structure

---

[109] Connor Pitteti, "Uses of the End of the World" *Science Fiction Studies* 44, no. 3 (2017): 444. https://doi.org/10.5621/sciefictstud.44.3.0437.

while the latter deals with whether that structure was justified. Yet neither can be cleanly separated from the other. Focusing on what changed the world assumes what was worth preserving or regaining. I focus on apocalypse specifically due to scope.

Furthermore, because apocalypse and post-apocalypse cannot be easily separated, these cases will involve and examine both elements. There has been much discussion on apocalypse in digital games through their environmental storytelling[110] or through their narratives.[111] However, my focus is on a form of embodiment, where players hook into a network of relationships.[112] More specifically, I focus on the question of *playing ideology*, especially through a subject matter which purportedly seeks to envision a space beyond it. I approach each case iteratively, and I focus on each game more in terms of how their rules and operations deal with questions of revelation, specifically those that can only be revealed in the wake of impending destruction. These approaches assume the framework of the digital game as an analogue for Althusser's structural causality, an instruction machine which players employ to navigate the virtual world around them.

I focus on digital games since they tackle subjects critical to Althusserian ideology by virtue of being digital games. More specifically, the electrical structure makes them akin to structural causality machines. To work, the digital games deploy circuitries to interlock with daemonic interfaces, operating systems, and multi-level protocols. Digital games provide play spaces with concrete repressive mechanisms; in tabletop, card games, and social games, players hemmed in by social convention and institutions, but in digital games players are restricted by

---

[110] Gabrielle Vasso, "An environmental critique of America post-apocalypse narratives: ecocriticism and ethics" (MA Diss, San Francisco State University 2018).
[111] Óliver Pérez-Latorre, "Post-apocalyptic Games, Heroism and the Great Recession," *Game Studies* 19, no. 3 (2019), https://gamestudies.org/1903/articles/perezlatorre.
[112] M. D. Schmalzer, "Janky Control and Embodied Play: Disrupting the Cybernetic Gameplay Circuit," *Game Studies* 20, no. 3 (2020). https://gamestudies.org/2003/articles/schmalzer.

non-social mechanical rule of code. This material form of the digital game recalls Althusser's argument of *economic in the last determinant*; digital games are more responsive to essential yet under-discussed considerations like system requirements, controllers, digital rights management (DRM) more than any other form of game. At the same time, like Althusser's concept of structural causality, the last determinant is an acknowledgment of the material conditions, but it hardly acts as the sole driver of the relations of production. More specifically, ideology occurs through the way in which these relations exist and reproduce, and the enmeshment of said relations helps define the structure. Digital games are analogous in this sense: the digital game bears a material, physical component, but it is defined by interlocked legal, social, and electrical relations. Rules and processes are layered upon other rules and processes, hooking into a tentacular network of electronics that, while we play, pulses with control and regulation, defining where we play, how we play, and who or what owns and decides the rules of what we play. For the digital game, to examine apocalypse and thus beyond ideology is to do so not only within a magic circle, but a magic circle with material tension. However, because I cannot account for every variable in a digital game in relation to themes of apocalypse, I'll only focus on specific lines and instances, exact moments where a mechanic, verb, or process shapes the playing process. Thus, my focus is on one specific imagination: apocalypse, and how it can translate these effects into arguments.

The Cases

This section concerns five major cases. Since procedural rhetoric concerns arguments being made by the rulesets of games, I have chosen each game not only for its mechanics, but also because some of these ideas are brought up by its developers. The degree to which they

reflect these sentiments varies. However, this decision is not just expanding on how these rules reflect relationships in a structure, but also how creators reinforce relations of ideological production by mapping out what they deem to be core questions in the face of apocalypse.

First, I look at an orthodox apocalyptic game, in the sense of conventionally popular and stereotypical, with accolades and widespread appeal: Naughty Dog and Sony Computer Entertainment's *The Last of Us.* First, I focus on its escort mission design and how that design is used to craft relations between its characters while simultaneously guiding players through its environmental storytelling. Through its scavenging imagination, I note how it creates an accumulative form of archaeogaming. This form ends up presenting a preferential vision of modernity. This lamentation of modernity presents two visions of post-apocalypse: one, as a reaffirmation of the necessity of the contemporary, pre-apocalyptic world through its emphasis on misery in the post-apocalypse. Second, *The Last of Us* reflects Anna Lowenthaupt-Tsing's approach to asset production, or how forms of capitalist accumulation persist supposedly when the components of its means of production are gone.

Next, I focus on *Tokyo Jungle*, a game where you play as animals roaming post-apocalyptic Tokyo. Tokyo Jungle is a foil to *The Last of Us* in the sense that it rejects human intervention. However, at the same time, *Tokyo Jungle* acknowledges the influence of humans in non-human positions and that even in the apocalypse, human thought acts as a limit zone. Non-human play, especially in the apocalypse, is not immediately expressed but struggled for. In other words, the game doesn't concern humans but beings whose nature has been dictated by humans. Drawing upon thoughts presented by feminist theory (particularly those of Donna Haraway and Lee Quinby), I focus on how Tokyo Jungle attempts to navigate the apocalypse in an environment which explicitly rejects human dominion. For Haraway, I focus on how her

tentacular interpretation of apocalypse (Chthulucene) can be applied to a relational understanding of nonhuman connections in *Tokyo Jungle*. For Quinby, I focus on the strength of her project in *Anti-Apocalypse*, in the sense that apocalypse is relational, relaying that what *is* apocalypse comes with the caveat of *whom*. In *Tokyo Jungle*, this is accomplished on two levels: that of animals and the human player. The translation of those two levels of ludic interpretation is thus reconciled in a central theme of Tokyo Jungle, specifically in the sense of the game as a blueprint on how to think *past* anthropocentric apocalypse. At the same time, I note how it magnifies difficulties with access; its depiction of human dramas while critiquing Anthropocene suggests a tension in the ideological structure.

Then, I focus on the Mass Effect trilogy, which problematizes a critical element of digital games left out of *The Last of Us* and *Tokyo Jungle*: complex choice. Here, it refers to combinatorial explosions in game design, or when choices become so vast that reconciliation of options forces a closure of narrative threads. One of the few games that transfer save data (especially at its scale), the Mass Effect trilogy grapples with digital memory. While all games reflect what Bogost calls the simulation, or the gap between the rules-based representation and its source system, Mass Effect builds upon that core element by concerning its source system with archiving. More specifically, Mass Effect is an extreme of how digital games present a form of self-destructive archive. I draw upon Jacques Derrida's *Archive Fever*, specifically in the sense of the archive as an enactment of preservation as power. For the Mass Effect trilogy, I argue its apocalyptic narrative relays a fixation with archiving.

Afterwards I consider how the game's space can play a role in these apocalyptic imaginations through *Doki Doki Literature Club*. A short, relatively limited visual novel, *Doki Doki Literature Club* questions the extent of a "magic circle" and, thus, how an abstract concept

81

like an apocalypse might be digitally mapped. DDLC engages with the apocalypse in two notable ways. First, as a visual novel with a series of limited routes, *DDLC* demonstrates that expression occurs through play. In DDLC, most player decisions are largely unimportant, directly reflecting the game's concern over control. However, what makes DDLC a notable case is what happens beyond its direct executable: players must manipulate root files to access the good ending, which brings to the forefront material considerations of ideology and apocalypse. These questions reinforce each other especially in the later remakes, where when porting for consoles, DDLC is fixated on its relations of production, up to and including the game's implementation of fake operating systems to mimic player interactions from the original games. DDLC, in this sense, reflects ideology at the level of mechanics: in a game about anime girls unable to escape the game, the game is unable to escape the infamy of its own mechanics.

Last, I shift to the interpretive circuitry of procedural rhetoric, specifically the assumption of the singular operator. I note how Bogost's concept of procedural rhetoric – how rules make arguments – generally presumes a singular operator even when singularity is not mandatory. Unlike responses to Bogost's procedurality, which have generally focused on play,[113] I argue that procedurality can be hermeneutically expanded through problematizing assumptions of its meaning-making process. Here, I look at two intertwined games: Atlus' *Persona 4* and *Persona 4 Arena*, specifically in terms of how apocalypse and ideology can be translated through different relations of play. I examine the contours of argumentation through rules and processes, especially by focusing on genre strengths and limitations in reflecting and grappling with certain themes and structures. More simply put, I look at whether certain genres are simply better at making specific arguments than others. Furthermore, when changes in player relations taken for granted

---

[113] Miguel Sicart, "Against Procedurality," *Game Studies* 11, no. 3 (2011). https://gamestudies.org/1103/articles/sicart_ap.

in design, how do these changes affect the way in which rules make their arguments? Here, I focus on how mechanics can be translated between genres, especially multiplayer genres, and how mechanics are negotiated locally while reflecting interpellative mechanics structurally. That final thought considers whether some games are just better at grappling with abstract topics like apocalypse than others, and ultimately form a recurring challenge in structural causality: the self-fulfilling prophecy of meaning-making.

Chapter 7: *The Last of Us*

I start off with *The Last of Us* primarily because its overall design is straightforward, it heavily emphasizes apocalypse, and it straddles a line between pensive examinations of the human condition and Triple-A survival game. In envisioning a world in decline, *The Last of Us* negotiates between thoughtful storytelling piece and satisfying open world corporate game feel. Nowhere is this balancing act seen than in its overall escort logic. This section focuses on interactions in its worldspace through the game's escort mission, and how those design considerations sets up a walled-garden vision of both visual and procedural apocalypse. Through its escort mission, the game depicts its apocalypse as a space of accumulation and spectacle. The apocalyptic imagination of *The Last of Us* implies a captured vision of any space beyond ideology, that spectacle distances viewers from the world before it.

It accomplishes this by focusing on the hostility and brutality of a post-capitalist world. Simultaneously, *The Last of Us* deploys apocalypse as spectacle, a relay of images used to obfuscate relations of exploitation, specifically that of its old capitalist environment. Here, I focus on Joel's narrative, how his pre- and post-apocalyptic character shapes the dramatic arc of his decisions. Then, I examine the game's approach to its world, what it deems hostile and what it doesn't. Last, I focus on how it resolves its issues by mechanically perpetuating its violence: accumulation of scraps, goods, and items, specifically to form implements of further violence. All of these depict an apocalypse which serves as both yearning and warning: an image in which players can *play* apocalypse. Yet at the same time that play comes with a warning: to aim for a space outside of capitalist control is to engage with hostility, brutality, and that ultimately such an engagement may not be worth it.

The Last of Us (2013) is concerned with control, particularly in the face of a verdant, seemingly free (albeit vicious and chaotic) apocalyptic environment. A critically acclaimed action-adventure game published by Sony Computer Entertainment and developed by Naughty Dog, *The Last of Us* has you command Joel, a grizzled survivalist who must escort a young girl, Ellie, across the United States. The setting is a zombie-like post-apocalyptic scenario; a mutated fungi, *Ophiocordyceps unilateralis*, has infected people, turning them into zombies. The United States government has retreated significantly in terms of scale and scope, and pockets of dictatorial government authority remain, though much of the United States has regressed into an overgrown wasteland.

The game employs an orthodox, hauntological imagination of apocalypse, a term by Jacques Derrida and later Mark Fisher to refer to a lost future. Here, the hauntological object is one which exists by absences; absences of subjects, objects, environments, processes. In *The Last of Us*, what is absent is are mythic qualities of neoliberal capitalism made visible only in its absence: without it, *The Last of Us* suggests, we have only faceless totalitarianism and lawless anarchy. This is seen in the game's overall gameplay loop: navigate through green environments teeming with life and danger to reach the objective and be rewarded with cinematic cutscenes. Peppered throughout these environments are lost structures, both figurative and literal. Occasionally, Joel and Ellie will chatter about life before the apocalypse, and Joel's tone is always wistful.

However, what calcifies the game's fixation with lost futures is how it begins before the apocalypse. Joel was a construction contractor and single father taking care of his only daughter, Sarah. Our only frame of reference for a world before apocalypse was seeped in precarity. Things quickly turn awry as reports of infection spring up all over the city. They meet Joel's brother,

85

Tommy, who tries to help them escape. Players then come across "first stage" infected, which look like conventional zombies. Nobody knows what is happening, the highways are blocked, and everyone is in a state of panic. They come across a soldier who, upon seeing Sarah, attempts to control the infection by force.

While Joel resists, the soldier's gunfire leads to Sarah dying in Joel's arms. Her death sets up two central elements to Joel's character, and consequentially, the game. One, Sarah's loss leaves an emotional wound that would end up being filled by Ellie. Two, it sets up a "beyond the pale" scenario, where the moral high ground of any governing body is lost the moment it turns its weapons against Joel's daughter. The game then enters an opening credits sequence, followed by a twenty-year time skip.

After the time skip, we see Joel again. He is a smuggler and with his partner, Tess, they take a job for a rebel organization known as the Fireflies, who resist the now-totalitarian regime of the remnants of the United States government. The Fireflies task Joel and Tess with transporting cargo. The cargo is revealed to be a girl named Ellie. It is revealed that Ellie is not only infected, but she is also immune to the effects of the fungus. The Fireflies want to run tests on Ellie so they can develop a cure. In an ensuing firefight with local authorities, Tess is killed, leaving Joel alone with Ellie. Together, they traverse long distances to reach the Firefly base and 'deliver' Ellie. Along the way, Joel reunites with Tommy, who has established a commune with his new family. Joel and Ellie continue on, and the game's final arc ends with them reuniting with the Fireflies. Joel then finds out that the Fireflies want to lobotomize Ellie and use her as material for developing a cure. He kills all the Fireflies and takes Ellie to Tommy's compound.

The *Last of Us*' apocalyptic imagination is Hobbesian in the sense that every zone outside of totalitarian America becomes a space of endless hostility that forms the connective social

tissue within the game. Scavengers and infected roam the roads. There is no bargaining or dialogue options. The only friendly community is Tommy's, and most of it is a depicted through cutscenes. When players play, they are playing violence. In fact, it is specifically through Joel and Tess' position as smugglers that sets in motion the trek through the apocalypse. It is also through this apocalypse that players engage in the intensity of Joel's charge; he sacrifices life and limb to deliver this girl, on promise of pay, killing infected and scavengers with careless brutality. In comparison, the player interfaces with the potential consequence of Joel's failure: horrendously violent cutscenes play when Joel (and later Ellie) are killed. Michael Epp touches upon this relation between violence and work, that the post-apocalypse is not the end of orders and systems, but "a chance to begin new life with a new, endless job."[114] Indeed, had it not been for Joel's work as a smuggler, he would have never met Ellie, and until the final arcs of the game, his role as Ellie's guide is primarily related to his work. Joel is doing violent work through a violent job.

Yet that violence is what links Joel with the player; the violent world of *The Last of Us* connects the player with Joel's work when he uses it for his own ends. When Joel realises that the cure will cost Ellie's life, he murders all the Fireflies, brings Ellie back and lies to her:

Ellie: What happened?
Joel: We found the Fireflies. Turns out, there's a whole lot more like you, Ellie. People that are immune. It's dozens actually. Ain't done a damn good neither. They've act-They've stopped looking for a cure. I'm taking us home.

Joel's motivation is simple. Over the course of the game, Joel opens up to Ellie, develops a rapport with her, and comes to see her as a surrogate daughter. When Ellie's life is weighted against a possible cure for the infection, Joel selfishly chooses to save Ellie's life at the expense

---

[114] Michael Epp, "Fantasies of Full Employment: Zombies, Video Games, and Violent Labour," in *The Playful Undead and Video Games*, ed. Stephen J. Webley and Peter Zackariasson (Routledge, 2019), 75.

of a cure. As Joel confronts a bleeding Marlene, the last Firefly, he refuses to spare her life:

> Joel: You'd just come after her.

Joel's decision to save Ellie, though personally heroic, undermines any broader expectation or demand. The Fireflies operated on a presumption of duty; they legitimize their murder of Ellie because Ellie's murder is necessary for a cure, but Joel's selfishness is an outright rejection of that demand. The collapse of civilization makes that decision even more selfish.

However, the game presents that selfishness not as necessarily immoral, but the byproduct of a person with few choices. Joel is a hardened person because of this hard environment, and the moment he softens, he chooses his personal humanity over the possible salvation of all humanity. The game sets up this dilemma as a taxing one, framed by years of empty violence engendered by the apocalyptic setting. However, it is specifically how this setting is set up that provides a bit more insight on the apocalyptic imagination of *The Last of Us*, specifically in terms of how it, to make this moral dilemma, upholds a revanchist vision of modernity.

How The Last of Us is Structured

The structure of *The Last of Us* is core to its procedural arguments given that its distinct limitations sets it apart from its contemporaries in the postapocalyptic Triple-A games space. Frederic Jameson describes the second horizon of ideological closures as one of social relations, where individual phenomena organize to reveal social facts.[115] In *The Last of Us*, apocalypse is used to uphold Joel's moral relativism (i.e. "The world is dangerous and everyone is looking out

---

[115] Jameson, *The Political Unconscious*, 83.

for themselves, why can't I?"). However, to express that argument, the game paradoxically strips layers of social relations, reaffirming the necessity of pre-apocalypse modernity. One, the solutions to its dissonance is engendered by its nature as a massive escort mission demonstrates its values as the story accelerates towards Joel's final decision to possibly doom humanity for his own ends. Two, that escort mission plays a role in informing how its landscapes are envisioned; a series of dialogues between Joel and Ellie for the purpose of emotional development framed through the loss of an implied better world. This, however, extends not only to how the world is presented, but also to how it's played. Due to its devotion to a scavenging mechanic, *The Last of Us* also allows players to *play* accumulation, that the loss of the world is the loss of markets, negotiations, and social contracts, specifically in that mankind has begun to slide into what Thomas Hobbes calls a "state of nature". Last, I focus on what may be at the core of its presentation of modernity: its overall procedural design, informed by its material conditions as an expensive, AAA game. In its insistence on avoiding frustration, the game becomes a sort of spectacle machine.

The game follows what Jesse Schell describes as a "string of pearls" method of interactive storytelling, where bursts of gameplay guides players along story beats as a reward for accomplishing specific goals. Narratively, *The Last of Us* progresses through its story through two general formats. As an action-adventure game with an escort element, it deploys large world spaces with defined entry and exit points that the player needs to reach. Within these spaces are small observational cues where Joel and Ellie can talk to each other. Most of it revolves around Joel explaining pre-apocalyptic America. When players reach their destination, the game progresses through cutscenes, with no meaningful choices. In other words, characters are developed through exploratory play, while the plot progresses through cutscenes. This division

has been noted elsewhere. For instance, Youtuber *Errant Signal* (Chris Franklin) describes the game as structurally divisive:

> It's very driven by the traditional "complete a gameplay section and be rewarded with story chunks" mentality that games have been trying to move away from for years…an uncomfortable juxtaposition of narrative and gameplay has been arguably the defining trait of Triple-A games for the past ten years. So if you're going to do a [tour of the Triple-A design mentality] it's best to get that right too.[116]

Franklin would go on to note that *The Last of Us* is marked by an oil and water approach to story and gameplay. In *The Last of Us*, players experience a clear delivery of one or the other: stories are delivered in very clear dialogue pieces and cutscenes. Plot-wise, gameplay is insignificant; how players behave within the environments do not affect how the story resolves. Nowhere is Schell's "string of pearls" method clearer than in the game's core escort mission.

The Escort Mission

The Last of Us' nature as an escort mission is crucial since it is the primary mechanic that puts Joel and Ellie's emotional bond in motion, forces the player to engage in wandering through the post-apocalypse, and reveals at both narrative and material levels its apocalypse to be less of an examination of disaster and revelation, but a spectacle zone that resolves the class contradictions which engendering apocalyptic desire. What makes *The Last of Us* unique as an apocalyptic game is that it's not only a massive escort game, but a massive escort game developed by a Triple-A publisher. While there is a significant amount of literature on *The Last*

---

[116] Chris Franklin, "Errant Signal – The Last of Us (Spoilers)," YouTube, July 22 2013, https://www.youtube.com/watch?v=bAzqDgKYfiM.

of Us, especially concerning morality,[117] fatherhood,[118] and Otherness,[119] there is relatively little discussion about the mechanical argument presented by the game's nature as an escort mission. For escort missions, players assume the role of a central character. The game then spawns a character in which players must protect. The core interactive loop is straightforward: if the player fails to protect the subject, the mission has (usually) failed. Ludonarratively speaking, escort missions are seen as a white elephant, an element that, in specific dynamic interactions, bears a meaning which has been taken for granted.[120] In this case, the escort mission reflects power: the player protects the non-playable character, and for whatever reason, the non-playable character is helpless without the player. Relative helplessness serves as a pivot for the escort mission; in comparison, missions where players direct non-playable characters who are much more powerful are often not considered escort missions. For example, in Bethesda's *Fallout 3*, the player is effectively escorting a giant robot, Liberty Prime, but given that Liberty Prime is so much more powerful than everything around it, it is framed as a siege mission instead of an escort mission. In other words, an escort mission comes with specific assumptions about the relationship between player and non-player characters.

However, escort missions are often frowned upon by its players specifically because of a loss of control within the world space. Writer Larry Sonntag, criticising Lionhead Studios' *Fable* (2004), describes it as very unsatisfying and annoying tedium.[121] Similarly, Weimin Toh notes

[117] Scott Hughes, "Get Real: Narrative and Gameplay in The Last of Us," *Journal of Comparative Research in Anthropology and Sociology* 6, no. 1 (2016); Shalini Harilal, "Playing in the Continuum: Moral Relativism in The Last of Us," *Praxes of popular culture* 1, no. 9 (2018).
[118] Bertrand Lucat, "Playing with Patriarchy: Fatherhood in Bioshock: Infinite, The Last of Us, and The Witcher 3: Wild Hunt," *DiGRA* (2017)
[119] David Callahan, "The Last of US: The Game as Cultural Geography," in *Playing the Field: Video Games and American Studies*, ed. Sascha Pöhlmann (De Gruyter Oldenbourg, 2019).
[120] Clint Hocking, "Dynamics: The State of Art," YouTube, January 7 2011, https://www.youtube.com/watch?v=St2fE049ULI.
[121] Russ Pitts, "Escort Missions Suck," The Escapist Magazine, November 21 2007, https://www.escapistmagazine.com/escort-missions-suck/.

that players see escort missions as sites of possible *sunk gain*, where players invest abnormally high degrees of effort to ensure meaningful payoff.[122] In short, escort missions are often seen as a waste of time.

Here, the apocalypse is the setting to escort Ellie, and escorting Ellie serves as the primary vehicle to depict Joel and Ellie's burgeoning relationship. At the heart of the mechanics of *The Last of Us*' escort mission is also how it sets up a specific, limited vision of modernity that ends up reaffirming the goodness of its pre-apocalyptic setting. For Joel's decimation of the Fireflies compound to hit with the emotional weight Naughty Dog intends, players cannot be frustrated with escorting her. Thus, Ellie is invulnerable. Since players often see escort missions as undesirable, and Naughty Dog is a AAA game developer beholden to its publisher, the studio cannot develop an escort mission in which players are frustrated by limited AI and what are deemed unfair rules (such as vulnerable protectees drawing enemy, or "pulling aggro"). Simultaneously, in *The Last of Us*, Joel escorting Ellie becomes the primary means in which he develops a rapport with her. Furthermore, since the player spends most of their time with Ellie, who will be delivered to the Fireflies and to her death, the moral relativism of *The Last of Us* hinges on its capacity to express sympathy for its main character by mechanically nurturing Joel and Ellie's relationship. This development is fostered in multiple ways, not just limited to environmental dialogue cues. Since Ellie cannot swim, many environmental puzzles revolve around finding ways to get her across bodies of water. During combat, Ellie can distract enemies and give Joel health packs and ammo. Thus, while Ellie is vulnerable, she is not helpless. The game uses the escort mission so the player can develop a reliance and rapport with Ellie in the same way Joel does. This is similar to a design sentiment mentioned by Tim Rogers, who

---

[122] Weimin Toh, "The Economics of Decision-Making in Video Games," *Game Studies* 21, no. 3 (2021). https://gamestudies.org/2103/articles/toh

describes it as "The Babychild-Bigfriend Situation," where character development happens through relations with another. Here, Joel and Ellie's develop concurrently in the style of an ersatz dad simulator.[123] The escort mission as a relationship builder is also exacerbated by Ellie's active participation in the game. She can help scavenge, distract enemies, and sometimes go for kills. While Ellie becomes an emotional core to Joel, she becomes a mechanical core to the play.

However, her helpfulness is at odds with game's need to prevent player frustration, setting in motion a dissonance. For her to develop an emotional bond with Joel, Ellie is reified to the status of useful party mechanic. She is an active participant in combat. She is invisible to her enemies. However, her limited AI means that could put her in harm's way. Since players need to escort her, her death could result in a game over. If she dies too often, players become frustrated. In this sense, the game cannot resolve this contradiction. The escort mission is both mechanically and narratively critical to the game's established moral quandary, but it cannot be deemed unfun by its players. Its solution, and thus the sight of its symbolic closure, is to accept the limits of its AI and simply accept its contradictions. Ellie becomes a character who must always be in danger, but mechanically she is rarely in harm's way.

In short, a specific form of the escort emerges, one where Ellie is always in precarity yet never in danger, where the digital game reveals contradictions between needing to protect Ellie on a narrative level but never putting her in harm's way on a mechanical one. To maximize the gravitas of Joel's final decisions, the player needs to develop a similar rapport with Ellie. The game is not just a survival action horror game, it is a relationship simulator with a specific vision of spacetime where Joel and Ellie walk across America and learn about each other, specifically to humanize Joel's decision at the very end. Yet the game is not just a survival action horror game,

[123] Tim Rogers, "Action Button Reviews The Last of Us," YouTube, June 20 2020, https://www.youtube.com/watch?v=MGSTEKapIAg.

but a Triple-A survival action horror game, one with a massive budget, that can't risk alienating and frustrating players with a mechanic that is often seen as frustrating. Therein lies a paradox closed at the first instance: an escort mission is one where players feel a need to protect Ellie, but she cannot be killed or harmed, since players cannot find Ellie frustrating. If Ellie is vulnerable, she becomes frustrating. Not only does this risk hampering the emotional weight of Joel's final decision, but it also makes much of the game frustrating: through their travels, players will always be on edge.

How The Last of Us Maps Its Apocalypse

But what are they traversing?

Preventing player frustration during the escort mission is critical in *The Last of Us* since it allows Naughty Dog to lead them through its environment. To *The Last of Us*, just as what is important to the escort mission is what Joel and Ellie are escorting *through*. On the surface, the environment of *The Last of Us* presents a somewhat utopic vision: a transition from one space to another, whose nature is dictated by nature itself. As Joel and Ellie travel across America, they do so through increasingly green set pieces, dealing with human and nonhuman threats alike.

The game's escort mission uses its environment to present a defense of anthropocentric modernity, specifically by depicting human civilization as maintainers of what is otherwise seen as the chaos of nature. Creative Director Neil Druckmann was heavily influenced by Alan Weisman's *The World Without Us*, a post-apocalyptic speculative fiction in which humans have disappeared.[124] Druckmann's analysis of that disappearance is that the relationship between humans and nature as one of conflict:

---

[124] "Grounded: The Making of The Last of Us," YouTube, March 1 2014,
https://www.youtube.com/watch?v=yH5MgEbBOps.

"[*The World Without Us*] describes in detail, how much fighting on a day-to-day basis we have to do to keep nature back. Once you stop doing that, how quickly nature can reclaim that. They talk about New York, and how everyday they pump water out of the subway system. That system breaks down within two days the whole city is flooded. Once water is introduced, structures collapse and trees will sprout and wind will carry those seeds over…" (19:20-19:39).

The transition between human cities and the wilderness in The Last of Us is not only a natural state of the post-apocalypse, but a central character of post-apocalypse. In *The Last of Us*, each map is not a separated, isolated location in which Joel and Ellie traverse, but a liminal space of a formerly thriving human civilization and the nature that overcomes it.

Druckmann's vision, played out in the mechanical and aesthetic tensions in the landscape of *The Last of Us*, depicts an apocalypse that extols the values of anthropocentric modernity, what Marshall Berman calls a perpetual mode of experience which both flattens and unifies, but also disintegrates.[125] Berman usefully defines modernity not through a series of distinct markers, but overall generalities, a concatenation of unfocused experiences. More specifically, Berman employs the language of force – forces of nature, forces of industrialisation, forces of capitalism – to describe modernity as excesses of human imagination brought beyond humanity's capacity to control it.[126] Modernity in this sense is one of dynamism, but a dynamism which escapes one's ability to make sense of it. In *The Last of Us*, the loss of anthropocentric modernity is framed in two ways: humanity's incapacity to contain the fungus, and humanity's inability to make sense of its new order.

Lack of containment is accomplished by juxtaposing it against limited nonhuman landscapes. *The Last of Us* frames human civilization as a series of enclaved zones of lost territory. Despite

---

[125] Marshall Berman, *All That Is Solid Melts Into Air: The Experience of Modernity*, Penguin Publishing Group (1988), 15.
[126] Ibid, 16.

Joel and Ellie's trek into the countryside, most of the game depicts zones outside of quarantine areas not as unclaimed, but *reclaimed*, in the sense that the effects and artefacts of pre-infection human civilization remain in sight. Most areas are just roads, plains, fields, and forests, but also embody former spaces: former building complexes, former factories, former college campuses. Here, wilderness refers to overgrown suburbia, lost highways, and lost urbanity.

Figure 3. Escaping Boston.[127]

We can see this vision humankind in its environmental design. The game's traversal from the concrete jungle of government-run quarantine zones to vine-laden danger zones marks a notable increase in hostility, both mechanical and aesthetic. For instance, the player's first exposure to outside the quarantine zone is marked by the massive effigies of Boston's skyscrapers, one of which the player traverses through to escape. Up until that point, human civilization had been

---

[127] "The Last of Us (PS4) – Full Game – No Commentary," YouTube, August 4 2016, https://youtu.be/aLg98S4sxsE?t=4296.

depicted as drably totalitarian, with checkpoints, barbed-wire fences, and police at every corner. The game only presents two main zones: the controlled, panoptic zone of the cities and the chaotic, lawless zones of elsewhere.

This conflict approach to *The Last of Us*' environment is especially pronounced considering cordyceps is not, by apocalyptic standards, divine punishment. Amy Green makes this observation, noting that the apocalypse is a faultless one.[128] Nobody in *The Last of Us* is at fault for the mutation of *Ophiocordyceps unilateralis*. Rather, the apocalyptic environment of *The Last of Us* is simply *normal*, that the brutal conditions outside of the walls of the government is what the natural order truly is, and, consequently, pre-collapse modernity is more of a gardener and tender of desired behaviour. Human society pre-apocalypse, in other words, kept baser and more dangerous human actions 'in check'. The effect of the fungus is not an imagining of a new radical order, but a dissolution of the old one, with the implication of the title of *The Last of Us* not a vision to a hopeful future, but a hauntological examination of the old world.

The Last of Us' Apocalypse as Accumulation

While *The Last of Us* presents the apocalyptic world as hostile to humans, it also allows players to engage in a space hostile to human accumulation. This is presented through its scavenging mechanics and how the game's avoidance of trading economies. *The Last of Us* is unorthodox in this sense; many Triple-A post-apocalyptic games suggest that, after the world has ended, market trading structures remain. The *Fallout* games, for example, have basic market economies where players can trade with NPCs. In *Resident Evil*, vendor characters ("The Merchant" in *Resident Evil 4* (2005) and "The Duke" in *Resident Evil: Village* (2021))

---

[128] Amy Green, "The Reconstruction of Morality and Evolution of Naturalism in *The Last of Us*," *Games and Culture* 11, no. 7-8 (2015): 752. https://doi.org/10.1177/1555412015579489.

incentivizes players to scour the areas, collect items, and then sell them for upgrades. Scavenging

mechanics in games engenders a practice known as archaeogaming,[129] where virtual landscapes

carry their own material culture. This extends inside and outside the game narrative,[130] from the

physical material upon which its metadata exists to the small notes stamped on its items. The

reasoning is that games, by their own internal logic, craft a culture in which players examine and

accrue artifacts, thereby developing an image of the game's cultural development. Scavenging

encourages archaeogaming practices since players are incentivized to find objects with the intent

to sell. In the process of finding sellable objects, the game's environmental storytelling unfurls a

narrative tapestry.

The Last of Us removes the existence of a vendor, favouring a crafting mechanic which rely

on the durability of its items to incentivize players to keep searching, forming a danger loop.

Instead of selling items to get currency to get better items, *The Last of Us* destroys existing items

that are used too often. Players can upgrade character stats, but it is limited based upon how

many points they can find (in the form of pills). In other words, the game leans on finitude and

scarcity. The lack of a vendor also sets up an important ludic loop: players must find supplies to

prepare against enemies, but to do so also involves running into enemies. These enemies also

drop supplies. Everything is framed as a means to survival by establishing every encounter –

animal, raider, scavenger, infected – as a harvestable chance for supplies. Reclamation happens

on the mechanical level: players cannot bargain or deal with other characters, with every

encounter serving as kill or be killed.

This sense of scarcity sets up a world that can only be harvested and never negotiated and

---

[129] Andrew Reinhard, *Archaeogaming: An Introduction to Archaeology in and of Video Games*, Berghahn Books (2018), 2.
[130] Ibid, 3.

thus reflects, mechanically, a loss of modern civilization through play. Players cannot reason with scavengers or raiders. Every encounter with an infected ends in hostility. The game does not present newly shaped orders but only the clinging remnants of old ones. Playing scarcity turns these items into a manifestation of what Anna Lowenthaupt-Tsing calls salvage accumulation, a process of amassing capital without the ability to control the conditions in which commodification occurs.[131] Tsing's frame of reference is the matsutake mushroom, a fungi which grows in blasted landscapes, and thus paradoxically re-engenders capitalist modes of accumulation in the face of its own calamities.

As Tsing notes, capitalism is fundamentally concerned with accumulation, the ever-expanding purview of investment whereby wealth is concentrated, making possible for new investments and by extension, more concentration.[132] However, in *The Last of Us*, the death of the Anthropocene is the death of capitalism, and by extension, the death of progress. To craft is to scavenge, to scavenge is to fixate on the archaeology of pre-apocalypse, and to fixate on the pre-apocalypse is shut out possibilities of new ideologies. This is enacted quite literally: all items in *The Last of Us* are remnants: bricks, bottles, medicinal equipment, and ammo. Even 20 years after the outbreak, the player acquires goods from pre-collapse. Sustainability and adaptation are framed as problems: Tommy's community is constantly under siege, and David, a man who runs a small commune during the winter section, is revealed to be a pedophilic cannibal. David's character is so stark in his inhumanity; he is the suggestion of what happens without "order," a subject who, without the regulating legal and prosecutorial power of human modernity, returns to an animal. His engagement in cannibalism, a taboo consumption and violation of human

---

[131] Anna Lowenthaupt-Tsing, *The Mushroom at the End of the World: On Possibility of Life in Capitalist Ruins*, Princeton University Press, (2021), 63.
[132] Ibid, 61.

subjectivity, forms the bookend of Joel and Ellie's journey. He is the ultimate warning of what happens when "society" collapses, though *The Last of Us*' packaging of society is so broad that its warning insists on the upholding of pre-existing capitalist relations of production. In other words, in focusing on the viciousness of the collapse, *The Last of Us* marks the pre-collapse era as safe. This is especially notable considering that the only frame of reference the player has for pre-apocalypse Joel is precarity:

> Joel: Tommy, listen to me. He is the contractor – he is the contractor, okay? I can't afford to lose [his] job. I-I understand.

Joel's pre-apocalyptic position is not a father with an idyllic lifestyle rent asunder by the apocalypse, but one of deep, pre-existing precarity. Despite the ideology's shortcomings, the game conflates modernity and capitalism with *safe*. Part of this is because of what Mark Fisher deems an apolitical element to capitalism, in that the ideology does not assume political beliefs,[133] so imaginations beyond, as in *The Last of Us*, default to pre-civilized perspectives. In other words, the loss of capitalism, of modernity, and of anthropocentric control is, by extension, the loss of civilization.

Furthermore, the game's narrative spacetime uses apocalypse to reaffirm the misery of collapse: *The Last of Us* is split into the four seasons, and all of them end in tragedy. For Spring, it was Joel's daughter, Sarah. For Summer, it was Sam and Henry, two fellow survivors. In Fall, nobody dies, but Joel is wounded, shifting the perspective to Ellie. In Winter, Ellie kills David. The apocalyptic imagination in *The Last of Us* is not a space of renewal; by ending every section in death, the game does not present alchemical shift of the world as one of renewal, but as a

---

[133] Fisher, *Capitalist Realism*, 17-18.

removal of the old. Additionally, since each section ends in the same beat, there is a spacetime uniformity. The pacing is rhythmic and by extension, death is presented as natural and unavoidable. It implies an endlessness to human misery, naturalizing the suffering of the survivors in the apocalypse.

The Last of Us' **Apocalypse as Mechanical Spectacle**

Near the end of the game, as the protagonists are near the Firefly compound, Ellie spots something. She runs ahead, and the player, who controls Joel, will end up chasing her. He then finds Ellie looking out window. It is a giraffe is grazing on kudzu. If players approach the giraffe, it activates a prompt. If the player presses the prompt, it activates an ingame cutscene. Ellie then runs to the rooftop and Joel follows her. Players are then treated with a heartfelt scene which acts as a reprieve before the misery about to unfold in the last arc. However, if players ignore the giraffe, Ellie continues anyway, and on the rooftop they speak about the giraffes as if players *had* interacted with them. Even if the player chooses not to engage in petting the giraffe, the game simply assumes they had.

The Last of Us is an efficient spectacle machine in that its depiction of apocalypse, from the siege mentality of its environment to its strict focus on accumulative archaeogaming, to its atomisation of social relations, all happens through a refusal to present or entertain new modes of human existence. In other apocalyptic games, the unveiling informs latent assumptions of human relations. However, nothing is revealed in the unfolding post-apocalypse in *The Last of Us*, becoming what Guy Debord defines the spectacle, or social relations mediated through images.[134] Here, relationships are not presential but always interrupted. This interruption is what

---

[134] Guy Debord, *The Society of the Spectacle*, PM Press (2021), 2.

Debord calls the image, a commodifying unit. This interruption forms a feeling of augmented survivalism,[135] where a subject reshapes their sense of necessity. In other words, a subject's definition of survival is not only food, water, and shelter, but also senses of expression, communication, and eventually, *kinds* of food, water, and shelter. To Debord, "the spectacle is a permanent opium war designed to force people to equate goods with commodities and to equate satisfaction with a survival that expands according to its own laws."[136] By conflating commodities with necessities, the subject reinforces forms of legitimation of an ideology. If someone needs a specific thing which can only be fulfilled within a specific space or mode of production, then they start reinforcing (knowingly or not) image-mediated relations to uphold the production of those things. Theoretically, what challenges entrenched ideologies is reconfiguring peoples' necessity circuitry. This is possible through détournement, a hijacking which reveals and draws attention to how images mediate relations with each other. To Debord, detournement is fundamentally anti-ideological,[137] an expression of a radical theory through the pre-existing representational apparatus.

The Last of Us' has very few avenues for hijacking. For instance, near the end of the Fall chapter, Joel wakes up. He finds out Ellie is gone and pursues her. During this section, Joel is injured, so his running animation is often interrupted by his wounds. Up until now, Joel plays as a superhuman, able to kill droves of enemies and (depending on the player difficulty) take magazines of bullets.

---

[135] Debord, *The Society of the Spectacle*, 15.
[136] Ibid, 17.
[137] Ibid, 110.

Figure 4. Winter Joel clutching his side in pain as he goes off to find Ellie.[138]

However, the moment Joel enters combat, the game returns to his default combat animation. When Joel exits combat, he will be in a wounded state, but when he is in combat, he behaves as if he isn't. The reasoning is that wounded Joel can hamper movement and adopt a wounded walk cycle animation outside of combat. However, should he behave wounded when *in combat*, where players can feel frustration from a loss of control, it risks making the section unfun. Unlike difficulty levels, where players consent to specific kinaesthetic relationships between game and embodiment, Naughty Dog's decision to revert debuffs suggests that the company believes specific relationships play a greater priority than an intention to profess a specific message. Arguments and ideas are valuable, expression is valuable, but they cannot be at the expense of player *fun*.

---

[138] "The Last of Us (PS4) – Full Game – No Commentary"

Figure 5. A wounded Joel, but his combat animations are unchanged from his unwounded self.[139]

Joel's sequence emblematizes a design decision in *The Last of Us* in that the player is given many options to express and navigate the post-apocalypse, but on a macro scale the game guides them on rails. It is mass media, not in a derogatory sense, but in a Debordian sense, as a collection of images handed down to help subjects consume, but not rethink. While Joel's struggle may not be immediately apocalyptic in the sense of worlds, it reflects, on a microcosmic level, Naughty Dog's approach to depicting apocalypse and the world beyond it. Game Director Bruce Straley describes *The Last of Us* as setups, a series of guided decisions to craft player empathy towards the characters in the game world.[140] Straley notes that, compared to games

---

[139] "The Last of Us (PS4) – Full Game – No Commentary."
[140] Ivy Taylor, "The Last of Us director on Ludonarrative Dissonance," GamesIndustry.biz, January 7 2020, https://www.gamesindustry.biz/the-last-of-us-director-bruce-straley-on-ludonarrative-dissonance.

where players use characters as self-inserts, Naughty Dog wanted to craft Joel as a self-realised character. The consequence is that Naughty Dog has pared down player relation so significantly to a space where the narratives it tells are *only* the characters presented. On a mechanical level, players do not entertain alternative viewpoints, perspectives, choices, or areas. At every level, *The Last of Us* is firmly focused on control. It sets up quick-time events at several moments but never branches out or provides alternative sequences when these quick-time events fail. It allows players to stray from the path, but the levels are long tunnels with small offshoot rooms rather than multiple directions to progress. It briefly entertains new vantage points and styles of play but makes active decisions to remind the player that such points and styles are temporary. It is a walking museum simulator, guiding players through hallways and set pieces, but never allowing them to reject those choices. *The Last of Us* tells its players, "if you want to see how this ends, you do what we tell you."

The *Last of Us* is fundamentally about distending the player as a determinant of change. In the world ravaged by *Ophiocordyceps unilateralis*, the player can only bear witness to Joel and Ellie's decisions, never directly informing them. If the player decides to veer away from Naughty Dog's walled-garden approach to narrative presentation, the game jolts them back. Very few levels are designed with a space to modify and tinker. There is no open world, no hub system, and no sense of an economy. In imagining a world where society has collapsed, The Last of Us does not present a vision of freedom or mobility, but one constrained entirely by the supposed limitations of a state of nature. Though Berger might consider the apocalyptic vision in *The Last of Us* as an alchemical burn, *The Last of Us* proposes a regenerative necessity to the apocalyptic vision. Its tightly woven narrative is situated on a bedrock of human immorality, one unleashed when the shackles of modern, capitalist society has crumbled. In this sense, Joel's loss

105

of Sarah is a memory that not only shapes his later actions, but also hampers the player's ability to accurately judge the moral right of his actions. But that leads us to another question: if human-led modernity informs the apocalyptic imagination, what happens when we change the nature of the human subject? From here, I move to *Tokyo Jungle*, and how games might conceive of nonhuman apocalypses.

Chapter 8: *Tokyo Jungle*

Unlike *The Last of Us*, which has difficulties expressing a world beyond modern-day capitalism, *Tokyo Jungle* declares the world beyond humans as a "brave new natural order." Taking place in Tokyo after humans have vanished from the planet, Tokyo Jungle is a survival-action game where players play as animals. Each species has different movesets, styles, and needs. All of them replenish their health via a hunger mechanic. Carnivores hunt other animals and herbivores graze. Players progress through the game by competing for territory, and as they capture more, they find more logs explaining what happens. In some ways, Tokyo Jungle is a counter-example to *The Last of Us*: both are Triple-A Sony Computer Entertainment Games. Both employ archaeogaming to expand on the worldbuilding of their respective apocalypses. Both believe in an enduring, violent struggle expressed through its ludonarration. Both have linear, limited plotlines. However, they differ in many important ways. While *The Last of Us* draws upon Weisman's vision of a world without humans as one of Ozymandian temporality, *Tokyo Jungle* draws upon a Japanese concept of humanless worlds as potentials for new expression. While *The Last of Us* is laser-focused on telling a specific story, *Tokyo Jungle* is focused on telling many, small vignettes.

Much of the response to *Tokyo Jungle* is relatively limited, with most material focusing on its strangeness. The first reviews from outlets (and subsequent reviewers would point out) would describe the game as "*Grand Theft Auto* with Lions,"[141] with most academic material on *Tokyo Jungle* mentioning the game as a possible example of an ecocritical text yet spending significantly less time on what those claims entail.[142] In fact, beyond a few scholars (such as

---

[141] Ellie Gibson, "Tokyo Jungle Review," Eurogamer, September 25 2012, https://www.eurogamer.net/tokyo-jungle-review.
[142] Alenda Chang, *Playing Nature: Ecology in Videogames*, University of Minnesota Press (2019), 192.

Kathrynn Hemann), *Tokyo Jungle* is often used as an analysand in process, in that discussions of the game could be worthwhile, though it is secondary to other, broader matters of Japanese popular culture or game texts.

In this section, I focus on the strength of *Tokyo Jungle*'s story mode, especially in terms of how it operates, on a ludonarrative level, as a form of interspecies entanglement. This entanglement, I argue, is through its limited narrative options, which it expresses through vignettes of its animals with very humanlike drama. While the use of that drama can be seen as a form of ideological closure, an insufficiency to express nonhumanity, I argue *Tokyo Jungle*'s deployment of human drama more reflects the necessity of tentacular approaches to post-anthropocentric renditions of apocalyptic orders. The game reflects what Lee Quinby and Donna Haraway both see (yet express in different terms) a paradox in apocalyptic mentality: if vision of a world beyond is too alien, to inaccessible, it risks becoming spectacle. Apocalypse generates dialectical power through its alliances. Here, *Tokyo Jungle* reflects such alliances, specifically *through* its employment of humanlike drama. Here, I focus on how its game modes lock together to incentivize players to unveil its mystery. With that in mind, I look at how those game modes present an apocalyptic vision different from *The Last of Us*, specifically as a sort of apocalyptic worlding. I conclude on how both topics form a tension – humans form the limits of animal legibility, both in terms of story and gameplay. More specifically, I focus on how despite the game's story ending on a positive vision of a world without humans, gameplay presents a much more difficult vision: everything begins and ends with humans.

Is *Tokyo Jungle* an ecocritical game?

Tokyo Jungle is somewhat different from modern-day ecocritical games because it seems

more concerned with absence than effect. Modern-day ecocritical games tend to be defined by a focus on the accessibility of their nonhuman materiality, or their tendency to "bring in" nature into frameworks of analytical clarity,[143] while simultaneously demonstrating system reactivity.[144] The strength of the ecocritical game is its utopian pedagogy, or its ability to entertain frameworks of action on how to "move forward" in the face of disaster. The ecocritical games can be apocalypses that prioritize instruction. The aim is not to understand apocalypse and its relation to ideology, but uses apocalypse as a focal point for activism. *Tokyo Jungle* is limited in its capacity for pedagogy. It does not demonstrate anything about the role of humans nor gives any solutions on how to fix the world. The game does not depict its animals as freed from humans, but rather successors to humans. It presents the world in a different orientation, specifically through its animals. In other words, it is a story not concerned with apocalypse as a space to navigate out *of*, but rather apocalypse as a space in which alien perspectives intermingle at the supposed expense of another.

However, a game by humans about animals will need to grapple with the simulated gap emerging out of the rules-based structure of the digital game. Part of what engenders a game's procedural argument is its capacity to simulate what Bogost calls a "source system,"[145] which can be many things: a phenomena, a concept, or an object. While the source system of *The Last of Us* is an apocalyptic world inhabited by the remnants of human civilization, *Tokyo Jungle* extends beyond that by reflecting not only an apocalyptic world, but also one inhabited by nonhumans. The game thus plays double duty, crafting a simulation of a world of a different ideology, but also beyond humans. The game not only attempts to imagine limits of ideology but

---

[143] Chang, *Playing Nature,* 134.
[144] Megan Condis, "Sorry, Wrong Apocalypse: *Horizon Zero Dawn*, *Heaven's Vault*, and the Ecocritical Videogame," *Game Studies* 20, no. 3 (2020). https://gamestudies.org/2003/articles/condis.
[145] Ian Bogost, *Unit Operations: An Approach to Videogame Criticism*, Mit Press (2008), 106.

develop an intelligible procedural argument reflecting the nature of subjects lacking the capacity to communicate on their own terms.

However, since in *Tokyo Jungle* the animal order is filtered through a human lens, it brings up bringing up questions on its effects. The game equates the "animal order" as not entirely dissimilar to a human one: the concrete labyrinth of Tokyo is described as a jungle, both figuratively (as winding and difficult to navigate) and literally (as covered in overgrowth). The analogues to a neoliberal order linger: the ending of the tutorial describes the world as neither pleasant nor harmonious, but as a "struggle for survival," that "the fight to survive is never easy, but only victors live to see where the future lives." From a glance, *Tokyo Jungle* may seem to be using animals as a sort of visual scaffolding, by which I mean the game seems to present a combat-oriented survival game, only that the characters are animals. Here is the first line of tension: *Tokyo Jungle* focuses on animals after humans have disappeared, though the game was written, developed, and published by humans. This can seem like a trite observation, but it's an important factor: if the representation of nonhuman subjects is embedded in a culture dictated by humans, then playing as nonhuman is always ideological, in the sense that assumptions on relations inform the way in which we relate to the subjects we play as. More simply, there is a translation process happening in playing as nonhuman, in that we are learning on how to make the experiences of those nonhuman entities intelligible in a way for us. These translation strategies form the core of *Tokyo Jungle*'s drama, and seeing what humanlike traits continue can tell us a bit about the ideology of Anthropocene; what Crispy's believes makes a dramatic story, what signifiers the studio employs, and how they craft the player's relation to the world are all components in what the studio sees is the minimum requirement in explaining this story of nonhuman struggle to a human audience.

*Tokyo Jungle'*s Game Modes

      The game is split into two primary modes: a challenge-based survival mode, where players accomplish objectives as specific animals, and a story mode, a collection of intertwining smaller narratives around animals, eventually ending with a revelation on the fate of humanity. Players must play both modes to completely unlock the story: to proceed in story mode, players must complete challenges in survival mode. Completing challenges in survival mode unlocks more challenges, more challenges unlock new chapters, and new chapters further progress the story. Survival mode accomplishes this through player-found notes. In survival mode, players cycle through progressively challenging scenarios. As players unlock more scenarios, they unlock more animals, and with more animals, they unlock even more scenarios. In survival mode, animal lifespan is reflected by a year counter, where each successive year increases the hunger requirement. As mentioned earlier, hunger in *Tokyo Jungle* reduces the animal's health. As years go by, enemies will become increasingly dangerous and satiating hunger decreasingly effective. Therefore, players are incentivized to reproduce their genes, creating maps of successive generations in Survival Mode.

Figure 6. *Co-op mode with a year counter.*[146]

In Survival Mode, much of Tokyo is explorable from the beginning. Some exceptions include areas locked behind animal sizes and the underground laboratory locked behind a chapter in Story Mode. To unlock further chapters, players need to find "archives", items with snippets left behind by humans. *Tokyo Jungle*'s core gameplay loop consists of finding USB sticks, and doing so requires buying as much time as possible. "Survival" is quantified by the year counter, and players cannot extend animal lifespans, but they can extend playtime through playing successive generations. That requires taking territory in which to breed. Simultaneously, other animals becoming increasingly dangerous other time. Near the survival mode endgame, players will eventually face anachronistic enemies such as pterodactyls, dilophosauruses, and *homo erectus*.

In comparison, story mode is meant to empathise with the animals. In Story Mode, *Tokyo*

---

[146] "Let's Play Tokyo Jungle Co-op (Survival Mode) Part 12 – A Costly Mistake (Beagle and Retriever)," YouTube, August 6 2014, https://www.youtube.com/watch?v=nGvEUAzq41I.

Jungle takes place shortly after all humans on Earth have vanished. Initially tamed or domesticated animals find themselves stuck in a new environment. The story mode is episodic in nature, split unevenly into vignettes concerning specific animals. Among them are a pampered Pomeranian compelled to produce offspring, a lost fawn who must avoid predators in search of their mother, and a lion, exiled from his pride, back for revenge. Most of the arcs are supplementary to the game's core mystery: the back-and-forth Warring States-style jockeying for power between the animals does not mechanically affect the ending chapters. Likewise, while survival mode is very open-world, the story chapters have largely true-false mission fulfillments; the only thing that matters is the objectives are completed. The story concludes on the trek of an electronic dog, ERC-003, whose task is to activate an unexplained protocol to return the humans back to Earth. It turns out that in the indeterminate future, the Earth has run out of resources and become polluted beyond repair. Future humans have devised a means of saving themselves: by replacing their position within the timeline with past humans, effectively swapping positions with their pasts. However, something goes awry, and spacetime has caused an error in the displacement, of which ERC-003 is tasked to fix. In the final mission - which is also the only mission that affects whether players receive "good" or "bad" endings - the player (as ERC-003) is given a choice to either bring humans back or leave them stranded in the future. Should the player comply, ERC-003 goes into cryostasis and the game resolves unsatisfactorily. If the player refuses, they must then defeat the other robot dogs, trigger a self-detonation sequence, and escape. The "good" ending concludes with a deactivated ERC-003 overgrown by plant life.

Figure 7. The only flag in the game that trips either the good or bad endings.[147]

Figure 8. The good ending, where ERC-003's body merges with the rest of the world.[148]

Tokyo Jungle as an Interimplicated Apocalypse

Tokyo Jungle's survival and story mode work in tandem to express its worldview,

specifically the argument that nonhuman subjects help humans understand apocalypse through

nonhuman relations with us, not as objects, but as *other subjects*. This argument is a slight

---

[147] "Tokyo Jungle Story Mode: Act 14 - Tokyo Jungle (Final) (Both Endings)," YouTube, April 13 2013, https://www.youtube.com/watch?v=-2MDlEcZBNQ.
[148] Ibid.

departure from Yohei Kataoka's expressed intentions: he himself mentioned he was influenced by Nakano Masaaki's *Tokyo Nobody* (2000), a collection of photographs of Tokyo without people.[149] Indeed, the development team took great strides to avoid overt human influences. Music producer TaQ (Sakakibara Taku), for instance, noted that despite the jungle-like atmosphere of drums, they avoided those since drums were made from the hides of animals.[150] Like Druckmann, Kataoka and the team at Crispy's demonstrated a concerted effort to map out a world without humans.

However, despite the team's emphasis of a world without humans, the game deploys deeply human-centric dramas to inform its animal drama, suggesting that the apocalyptic play of *Tokyo Jungle* is tentacular. The animals are not animals in a literal sense, but what Donna Haraway calls oddkin, or subjects formed from unexpected interactions and collaborations,[151] to focus beyond frameworks of fixed loci and more onto relations in motion alongside a multivalence of beings. Haraway's metaphor of choice is compost: a teeming interlock of living and dead biomass defined by not just what it is (a mass matter of living and dead things) but what it also can become (nutrients). This imagination of a thing as potential-without-futurity is essential to distinguish Haraway's conception of apocalypse from a utopic imagination, of which she is skeptical. The utopic vision, to Haraway, comes with an expectation of before times; the vision of a "better future" carries an ideological assumption on what the future reflects in the past. Haraway warns us that when the capacity to envision a bright future is not possible, we become paralysed in the face of apocalypse.[152] Therefore, it would be helpful to look at

---

[149] Kathrynn Hemmann, "The Cute Shall Inherit the Earth: Postapocalyptic Posthumanity in *Tokyo Jungle*," in *Introducing Japanese Popular Culture*, ed. Alisa Freedman (Routledge, 2017), 94.
[150] Ibid.
[151] Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene*, Duke University Press (2016), 4.
[152] Haraway, *Staying with the Trouble*, 4.

apocalypse not just in terms of how it is portrayed, but the way it is portrayed, and through which perspectives. In *Tokyo Jungle*, this is played out in how it interlocks its mechanics and elements, and how human and nonhuman components are presented through interlocking.

Tokyo Jungle plays a form of *worlding*, what Kathleen Stewart explains as a composition of generative forces, a collision of interimplicated matter and matters.[153] The game interimplicates humans and animals; players cannot proceed through one mode without playing through the other. Players collect artifacts in survival mode, with each artifact explaining snippets of humans before their disappearance. In effect, survival mode – and therefore its human element - forms its investigative core. In comparison, story mode and its nonhuman element form the game's *emotional* core.

This investigative and emotional core is notable to *Tokyo Jungle* since the game cannot be explained in one mode alone. Players must explore Tokyo in survival mode to find USB archives, which are mandatory to unlocking more story mode chapters. Progressing in story mode lets players explore more of Tokyo Jungle with different animals, changing *how* they can explore the city. The information in the archives is also not arbitrary: information in survival mode always follows its story mode in that USB data provides context on the events of the Story Mode chapter players just played. For example, one of the first archives players come across is the Zookeeper Record, which concludes by noting that one of the Zookeeper's Pomeranian is agitated:

Zookeeper Record 1:

The zoo animals have been restless recently. The fierce predators are particularly on edge, and fights are often breaking out between them. Feeding time has become quite frightening. I think I'll talk to our vet about administering some tranquilizers…

---

[153] Kathleen Stewart, *Ordinary Affects*, Duke University Press (2007), 119.

Zookeeper Record 2:
We've adjusted their diet, but the condition of the animals has yet to change. Even our Pomeranian at home seems agitated and unable to sleep.
I wonder if all animals in the area are suffering similar symptoms.

The Pomeranian is the first animal the player plays in the story mode. It behaves like a tutorial character, meant to explain the game's basic mechanics. During the course of the Pomeranian's story, it kills, breeds, and forms a family unit by necessity. However, when players then go to the Survival Mode to unlock the next story chapter, they find archives which reference the Pomeranian, specifically through the perspectives of its human owners. Here, the Pomeranian is not just a dog freed from human control, but a dog informed by humans around it. Its actions are seen as simultaneously natural (breeding, killing, eating) and unnatural (the sudden success of its natural habits made mysterious by the note commenting on its agitation – can a Pomeranian be *that* vicious?). Playing as the Pomeranian makes the player uncertain of the animals' "natural" behaviour, as they are so interlocked by both the influence of the humans and the premise of the science fiction mystery of the game.

The connection intensifies as the Story mode progresses and animal drama becomes more humanlike, reflecting the intelligibility of worlding. The game is aware a critique of anthropocentrism cannot present a wholly new imagination, but needs to negotiate pre-existing cues into new ones. The first notable transition happens in the multi-chapter dog war. Here we have an ongoing feud between clans of dog breeds, specifically Tosas and beagles. The player controls both breeds and sees both vantage points: they initially play as the beagles, who mount an offensive against the ruling Tosas. Afterwards, they play as the Tosas and must reclaim their dominion over Tokyo by destroying the Beagles. Notable is the way the Tosa storyline develops:

117

over the course of several chapters the player needs to pilot the Tosa back to the position of, quite literally, top dog. At the Tosa leader's nadir, when all of his clan is scattered or killed, he comes across a bear who stands on its hind legs and who, instead of attacking him, offers an alliance. Should the Tosa kill the leader of three groups (crocodiles, tigers, and chimpanzees), the bear will give the Tosa the tools he needs to revive his clan.

The mighty bear saved the dying
Tosa deprived of his territory.

Figure 9. Bear, named "The Chief of Shibuya Woods," standing its hind legs.[154]

To aid the Tosa in this mission, the bear gives him a pair of gloves with claws attached. This is one of the rare breaks in the game's categorization of animal classes and their respective mechanical associations. Up until now, the game categorizes animals into attack groups: herbivores are stealth classes, dogs use lunge attacks, cats use swipe attacks. The Tosa wearing clawed gloves is a way for the player to employ a more lethal variety of movesets, especially as enemies become more difficult. At the same time, the dog's use of what are ostensibly animal-

[154] "Tokyo Jungle Walkthrough: Act 10 - A Fateful Meeting," YouTube, December 9 2012, https://www.youtube.com/watch?v=zHw1TncW5Zw.

made tools transforms the game's depiction of the animals from naive inheritors of a humanless order to regenerators. They are not passively adapting to a posthuman world, but in some ways becoming new humans themselves. However, they are not becoming humanlike because circumstance or environment has made them humans, but because human drama is how the game negotiates nonhuman subjectivity to human players.

The distinction between animals becoming humans versus presenting animal drama through anthropocentric narrative structures (as *Tokyo Jungle* is doing) is demonstrated by the fact that *Tokyo Jungle*'s story explicitly rejects the return of humans. Human-like qualities no longer remain the domain of humans, but become presented as chthonic to nonhuman subjects. The apocalypse of *Tokyo Jungle* allows new means of imaging entanglement while simultaneously expressing them in ways understandable to human players. *Tokyo Jungle* does not demonstrate a humanless apocalypse as an alien space, specifically because the animals are not others; they are interimplicated subjects who still bear the tracings of human intervention, but what makes new subjectivities possible is how old messages and narratives are repurposed through the lens of extant beings. Consider how the Tosa story unfurls: in the process of dramatizing what might have been natural animal territorial disputes, *Tokyo Jungle* leans heavily on human theatrics to dramatize its narrative. Up until this chapter, the game has wed its mechanics with relevant subject matters: the animals fought for territory *specifically* for survival, they survived in spite of the harsh new environment, and the desire to breed forms the fulcrum of the nascent animal clans. In other words, even anthropomorphized, chapters in *Tokyo Jungle*'s story mode are issues that can be reasonably understood to double as animal concerns. Chapter 10 takes a dramatically different route in that it focuses on honor, and as a result takes a sharp turn away from the struggle of animals, to animals who are becoming human-like in their

119

dramatic arcs. The Tosa's relationship with Bear (who constantly presents themselves as the "Chief") is not presented in any sense as animal-like. Instead, it adopts a mentor and student relationship.

Figure 10. The Tosa dressed like a Rikishi, a sumo wrestler.[155]

The Tosa arc and the animals' adoption of human characteristics demonstrates that despite a focus around worlding, we can still see how ideology shapes subjects. The Tosa arc is where the game makes its most distinct transition from animal instincts to ritual. The Tosa's triumphant return to power is marked by him adopting a mawashi, an ornate silk garment used in sumo wrestling, itself a highly ritualized combat sport. This attire marks him as a "yokozuna," wrestler of the highest rank. The Tosa attains its rank not through a battle between enemies, but through a turf war enacted by a desire to reclaim its honor. The animals adopt very similar habits, not just because of repressive mechanisms, but because even consideration of interimplication

[155] "Tosa," Tokyo Jungle Wiki, https://tokyojungle.fandom.com/wiki/Tosa?file=1nNjt.jpg.

can be seen as interpellative. Envisioning a new order means being able to express that order to subjects of an old one in an intelligible way. The Tosas must adopt the semiotics of sumo wrestlers to capture the sentiment of the developers were aiming for and they must use the claw tools in a way commensurate with the way the game's document was set out.

Tokyo Jungle as Anti-Apocalypse

The Tosa arc is also emblematic of another tension emerging out of posthuman apocalyptic visions: the anthropomorphizing of the nonhuman subject. Core to Crispy's initial design document is the use of animals – especially domesticated and cute animals – juxtaposed in unfamiliar environments. In an initial pitch of the game, Kataoka relied on photoshopped images of animals in brutal engagements with each other using Nakano's photographs.[156] More specifically, in demonstrating the game's attractive elements, he stressed the Pomeranian as the initial protagonist. The Pomeranian, Kataoka stressed, represented an animal that was seen in Tokyo as more of an accessory than a subject, a living being which largely existed in-relation to another.[157] Additionally, the value in the Pomeranian as the initial protagonist also allowed Crispy's to levy its cuteness as a selling factor to get players engaged and excited by the game. At the core of Crispy's pitch is what Kathryn Hemmann notes is an affective appeal, utilising the cute aesthetics of many of the animals to juxtapose with environment they're in.[158] We can see the logic play out in the Tosa arc: the anthropomorphizing of Bear ("Chief") and the Tosa makes their engagement not only intelligible, but also endearing, in the sense that its behaviour and

---

[156] "Tokyo Jungle and Japan's Gaming Potential," GDC Vault, https://www.gdcvault.com/play/1018095/Tokyo-Jungle-and-Japan-s.
[157] Ibid.
[158] Hemmann, "The Cute Shall Inherit the Earth: Postapocalyptic Posthumanity in *Tokyo Jungle*," in *Introducing Japanese Popular Culture*, ed. Alisa Freedman, 91.

narrative is not too distinct from human dramas.

The anthropomorphizing of animals generates a crucial corollary which is played out by the game's focus on animals; *who* is experiencing the apocalypse? Throughout the game, the player's affection for the animals is enabled mechanically; players play as domesticated animals who start off weak, but become stronger, and the game rewards players for it with congratulatory messages and snippets of storytelling. When the Pomeranian succeeds in finding a mate and starting a clan, the game doesn't congratulate the player for surviving, but for their ascension into a patriarch of a clan. While the player might find the Pomeranian's story cute and thus its arc endearing, they effectively playing a violent battle for supremacy. The game leans on a core action gameplay progression system (kill enemies, achieve objectives, become stronger) to empower animal proxies, suggesting in the post-apocalyptic world of *Tokyo Jungle*, animals are not the ones experiencing post-apocalypse. In fact, they are becoming stronger for it.

Tokyo Jungle's depiction of animals in the environment stresses not only a tentacular vision of human-animal relations, but also demonstrates that apocalypse is not a universalist engagement, but a contextual one. More importantly, the perspective of apocalypse extends not just into questions of communities, demographics, or religions, but into deep axioms like ontologies. This concern is what Lee Quinby stresses emblematizes anti-apocalypse, or the belief that apocalypse moreso betrays a regime of truth rather than a coherent, absolute one.[159] Quinby was writing specifically after the wake of 80s America, in the resurgence of the Pat Robertson fundamentalist movements and the explosion of the millenarian movements beginning in the 70s. Core to Quinby's thesis is that apocalypse is a site of enactment, specifically an enactment which limits freedom and movement, and that the existence of its political motion is highly dependant

---

[159] Quinby, *Anti-Apocalypse*, xv.

on pre-existing relations of power.[160] In other words, apocalypse always comes with an asterisk – to *whom*?

Quinby and *Tokyo Jungle* are related through an emphasis on apocalypse as perspectivalist, that certain groups are always speaking of apocalypse while simultaneously insisting on universalist totality of its effects. To Quinby, the apocalyptic vision has frequently been at the assailment of feminist work and women's bodies in general: the division of feminist movements into epochal shifts (First, Second, Third wave) has given ammunition to patriarchal structures to pronounce and employ an end of history rhetoric (35), that finally *now* (and always now) women and women's bodies are finally able to do things. Yet Quinby simultaneously stresses that apocalypse is also relational; feminist discourse employs apocalypticism (dismantling masculinism and patriarchy), but the ends it seeks are different.[161] *Tokyo Jungle* presents these questions along similar lines, and it is unsurprising that its only plot choice revolves around this issue: the animals do not, and never have, seen the incident in the game as apocalyptic. The game never once speaks of the situation in *Tokyo Jungle* as apocalyptic. If oftentimes uses the idea of a "brave new order," but rarely does the game speak of a fundamental revelatory shift in the same way we think of as apocalypse. In fact, we, as humans, see *Tokyo Jungle* as a post-apocalyptic game, but there are no humans in-game to situate that perspective.

Apocalypse as Perspectivalist

Tokyo Jungle presents two notes on apocalypse that can seem like truisms, but are relevant to the question of Althusser's discussion on ideology. One, an interimplicated perspective on apocalypse suggests subjects play a crucial, constitutive role in subjectivation,

[160] Quinby, *Anti-Apocalypse*, xxii.
[161] Ibid 36.

specifically with regards to other subjects. While Althusser accounts for multiple subjects in ideology, they are generally seen in relation to an overarching structure. *Tokyo Jungle*, in emphasizing animal-human relations, suggests that apocalypse does not present an epochally new vision beyond ideology, but a vision already implicated within the pre-existing one. Yet, at the same time, a tentacular approach suggests that the post-apocalyptic vision is not just hemmed in by relations of interpretation dictated by the old one, but rather serves as a sort of transition. Second, *Tokyo Jungle*'s emphasis on nonhumanity as the benefactor of apocalypse suggests apocalypse is relational. Just as how subjects are situated in relation to other subjects, they will also envision their roles outside of that subjectivation. However, what the animals in *Tokyo Jungle* are subject to is unclear – the only thing is survival, informed by their experiences with now-missing humans. In away, they can be subjects of alliances.

Focusing on vantage points, entanglements, and alliances also opens up new avenues for thinking of apocalypse as relational rather than universalist. Whereas *The Last of Us* adopts an anthropocentric perspective on its ludic drama, *Tokyo Jungle* foregrounds apocalypse not as a universal dilemma, but as a space of challenge. Haraway argues along similar lines, further problematizing that concept of apocalypse by reshaping the concept of Anthropocene through the lens of Capitalocene, or a specific *group* of humans who engage in shaping and reshaping, particularly the wealthy, intellectual, and the bourgeois. To Haraway, we (the "we" in the sense of people who have the time to read this) are more witnessing a shift *now* which has been long witnessed by indigenous peoples.[162] Haraway's Capitalocene echoes Lee Quinby's project of anti-apocalypse, or the move against apocalypse as a totalizing state of existence and toward a relational state of perspective. To Quinby, Apocalypse isn't just the destruction of spaces, but

---

[162] Haraway, *Staying with the Trouble*, 49.

124

spaces for certain people, certain subjects, and certain states of being. In this lens, the apocalypse of *Tokyo Jungle* comes with a very specific marker: it is an apocalypse for *us*, the player. The animals have no registry of apocalypse.

These questions are possible despite never having met any humans in *Tokyo Jungle*. While *The Last of Us* concerns a handful of people as survivors in the apocalypse, and *Tokyo Jungle* focuses on new opportunities and identities because of the apocalypse, both are tied in relation to memory. Here, both games employ memory in relation artifacts of people from before: photographs, USB drives, snippets of data. In the process of exploring these memories, players situate themselves into relation to the apocalypse. What someone might see as a new world is informed based upon assumptions of the old and what about the old is gone. However, one specific commonality between *The Last of Us* and *Tokyo Jungle* is the use of memory to inform worlds. Neither discuss memory as a device of apocalyptic imagination.

Chapter 9: The *Mass Effect* Trilogy

What does the game remember?

Earlier I mentioned that Bogost stresses that simulation is the gap between rules-based representation and its source system. Bogost warns us of a simulation fever, a tension existing between a fear of slavish devotion to simulations and a wholesale rejection of simulations for complex, nuanced subjects.[163] Bogost's simulation fever is a play off Derrida's archive fever, a fascination with archiving as a means of both destruction and creation, where the act of preservation also activates a power, which was exerted by a claim.[164] This chapter focuses not only on archiving, but a simulation of the archive. More specifically, I focus on the trilogy as a rules-based representation of the source system, the archive, which is played out as a set of possibilities yet always locked back into specific forms. More specifically, I focus on the apocalyptic vision of Mass Effect, especially through its save files.

While *The Last of Us* depends on a clear mechanics-versus-story division as part of Naughty Dog's vision for a polished game and *Tokyo Jungle* employs a multi-mode gameplay loop to tackle the nature of its apocalyptic imagination, Bioware's *Mass Effect* trilogy revolves around three games linked by a critical device: save data. Since computers can maintain records of a functionally innumerable amount of variable data, save data is invaluable for games that entertain a vast number of potentialities. Save data is also at the core of the modern-day digital game: the system can remember where players last were, what they finished, what they still need to do. It is one of the most core possibilities of digital games, an object allowing players to cut up their experience while simultaneously staking claims on what is remembered through the material memory of the save file. Though save data can be seen as a simple quality of life

---

[163] Bogost, *Unit Operations*, 107.
[164] Jacques Derrida, *Archive Fever: A Freudian Impression*, University of Chicago Press (1997), 2.

feature, save data can generate specific forms of play: some games only allow saving at specific times, at any time, or none at all. Some games allow for New Game Plus, where players can load data from a previous save into a new game, completely changing the experience of a game. Save data acts as a form of codified memory, a means in which specific experiences are not only preserved, but also allow and bring into existence specific forms engagement.

Why *Mass Effect*?

The *Mass Effect* trilogy is an important case for studying save files and how they relate to systems, ideology, and apocalypse primarily because of the scope and complexity of its storytelling possibilities. It demonstrates this complexity through how it interprets the save data file, going beyond save scumming or New Game Plus. The trilogy uses the transfer of information from one save file into another system or file to sell its premise and tell its story. It is also for this reason that I focus on the trilogy instead of a single *Mass Effect* game: the game's experience within what Miguel Sicart calls the ludic hermeneutic circle, the reflective meaning-making loop of meaningful play,[165] is segmented at the ludic level due to save data transfer. At the same time, *Mass Effect* is appropriately concerned with the violence which emerges out of save data transfers, specifically in terms of archival violence of digital data, expressed through its narrative. In other words, the trilogy takes advantage of a digital system to tell its story about the violence of digitization.

Navigating this digital system is also presented on an existential level. Drew Karpyshyn, writer for *Mass Effect* and *Mass Effect 2*, describes the trilogy as a discussion on the human

---

[165] Miguel Sicart, *The Ethics of Computer Games,* Mit Press (2009), 122.

condition.[166] While Karpyshyn would be far from the only writer on the team, and he would be

uninvolved for *Mass Effect 3*, his pivotal role in the genesis of the Reaper threat informs the

narrative preservation logic for the rest of the trilogy. Both Karpyshyn and director Casey

Hudson conceived the game as a trilogy from the beginning,[167] so the scale and complexity of

save data played a pivotal role in shaping how lower level narrative interactions in the trilogy

played out. Likewise, memory plays a crucial role in the trilogy, as the main enemies were

developed specifically with god-like power in mind,[168] dictating how new forms of life emerge

in the face of apocalypse. For the trilogy, this dictation occurs at the level of memory.

This section focuses on the trilogy's fascination with memory, especially in the enactment

and exercise of power on *what* must be preserved. Some recent literature has been written on the

Mass Effect trilogy, specifically along the lines of its examination of lost futures[169] and what

could have been in the face of apocalypse. However, while the literature focuses on hauntology, I

shift towards memory both narratively and mechanically. On a narrative level, the trilogy is

heavily focused on archiving as theme. Many characters fixate on preserving elements of

civilization, up to and including the antagonists. Here, its apocalypse sets in motion a desire to

preserve a specific vantage point of civilization. Furthermore, the process is ideological: the *what*

these civilizations choose to preserve speaks on what they think is worth preserving, that in the

face of apocalypse they lay claims on what constitutes their identity. This is demonstrated on the

---

[166] "Drew Karpyshyn, Mass Effect and Optimism in Space : Chasing Atlantis," YouTube, November 10 2018, https://www.youtube.com/watch?v=V0yEoPHFqgM.

[167] "Casey Hudson Interview - How Mass Effect Began," YouTube, November 17 2011, https://www.youtube.com/watch?v=Zi0EvhiDPUQ.

[168] Evan Narcisse, "Here's Why Mass Effect Villains Were So Excellent," Kotaku, April 11 2013, https://kotaku.com/heres-why-mass-effects-villains-were-so-excellent-472348799.

[169] Dom Ford, "The Haunting Ancient Societies in the Mass Effect trilogy and *The Legend of Zelda: Breath of the Wild*," *Game Studies* 21, no. 4 (2021). https://gamestudies.org/2104/articles/dom_ford., Justyna Janik, "Ghosts of the Present Past: Spectrality in the Video Game Object," *Journal of the Philosophy of Games* 2, no. 1 (2019). https://journals.uio.no/JPG/article/view/2943.

technical level, which forms my primary break from previous *Mass Effect* literature: the trilogy,

by virtue of being a digital game, resolves its complex narrative arcs through digitizing and

enacting specific forms of experiences at the expense of others. This is demonstrated not just at

the narrative level (as Ford and Janik propose), but also on a structural and technical level. In

other words, the trilogy's apocalypse focuses on archiving.

*Mass Effect***'s Story**

Like many games, *Mass Effect* sells its audiences on the idea of a 'choose your own

adventure' premise, a quasi-power fantasy where players can navigate and address uneasy and

alienating situations in the comfort of their own homes. However, where *Mass Effect* differs from

many other games is that its narrative arc depends on its save data transfers. The game is

marketed by its multi-entry throughline, where players can carry over save data and continue the

story of *their* protagonist. Therefore, this section is the only game in this project that's

understood on its basis as a series. *Mass Effect's* appeal and narrative thrust is largely understood

on how each game depends on each other. The other cases, though they may be part of a series,

are largely self-contained stories. In doing so, Mass Effect brings up a unique challenge

associated with digital games: how are experiences quantified, and how can they sufficiently be

remembered so that future experiences (playthroughs) accurately reflect a consistent narrative?

At the same time, what are the political implications in quantifying and digitizing these

experiences? As the games grow in complexity from *Mass Effect* to *Mass Effect 3,* so too is the

demand that these systems must, *somehow*, resolve what Bioware deems to be its main plot

beats. Both procedurally and narratively, *Mass Effect* is a far-reaching conspiracy trilogy

concerned with themes of memory, defining what *must* be preserved, and ultimately

demonstrating that digitization is violent. Yet the trilogy also argues that, one, ideology is inseparably linked with archiving, and two, an apocalyptic imagination does not lead to an end of an ideology, since an ideology reproduces through apparatuses maintained by such archives.

The first *Mass Effect* (2007) happens in a not-too-distant future where humankind has expanded beyond Earth. After discovering a large space relay (referred to as 'mass relay'), humanity has access to consistent long-ranged faster-than-light space travel. However, it turns out they were not the first to discover these relays, and humanity is soon integrated into a vast galactic community with an administrative center at the 'Citadel', a multi-appendage superstructure serving as a home for the galaxy's political elite. Running the Citadel are a collection of aliens, with representatives led by a council (simply referred to as 'The Council'). The Council's military arm is led by mobile operatives known as Spectres, special agents who act as their investigate arm. The first *Mass Effect* starts with the nomination of the first human Spectre, Commander Shepard. To test their mettle and competency, the Council sends Shepard to investigate an attack on a human settlement. During the investigation, Shepard discovers two things: first, the attack was orchestrated by another Spectre, Saren. Second, Eden Prime is the home of an ancient alien beacon. The rest of the game revolves around Shepard's pursuit of Saren, all the while forming allegiances and friendships with mercenaries, police officers, stowaways, and soldiers, each of whom have their own reasons for pursuing Saren. The story takes a dramatic turn when it's revealed that Saren's flagship, Sovereign, is a sentient being known as a 'Reaper', a race of gargantuan, ultra-advanced machines resembling armored cephalopods. The goal of the Reapers is to cull the galaxy's advanced civilizations every 50,000 years. The next cycle is soon. Saren falls victim to Sovereign's Indoctrination, a Lovecraftian mind-control ability that slowly turns organic beings into unbidden slaves of the Reapers. *Mass*

Effect ends when Shepard stops both Sovereign and Saren, postponing the Reaper invasion.

Though published three years after *Mass Effect*, the story of *Mass Effect 2* (2010) begins only months after the first one. In a patrol on the edges of charted galactic space, Shepard is attacked by an unknown ship. Shepard's ship, the Normandy, is grounded and much of the crew escaped (with the rest dead). Shepard perishes in the vacuum of space - for now. Fortunately, a clandestine human supremacist organization known as Cerberus retrieves their body, and through a lengthy and expensive process revives Shepard. When Shepard awakes, they find out two years have passed. In the meantime, Cerberus, Shepard's new benefactor, has a mission for them: human colonies are disappearing, communications are cut, and it's up to Shepard to figure out what's going on. Given that Cerberus is a human supremacist organization in a multi-racial galactic community, Shepard is suspicious, but soon finds the threat real. Shepard accepts the offer. It is revealed that the perpetrators are minions of the Reapers, the latter seeking another way into galactic space. Cerberus devises a plan to assault their base of operations, and to accomplish this, Shepard must build up a new squad of new characters to partake in this suicide mission. At the end, the game reveals the truth about the kidnappings: human colonists are getting liquefied and their remains are being used to form a new Reaper, homegrown in galactic space. *Mass Effect 2* reveals that each Reaper is not simply a large, seemingly insurmountable monstrosity, but a literal race of its own. Though every Reaper maintains the same chitinous, cuttlefish-like design, they are internally different. The role of 50,000 year cycle is less a thorough apocalyptic annihilation, and more a harvest; Reapers reproduce through the processing and subsequent liquefication of advanced civilizations. *Mass Effect 2* ends with Shepard not only destroying the fetal human Reaper, but also destroying the mass relay they were about to use. Yet in the process, Shepard ends up killing a small alien colony, and is thus stripped of their service

and placed under house arrest.

Mass Effect 3 (2012) begins shortly after *Mass Effect 2*. Shepard is still under house arrest. However, during Shepard's military hearing, the Reapers find a way into galactic space. One of their first targets is Earth. The invasion interrupts Shepard's hearing, allowing them to escape. With a small complement of soldiers, Shepard rendezvouses to Mars on the behalf of human benefactor Hackett, an Admiral in the human navy. At the research facility, Shepard learns two things: Cerberus (now having cut ties with Shepard) is attacking the facility, and they are seeking plans for an ancient anti-Reaper superweapon. From there, *Mass Effect 3* revolves around Shepard trying to secure fleet power and logistics needed to construct this superweapon. However, because the galaxy is now beset by a Reaper invasion, the humans are not alone - nearly every spacefaring civilization is under attack. To acquire the manpower needed to finish construction, Shepard must hold diplomatic meetings with hostile actors, stop (or support) crime lords, and investigate the origins of the Reapers, all in hopes of finding a way to stop them. The game involves two general threats. On one hand, Shepard must balance the tense wartime environment that defines the galaxy and its major political bodies. On the other, Shepard must deal with both Reaper and Cerberus threats challenging the construction of the superweapon. *Mass Effect 3* concludes with a coalition of fleets (human and non-human) finishing construction of the superweapon, but before Shepard can activate the weapon, they meet an avatar of the Reaper collective. This avatar reveals that the Reapers are a product of an AI singularity. In the *Mass Effect* universe, all civilizations eventually develop AI, which will inevitably turn on them, leading to their extinction. Reapers are preservations of civilization DNA. At this stage, Shepard can use the superweapon to merge organic and nonorganic sapient life, destroy the Reapers, or merge their consciousness with the Reapers and rebuild galactic society. A fourth, alternative

ending, is an act of defiance which leads to a bad ending. Here, a cutscene shows the galaxy

thousands of years in the future, with a hologram of Liara commenting that they have failed, and

that it is up to future generations to prepare for the next inevitable Reaper invasion.

How to preserve and define in the wake of a disaster is not new to Bioware or digital

games in general, but what makes the *Mass Effect* trilogy especially unique is its position as a

self-contained trilogy and thus how it, by design, must deal with the variable complexity it

generates throughout all three games. Alice Henton examines how archiving operates in

Bioware's other signature title of the time, *Dragon Age: Origins*. For Henton, Bioware's *Dragon*

Age: Origins, an apocalyptic fantasy game where player origins and interactions can determine

how dialogue and end-game choices play out, is the quintessential example of archiving, where

players engage in the destruction, preservation, or manipulation of nearly every political body's

archival methods.[170] However, archiving is not unique to Bioware. Henton mentions Ubisoft's

Assassin's Creed (2007), which uses DNA as a form of memory machine to recall one's

ancestry.[171] In this, the character of Desmond is both a stand-in for the player (who accesses the

memories by playing as the ancestor), but also an acknowledgement of the hyperreality of

gameplay. We are not necessarily experiencing some real past, but a past of a fictional world with

a history carrying some vague verisimilitude of an authentic past.

What differs the *Mass Effect* trilogy from *Dragon Age* and *Assassin's Creed* is precisely

its nature as a trilogy: it must, in some ways, resolve its various threads by the conclusion of its

third entry. Thus, the trilogy's unique selling point is not so much the novelty of the save data

transfer but also the scale upon which it attempts and attempts to resolve it. The game keeps

---

[170] Alice Henton, "Playing the Archive: Game and Narrative in Bioware's Dragon Age: Origins," in *Dungeons, Dragons, and Digital Denizens: The Digital Role Playing Game,* ed. Gerald A. Voorhes, Joshua Call, and Katie Whitlock, Continuum (2012), 72.
[171] Ibid, 67.

track of numerous values, both mundane (the number of fish Shepard purchased) and significant (which characters died, when, and for what reason). In doing so, *Mass Effect* is not only an archive as a game with a database (as Henton frames digital games), but also a game focused on archiving.

The Reapers as Apocalyptic Archives

The Reapers are harvesting advanced civilizations as a form of reproduction, and in doing so, act as both the site of commencement and violent preservation associated with archiving. In *Archive Fever*, Derrida argues that the archive consists of two core components: a commencement (a beginning) and a commandment (an exercise of authority).[172] The reason, Derrida argues, is because the archive is not only fixated on events and time, but also space, specifically spaces of events and spaces in which these events whose records are kept. This is because archives not only house records, but were managed or owned by powerful individuals (archons).[173] Therefore, the power of the archive is not only its ability to preserve, but also an expression of power to maintain an impression of an event, object, or subject. It creates a thing as much as it purports to remember it. Derrida's archive is concerned with memory, specifically as a series of impressions structured in a way to form what humans deem as a memory. Any archive of any given event not only acts as a conservation of that event's memory, but also institutes a set of expectations and beliefs about the nature of that event.[174] Since archons preserve archives in places they decide, archives emblematized processes of social memory; the capacity of thought, development, and recollection become curated by those who maintain political and physical

---

[172] Derrida, *Archive Fever*, 1.
[173] Ibid 2.
[174] Ibid 7.

control over spaces demarcated as sites of curation.

Furthermore, to preserve and remember is also an act (knowingly or not) to forget. Since the archive cannot house everything associated with an event, it makes statements about what is valuable and thus worth preserving. In this sense, archives are what Derrida deems *archiviolithic*,[175] a violence meted against the thing it seeks to preserve. This self-violence situates the archive as essential for preservation, but by the act of its own preservation it invariably destroys something. In this sense, the *Mass Effect* trilogy is fundamentally concerned with the power of the archive, especially in the face of apocalyptic crises. The Reapers are living archives in the literal sense: machines which only exist by the violent destruction of civilizations the Reapers deem worthy of preservation.

Archiving is especially relevant in apocalypse because apocalypse sets a time limit: in apocalyptic media, subjects often rush to preserve. What they choose to preserve tells us about what they believe they are. The trilogy engages with preservation and the political inclination of preservation on a macro and micro scale. On a macro level, the Reaper invasion forces numerous civilizations to historical records much more seriously, interlocking the archive as a core object to apocalyptic imagination. In fact, the *Mass Effect* trilogy focuses on how relations of modes of existence are determined not only by archive, but exist in tension with a desire to preserve specific imaginations of archives. *Mass Effect 3* demonstrates this in two major campaigns. One is the Rannoch campaign, where two bitter factions are at war. One faction is the Quarians, an alien race driven from their homeworld of Rannoch by the other faction, the Geth, an artificial intelligence robot species. In a pre-emptive strike, Shepard must broker a peace by entering the massive Geth intelligence. The Geth, who have been infected by "Reaper code," ask Shepard to

---

[175] Derrida, *Archive Fever*, 11.

disentangle their neural network. Shepard obliges, but in doing so, gains access to Geth archives

of Quarian history. Up until now, the trilogy's account of the Quarian expulsion has been from

the Quarian perspective, specifically that the Geth removed them by force. It turns out that the

Geth didn't want to drive the Quarians from their homeworld, but found it necessary in the face

of extermination by the Quarians. The other campaign is the Thessia campaign. Shepard, trying

to retrieve an ancient artifact to complete the superweapon, is thwarted by Cerberus. The mission

ends with Shepard interfacing with the alien consulate, who laments the loss of their homeworld

and pulls out of the alliance against the Reapers. She states,

> "Then I should be going. Plans must be put in motion. Continuity of civilization has to be
> considered…I never thought this day would come."

Both the Rannoch and Thessia campaigns demonstrate the perspectivalist element of archiving,

especially with regards to statements on the nature of preservation. Apocalypse suggests a core,

existential threat to the identity of those who register it, and thus the scramble to record stakes

claims on what defines their identity. For the Rannoch campaign, the apocalypse of expulsion

from their homeworld diverged in two narratives between the Quarians and the Geth. Only in the

archives from both sides is compromise made possible. For the Thessia campaign, the act of

preserving "civilization" hides the role of perspective: the game never mentions to the player that

the Thessia invasion is a harvest, what the Reapers see as a form of archiving. Both the aliens

and the Reapers, in Thessia, are archiving the same object, but how they choose to archive sets in

motion the archival process. To the Reapers, it begins at alien DNA, the literal liquefied essence

of their species; for the aliens, it is their culture, works, and history.

On a micro level, the player directly engages with preservation and the claims it makes

on its subjects. Nowhere is this more clear than in Liara, a squad mate and scholar, who

represents the contradiction between the necessity of archiving despite the acknowledgment of

the archive's limits. In *Mass Effect 3*, Shepard unearths a Prothean teammate named Javik. Javik

seeks revenge against the Reapers for the destruction of his people. Over the course of the game,

Javik reveals that the Protheans - initially considered enlightened and technology advanced

progenitors to contemporary galactic civilization - were violent warmongers who perpetuated a

cycle of slavery and violence against native populations. Liara expresses her surprise:

> Liara: A Prothean. A living breath Prothean right below me.
> Shepard: He's not what I expected.
> Liara: Me neither. He was a little…cold when I tried to talk. I understand the shock of
> waking up again. His species gone. But a Prothean, Shepard? There's so much he could tell
> us.

Liara's surprise underlines both her expectations and prejudices with regards to how Prothean

civilization is understood in the canon of the story, but also highlights the effects archiving has

on subsequent futures. In *Mass Effect*, the Protheans are suggested to be unwitting victims of the

Reapers, a galaxy-spanning collective whose seemingly endless renaissance was challenged by

an insurmountable invader. In reality, the history of the Prothean civilization is incomplete. They

were defined by a cycle of violence before them. Javik in particular, despite being the only living

testimony to Prothean civilization, is also exceedingly unreliable:

> Javik: Those that faced the Reapers in the beginning were long dead when I was born.
> There were memory shards, however, passed down from soldier to soldier. They have us
> fragments of what happened.

Yet later, Liara meets up with Shepard and asks them to verify an archive-in-progress.

Mechanically, this is the moment where the game outlines Shepard's achievements throughout all three games. As a digital game, it can only outline what is quantifiable: what class the player chooses, what binary decisions they've made, and what deals they've brokered. Furthermore, in a twist of irony, no matter what Shepard does, she will always portray Shepard as a heroic figure whose decisionmaking has ultimately led to the overall betterment of the galaxy against the Reapers. Despite her professed concerns about the limited information they could glean about Prothean behaviour, especially considering how differently Javik presents the Protheans, Liara's desire to present Shepard along similar, heroic lines in the face of catastrophe repeats the violent process of memory-keeping. Here, the act of archiving becomes a sutured contradiction: regardless of her realisation of the limits of Prothean archives, she nevertheless sets in motion a specific vision of the contemporary Reaper war.

However, what makes the *Mass Effect* trilogy particularly unique is that the archive is itself presented as an enemy. The Reapers are composed of the liquefied remains of bygone civilizations, ironically due to Reaper invasions. Before the end of *Mass Effect 3*, Shepard has a final conversation with the avatar of the Reaper network. Shepard attempts to convince the avatar (known 'the Catalyst') to halt the Reapers, upon which the avatar responds with:

> Shepard: I need to stop the Reapers. Do you know how I can do that?
> The Catalyst: Perhaps. I control the Reapers. They are my solution.
> Shepard: Solution? To what?
> Catalyst: Chaos. The created will always rebel against their creators. But we found a way to stop that from happening, a way to restore order.
> Shepard: By wiping out organic life?
> Catalyst: No. We harvest advanced civilizations, leaving the younger ones alone. Just as we left your people a live the last time we were here.
> Shepard: But you killed the rest.
> Catalyst: We helped them ascend so they could make way for new life, storing the old life in Reaper form.

In short, the Reapers are curators. The threat, the Catalyst argues, is the eventual synthetic threat that faces all organic lives, risking their extinction. However, the irony seems lost on the Catalyst: the Reapers themselves are synthetic, a complex melding of organic and non-organic material. On one level, the destruction of organic civilizations is simply hastened, not averted, by the Reapers' existence. On another, through the preservation of organic species through the destruction of the civilizations they create, the Reapers - and the Catalyst - are making implicit claims about what defines and determines what is worth preserving. The Reapers determine the worthiness of interstellar civilizations based upon their cultural, technological, and political complexity: during the invasion, they leave terrestrial civilizations alone. Yet despite choosing species on their superstructural production, they preserve these species on their biological bases. At a glance the Reapers can be seen as extremely vulgar determinists, seeing the conditions of galactic prosperity worthy due to the genetic code of the species they preserve. On another level, they can be seen as the penultimate manifestation of archiving: a self-violating and contradictory machine that, by its own existence, creates the conditions of its necessity while simultaneously giving life to a specific machine. The Reapers' continual rejection of the potentiality of the galactic species, which forms basis of Shepard's resistance to their thesis of machine singularity, also makes them a fundamentally conservative species. The Reapers only care about encapsulating the present space.

However, this apocalypse happens as a climactic resolution of a set of experiences the player engages with in the game. Over the course of the trilogy, players make decisions which are then recorded on the backend. Not every decision is recorded, and not every decision of meaningful, but the game rarely tells players which decisions are meant to be meaningful. In comparison to a game like *Tokyo Jungle*, which telegraphs that a decision has a meaning, many

of the decisions in the trilogy leading up to *Mass Effect 3* are presented as relatively minor. The aim is to present a very specific and seamless experience of all three games: when you play as Commander Shepard, the things you do, unknowingly, bear fruit – in marketing terms, you see the consequences of your choices. To pull this off the game as a structure ends up, by virtue of how it reconciles experiences, making claims about experience through digitizing decisions.

Ideology and Structural Causality in *Mass Effect*'s Procedure

The *Mass Effect* trilogy demonstrates how digital structures end up compressing experience into quantifiable information to interpret a network of interlocked engagements in relation to a structure. Earlier I focused on how this happens in the story: the Rannoch and Thessia campaigns demonstrate the way in which memory is recorded is also a stake on what the archivists believe memory suggests. Liara's realisation on the limits of and still reliance on archives demonstrates how archives set in motion specific relations of memory (and thus identity). Last, the Reapers, in their goal, are themselves archives, violent and enactive, things which exist by their direct destruction of others. However, what makes the *Mass Effect* trilogy extremely apropos is that questions of digitizing experience are not just discussed in-game, but performed at the level of procedure.

Because games must recall information from a save data as values to approximate a player's experiences, there is a loss of nuance. This loss is taken for granted in digitization: the transition from analog to digital is one of discretion, a "rounding off" of information in relation to a broad set of rules. Saving a file creates a save file and preserves an imprint, but the save file must always be legible by its overall system. Simultaneously, the digital save is on some level corruptive in that even if data proper does not diminish, some past experiences must be codified

140

into an engine that can interpret them. In other words, the trilogy transfers information through its save system, and by looking through how it transfers this information and trips its flags, we can see how the games map decision-making in a system and what that system may value. Kept and verified locally, these saves determine how games of *Mass Effect* are played. When *Mass Effect 2* or *Mass Effect 3* imports a save file, there are two types of checks made. One check is made at the beginning of the game, setting out major decisions that determine classes and character details. The second are story checks made during major decisions, and those affect both large and small events in the game.

The quantification of experience demonstrates two things regarding an Althusserian concept of ideology. One, it demonstrates how small causal mechanisms link together to form an always-already mesh of interactions that are intelligible at the level of immediate procedure, but can extend beyond perceivable or even codified interactions. This is demonstrated at how the game tackles the resolution of the Geth-Quarian conflict, and how doing what is needed does not require a flipping a series of switches, but demands a specific kind of subject flip a series of switches. Second, players can recognize ideological misfirings while playing; when the game resolves its major inconsistencies through its ending, the response demonstrates that the digitization of experience is always negotiated, not dictated, with the ideological subject.

The Geth Quarian Conflict

Using *Gibbed's Mass Effect Save Editor*, a freely available save editing program for Mass Effect, we can see how the game sets up the decision-making values for a pivotal moment. In the second half of *Mass Effect 3,* Shepard chooses to ally themselves with one of two members of their squad: Tali, a Quarian alien seeking to return to her homeworld, and Legion, a self-

actualized Geth. The Reapers, realising this division, attempt to take control of the planet

Rannoch by lending their aid to the Geth. Doing so traps the Geth under Reaper control. To free

them, Legion must upload a new set of codes that will unlock Geth capabilities, giving them true

freedom but also makes them stronger. Tali implores Shepard to not allow that to happen. Players

are forced to make a choice: should Shepard convince the Quarian fleet to disengage with the

Geth and hope that the Geth will as well? Or should Shepard tell the Quarians to continue firing

and eliminate the Geth once and for all? In *Gibbed*, we see that the Geth/Quarian dilemma is an

integer-based trip, meaning Shepard must accumulate a certain number of points before the
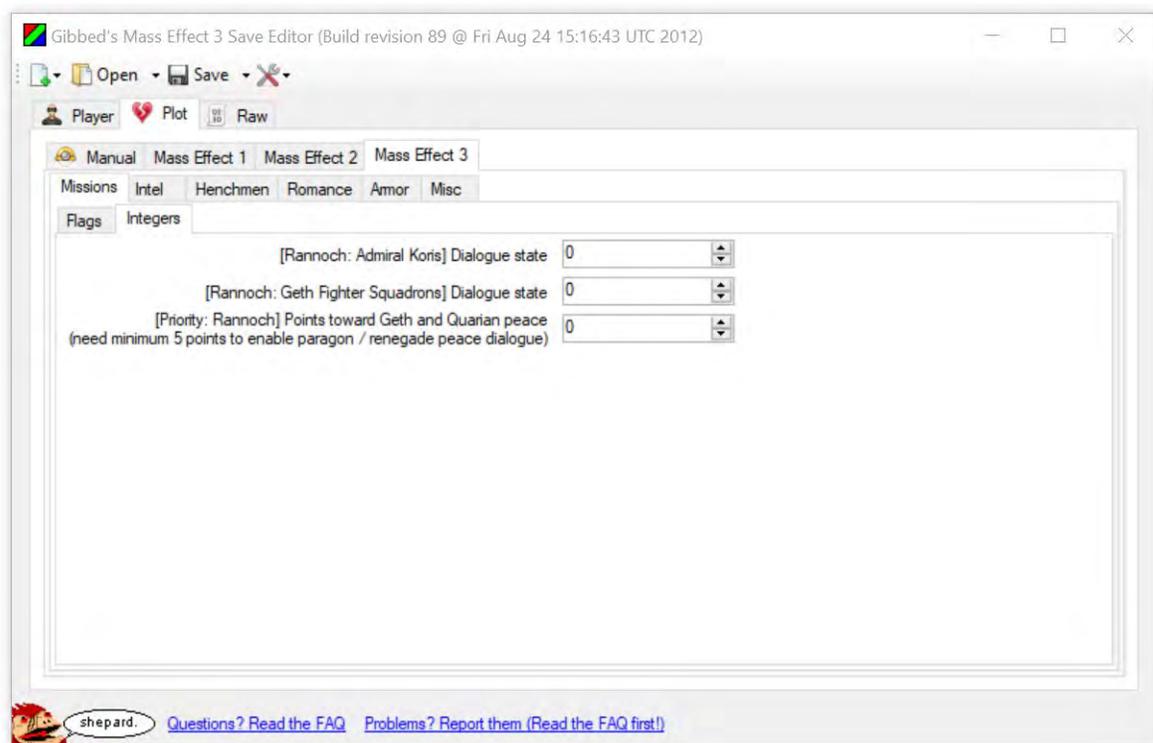
options for a 'true' peace can be acquired:

Figure 11. Interface of Gibbed's Save Editor.

However, this is insufficient. Because the plot of the Quarian-Geth conflict is predicated

on Shepard understanding it, something that was established in *Mass Effect 2*, the game also

makes a boolean (true/false) trip that determines whether the actual peace is *possible*. Looking at

Gibbed's comments in the application's folder director, Gibbed[176] notes that:

> To receive any points, you must:
> - plot bool 1449 -- Probably Tali/Legion conflict in ME2 (plot.bools[1499] == true)
> - Have completed [Rannoch: Geth Fighter Squadrons] (plot.ints[10176] != 0)
> - Legion must be alive (plot.bools[198] == false)
> - Tali must be alive (plot.bools[40] == true)
>
> +2 points: Heretics killed in [Legion: A House Divided] (plot.bools[757] == true)
>
> +1 point: Have completed [Rannoch: Admiral Koris] (plot.ints[10174] != 0)
>
> +2 points: Tali must be alive and
>
>> Father posthumously exiled or
>> Tali found not guilty or
>> Tali exonerated
>
> (plot.bools[40] == true && (plot.bools[2933] == true || plot.bools[2935] == true || plot.bools[2936] == true))
>
> +1 point: Saved Admiral Koris in [Rannoch: Admiral Koris] (plot.bools[18184] == true)
>
> +1 point: plot bool 1585 -- Probably Tali/Legion conflict in ME2 (plot.bools[1585] == true)
>
> Minimum 5 points and
> reputation bar must be nearly full(?) ((reputation points+paragon points+renegade points)*(1+reputation multiplier) > 840)
> for Geth and Quarian peace to be possible.
>
> Points get added to plot int 10212.

Here is a mix of both integer (values-based) and boolean (true/false-based) switches. *Mass Effect*

3, in attempting to map out a certain image of the conflict, approximates these relations through

---

distinct values. Which elements of the narrative are used as boolean versus integer trips reveals the ideological process of the game's patterns. For instance, in one of the quests you must choose whether to save Admiral Koris (a Quarian admiral suing for peace) or his soldiers (whom he begs for you to save). The game will *only* count towards the peace agreement if you choose Koris. For peace, Koris' soldiers are unimportant. The primary pieces worth saving, according to the game, are the leaders of the conflict. In fact, aside from the "Heretics" flag, what the game needs for peace is the *leaders*. The trilogy's 'Great Man' approach is not only core to its narrative, but also its procedure. More minutely, specific enactments of political power are present in specific ways. For instance, the legacy of Tali's father, a major development arc in *Mass Effect 2*, has no bearing on the final decision. At any point during that mission, the player can choose to radicalize Tali against or in support of her father's ideals. However, the only trip that matters is that Tali is *alive*. The game's structure is weaved in way that certain mechanical values are prioritized.

However, all these integer values require the 1449 boolean trip, which is a resolution of the Tali and Legion dispute in *Mass Effect 2*. This scene demonstrates how, in resolving complex experiences down to quantifiable data, Bioware generates specific playstyles by virtue of forcing players to engage in specific behaviours. In the Tali and Legion dispute, Tali catches Legion sending classified information to the Geth fleet. Legion says it is a precaution against the Quarians. Shepard has two default options, each telling one or the other to back off. This results in a loss of loyalty with the other. The only way to retain loyalty from both members is to pass either the Paragon or Renegade dialogue check. However, to pass those checks, the player needs to have accrued enough Paragon or Renegade points up until that moment, which requires them having engaged in enough Paragon or Renegade conversation options. If players play a neutral

144

Shepard or flit between Paragon or Renegade options, there is a possibility players cannot pass the check.
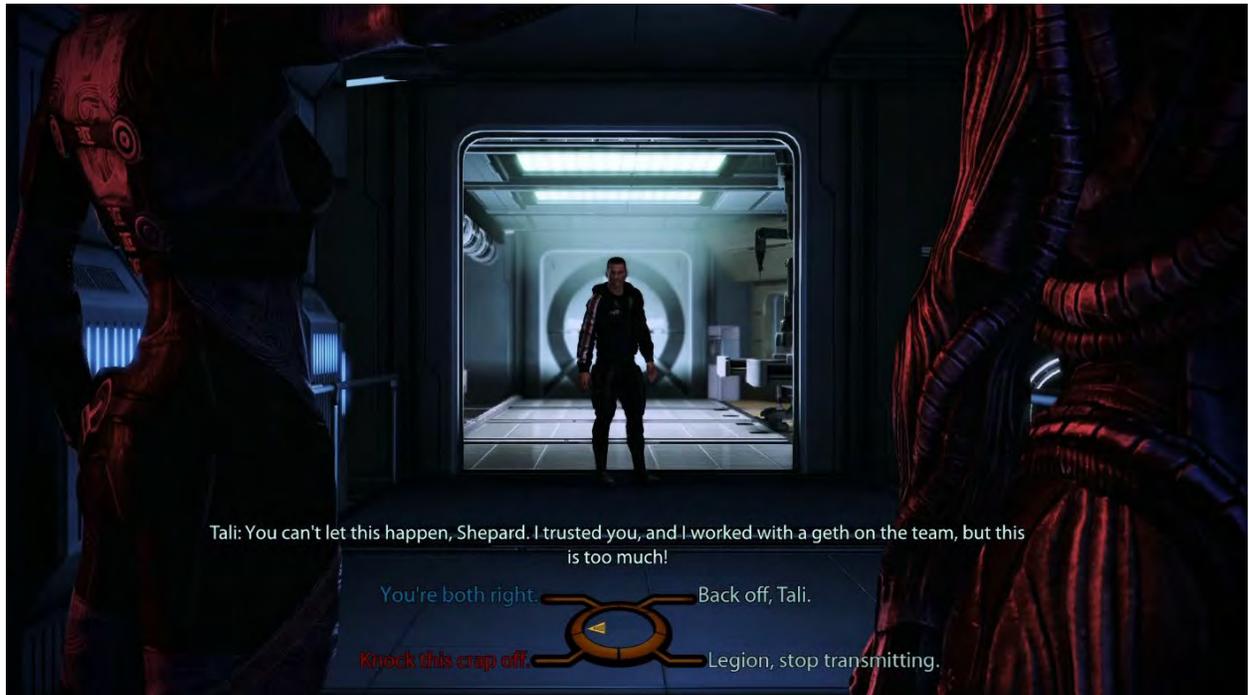
Figure 12. Plot 1449, the Tali/Legion dispute. The Paragon and Renegade checks are on the left.

In other words, if a player engages in neutral or nuanced Shepard, they find themselves increasingly locked out of higher-level and later-stage interactions. The Quarian-Geth conflict, which might theoretically suggest a nuanced position accounting for both sides, is only possible through procedural radicalization. A neutral Shepard cannot, mechanically, broker peace. Only a virtuous Paragon or reckless Renegade Shepard can accomplish that.

More broadly, the trilogy (and *Mass Effect 3* in particular) fills in or removes characters based upon whether they survived the events of *Mass Effect* and *Mass Effect 2*. The implication, therefore, is that the game establishes a largely modular narrative. In Gibbed's tab for *Mass Effect 2*, the game logs whether the characters are alive or not:
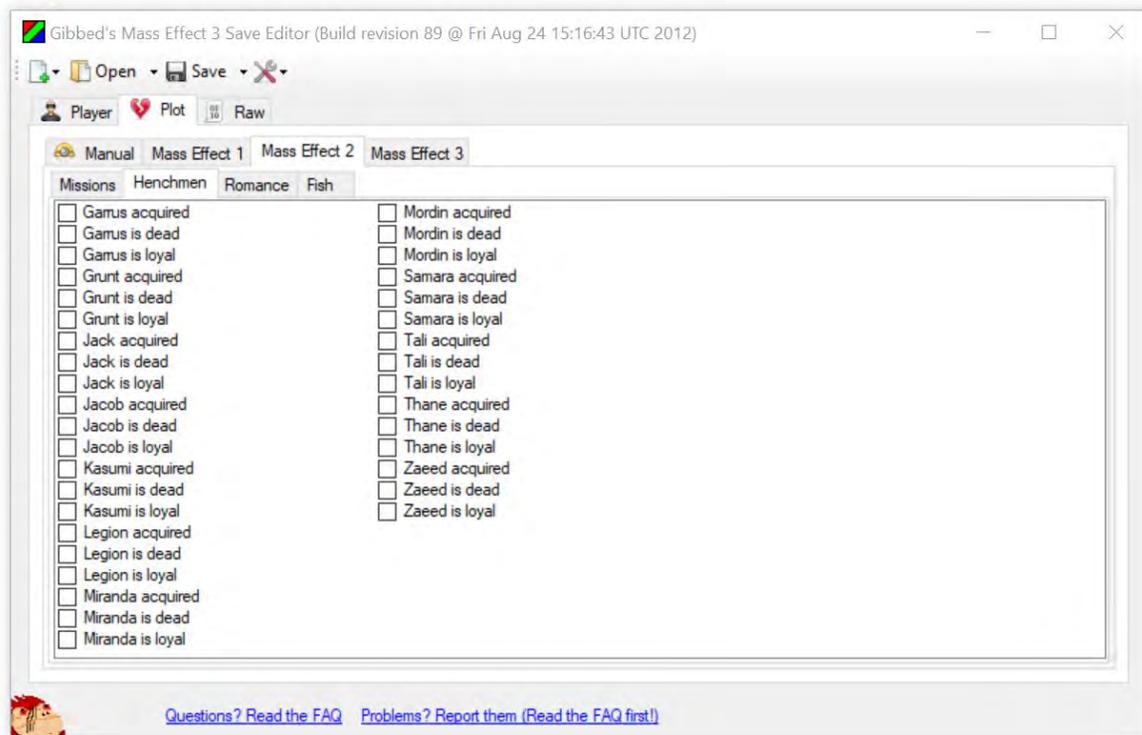
Figure 13. Log of every team member, their status, and their loyalty.

Though the characters can respond differently to Shepard's actions and develop a rapport

with Shepard, none of that matters for their survival. The primary trigger is not an integer, but a

boolean, primarily because *Mass Effect* is a trilogy that must be conceived structurally. It does

not and cannot think about storytelling and character development in a nuanced fashion because

the game must leave room for alternative worlds in which these characters are no longer alive.

Just like Tali, whose opinion on her father is unimportant, *Mass Effect* compartmentalizes its

characters so they can be easily replaced. In another mission in *Mass Effect 3*, Shepard must find

a cure for the Krogans, a dying alien civilization. The leader of this civilization is ultimately

unimportant to whether Shepard succeeds. The leader can either be one of your old squadmates,

Urdnot Wrex, or his psychopathic brother, Urdnot Wreav. Though the narrative paints Wreav as a

much more callous and dangerous individual, the game provides few consequences. Shepard can

gain the same soldiers, the same fleet power, and lead to roughly the same outcomes. While the player can kill Wrex in *Mass Effect 1*, his lack of presence in *Mass Effect 3* is addressed by Wreav's existence. There is no gameplay, sidequest, items, or anything which changes the relationship should Wrex survive. The only thing is the player's subjective affinity for Wrex, something which is not codified in the game's files.

The trilogy is an extreme example of what Jesse Schell refers to as the combinatorial explosion,[177] a design habit where the game oversells the impact of its smaller decisions. The system, Schell notes, condenses multivariate decisions into unchanged conclusions. However, the core of the combinatorial explosion is material in nature: only so much data can be stored, and only so many possibilities can be made. Thus resolutions imposed by the limitations of the save file can be apolitical yet deeply ideological. More specifically, the file condenses and digitizes experience, but there is no agential force exercising that power. Yet, simultaneously, it is ideological in the sense that it maps out a very specific set of relations due to its material modes of existence.

Resisting Apocalypse

The tension between conservation through the nature of the digital structure as a form of archiving is relevant to its apocalypse because that is precisely the core contradiction the trilogy seeks to address. The story of the trilogy is not just the story of archival violence, but resistance against oversimplification in the process of preservation. This resistance happens both narratively and through its community. At the end of the trilogy, Shepard is transported to the heart of the Citadel, where he meets a ghostly electronic character who has taken form of a

---

[177] Jesse Schell, *The Art of Game Design: A Book of Lenses*, A K Peters/CRC Press (2017), 301.

young child. Here, the Big Bang that is the trilogy's combinatorial explosion enters its Big

Crunch: the game resolves all of its disparate threads through one of three samey endings. If the

player can choose to reject the Catalyst's offer, or choose to unload their magazine:

> Catalyst: Your time is at an end. You must decide.
> Shepard: No. I'm going to end this war on my terms.
> Catalyst: Then you will die knowing that you failed to save everything you fought for.
> Shepard: I fight for freedom, mine and everyone's. I fight for the right to choose our own fate. And if I die, I'll die knowing that I did everything I could to stop you. And I'll die free.
> Catalyst: So be it. The cycle continues.

The game then plays a cutscene, showing a hologram of Liara beneath several layers of

sediment:

> Liara: If you're hearing this, then there is still hope. Hope that you can avoid the same mistakes we made. We fought the Reapers, but we failed to stop them. We did everything we could. We built the Crucible, but it didn't work. We fought as a united galaxy, but it wasn't enough. I only hope the information in this capsule is enough to help you before it's too late. My name is Dr. Liara T'Soni. Herein lies the recounting of our war with the Reapers.

It then fades to black, eventually showing a backlit child with an adult woman:

> Child: Did that all really happen?
> Stargazer: We'll never know exactly what it was like, but yes, the archives tell the true story of those who came before us. They fought a terrible war so we wouldn't have to.
> Child: And that's why we have peace?
> Stargazer: Yes. Without everything they accomplished, without the information they passed down, we too would be threatened.
> Child: What else do we know about the Shepard?
> Stargazer: Just what we know in the archives.

The trilogy's apocalyptic imagination suggests that archives shape subjects in relation to

ideology and that the means in which archives preserve events in motion help shape relations of

production. The digital game allows us to explore this, but the structure takes great pains to

restrict our ability to play beyond it. Reaper harvesting continued through innumerable cycles,

but it is through the Catalyst's terms that Shepard can defeat them. The Crucible is less of a

device that dismantles ideological control and more a device reaffirming it. Shepard's refusal to obey the Catalyst's demands leads to a 'bad' ending. The Reapers are both the solution and the problem: everything will become a subject to the digitized structure of ideology, and the savior exists in another form of digitization. Furthermore, the child and the stargazer's comments suggest that whereas Shepard rejects the Catalyst's offer, these future humanoids chose to accept them.

However, the trilogy and its question on the quantification of experience through archiving is also somewhat unique due to the resistance displayed by its player base. More broadly, resisting archiving by archiving is a means of navigating and resisting relations of production through similar relations of production, to "make sense" of a structure as it condenses people into subjects. What makes the trilogy unique is that similar tensions was played out by its playerbase. There was significant backlash against the totalizing resolution of the original trilogy. Players and reviewers alike were critical of the game's similar endings.[178] Some players, refusing to believe in the canonicity of the endings, devised the "Indoctrination Theory," a fan theory suggesting that Shepard's actions are the final stages of mind control delirium.[179] On Nexusmods, one of the largest english-speaking modding communities, one of the most popular Mass Effect 3 mods of all time is MEHEM, or the *Mass Effect 3 Happy Ending Mod*. Here, fanmade cutscenes recontextualized the ending, up to and including Shepard's survival.[180] At first, this may seem like resistance: players pushing against the repressive three-color ending of Mass Effect reflects back onto how ideology might be pushed. The trilogy, up until the ending,

---

[178] Luke Winkie, "10 years later, the Mass Effect 3 ending controversy still haunts gaming culture," PC Gamer, June 2 2021, https://www.pcgamer.com/10-years-later-the-mass-effect-3-ending-controversy-still-haunts-gaming-culture/.

[179] "Mass Effect 3 – The Indoctrination Theory Clevernoob Documentary Reupload," YouTube, May 21 2015, https://www.youtube.com/watch?v=BSE0osxQvA8.

[180] "MEHEM The Mass Effect 3 Happy Ending Mod," Nexusmods, February 21 2015, https://www.nexusmods.com/masseffect3/mods/66/.

presented a specific form of narrative agency which many players found were insufficiently addressed with the Catalyst's choices.

However, player responses also reveal how ideological imaginations employ symbolic acts to resolve their contradictions. Under mounting pressure and death threats,[181] Bioware released the *Extended Cut*, free downloadable content which expands on the original choices, but doesn't change them.[182] Despite being an extension of the original endings, the *Extended Cut* successfully tempered diehard fans.[183] This decision to begin and end at the structure laid out in the trilogy is not limited to the Extended Cut. Even MEHEM itself, a fan-made mod with much acclaim, did not dramatically change the end of the trilogy; it provided more context so that the decisions players experienced during the course of the game felt more meaningful at the final moments of resolution.

Mass Effect's apocalyptic imagination suggests that memory becomes a tool in ideology, and apocalypse reaffirms how it happens. The archive is presented as a site of ideological reproduction: to maintain is to stake claims, and to stake claims is to bring into motion pre-existing relations of production of political and social identities. *Mass Effect* suggests the apocalypse plays a crucial role: the threat of existential destruction begins to quantify what we believe those relations are. We can see how digital games thereby act as ideological archives, retaining but also destroying information while simultaneously expressing imagined relations of the world. This happens both on a narrative and mechanical level. The trilogy fixates on tackling

---

[181] "The Inside Story of Mass Effect 3's Endings, Finally Told," YouTube, October 21 2021, https://www.youtube.com/watch?v=nhtgjmkcht8.

[182] Kenneth Shepard, "After Years of Silence, Mass Effect 3 Devs Talk About What it Took to 'Fix' Its Ending," Fanbyte, October 22 2021, https://www.fanbyte.com/legacy/after-years-of-silence-mass-effect-3-devs-talk-about-what-it-took-to-fix-its-ending.

[183] Joe Juba, "Mass Effect 3 Extended Cut: The Good, Bad, And Ugly," Game Informer, http://www.gameinformer.com/b/features/archive/2012/06/26/mass-effect-3-extendedcut-the-good-bad-and-ugly.aspx.

what must be remembered, continuing a cycle of subjectivation by reworking the rules of engagement. Furthermore, the apocalyptic imagination of the trilogy is not a way out of ideology, but rather an extension. In this case, the trilogy does not present new visions beyond ideology, but demonstrates how archives reinforce ideology. Here, ideology keeps traces and maintains systems for interpretation. In this sense, ideology not only is an obfuscating, controlling atmospheric guide, but also a generative system for tools of interpretation, thus maintaining control. The trilogy tackles questions of both apocalyptic revelation and apocalyptic disaster, but both senses of apocalypse are mediated by technology, both narratively (Reapers) and interactively (save data transfers). Even in moments of resistance (such as the bad ending and the player response), we see how resolutions occur through symbolic acts. Both seek to preserve, but it is the disaster that determines how this preservation occurs.

However, in the *Mass Effect* trilogy, I focus on the way in which a program interprets information, that for it to take narratives and player experiences and quantify them into increasingly regressive and discrete bits and bytes of information. Furthermore, I tackle the irony of the trilogy's story, specifically in that in an apocalyptic tale of human resistance against biomechanical discretion of their subjecthood, the game is a vector in which this discretion occurs. But this only occurs if players engage in the trilogy as a whole, for its digitization to take hold and the consequences of that digitization brushes up against a player's experiences and values. Players who only play the first *Mass Effect* might never experience the violence of that archivization. However, what happens when the digital platform *is* the very site in which an attempt to escape ideology itself *becomes* ideological? What happens when you that, in attempting to escape, there is no way out?

Chapter 10: *Doki Doki Literature Club*

The Computer Device

This section looks at Dan Salvato's *Doki Doki Literature Club*, specifically as a visual novel which uses it mechanics as commentary on play as an extension of ideology. Until now, each case is connected by a specific technical relationship: they are all developed for consoles. Both *Tokyo Jungle* and *The Last of Us* were published in 2012 and 2013 respectively by Sony Computer Entertainment as Playstation 3 exclusives; *Mass Effect* was initially published by Microsoft Game Studios as an *Xbox 360* exclusive. The publishing platform partly determines the nature of the game. Console players engage in very different challenges than PC players, specifically that consoles are primarily play machines and secondarily media boxes. This is due to software and hardware limitations and much tighter vertical integration of their production; the largest publishers (Sony, Nintendo, Microsoft) also control the operating system, the distribution rights, and the designs standards (eg. controllers, graphical fidelity, the chip's power draw) in which these games are developed. Even as consoles become increasingly powerful, they are locked beyond efficiency: consoles can perform similarly to PCs due to factors like limited multitasking and less load-heavy operating systems.

On the other hand, PCs open up additional possibilities through a different approach to the software-hardware interface. A PC does not just load up a game. Instead, players fiddle with settings and graphics, check compatibility, fix bugs, and interact with various intermediary systems (such as DRM platforms, cheat devices, trainers, modding organizer tools, etc). By default, PC players have access to what Gerard Genette calls paratext, a reading strategy where one's experience with a text is less on its nature as an object, but more of a threshold.[184] PC play

---

[184] Gerard Genette, *Paratexts: Thresholds of Interpertations*, Cambridge University Press (2010), 261.

is not just a console with a keyboard, but a zone of potential manipulation. For example, due to

its ease of modding, *Skyrim* (2011) PC players often joke that they spend more time modding the

game than playing it:
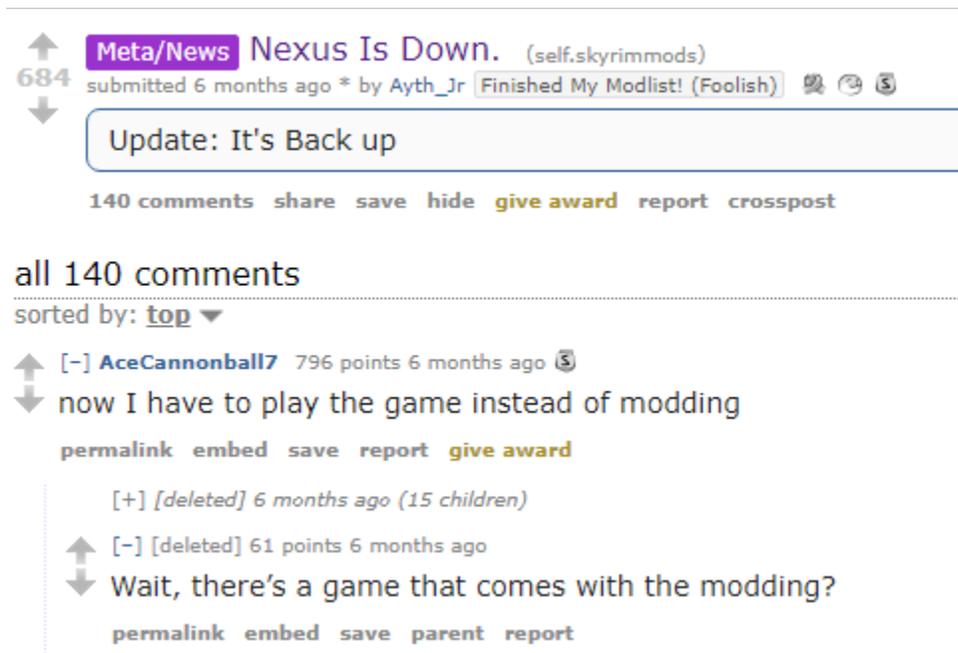
Figure 14. The top comment on an announcement that Nexusmods is down for maintenance.[185]

On PCs, the relationship between playing the game and an ecology of playing the game

begins to blur, normalizing certain expectations regarding games and their files. PC players see

PC games as manipulable, whether it be in terms of modding, choosing their platforms, or even

changing in-game settings such as resolution and fullscreen modes. This expectation extends to

elements extant to the game's magic circle: pre-game launchers and performance logs (files

which keep track of events such as crashes) contextualize how players relate to these games by

establishing zones of engagement which are rarer in console play. On consoles, checking

---

[185] "Nexus is Down," Reddit, September 14 2022,
https://www.reddit.com/r/skyrimmods/comments/xe5spb/nexus_is_down/.

performance logs and working with file subsystems are relegated to more technically savvy

gamers, such practices are seen more commonly in PC games by virtue of the platform's

architecture. Furthermore, this PC platform extend beyond issues of manipulable software; issues

like system requirements dramatically affect player experiences with digital games, since some

PC games simply cannot be played on certain systems.

The PC game is, therefore, symptomatic of a cluster of interactions tied to the computer's

behaviour. This is especially relevant to games as ideology machines, in that PC interaction is

more overdeterministic relations than consoles, especially in that PC players and PCs naturally

adjust to various practices which are rarely discussed in the field of casual play, but always in

mind. For instance, certain PCs can only play certain games because of different technical

limitations determined by issues like parts availability, budget, and space. In comparison, any

game developed for a console can play on any console of the same make. PCs also allow

manipulations of the electronic structure not seen elsewhere: players can mod, datamine, and bug

fix. Extreme graphical mods known as "potato mods" can make playing certain games possible

on a low-end PC, but require significant manipulation or replacement of its files.

The PC, as manipulable, emblematizes the operational logic of ideology: players react to

the machine, which reacts in turn. At this stage, the machine can seen as the material plane upon

which PC play is engaged, especially in a practical sense. However, such as material condition is

acknowledged (the computer specs) in the last determinant, but the ideology's subjectivizing

happens in layers of interactions between subject and system (the settings panel). Furthermore

this manipulation is not always mechanical manipulating playing PC is also knowing PC.

Addressing technical issues, setting up directories, and working with tools and modifications

requires a *sui generis* set of subcultural practices largely underemphasized in console play. In

other words, the PC sits in a unique position as a platform device that enables not just an idiosyncratic style of play, but problematizes the presumed zone in which that play happens.

If *Tokyo Jungle* problematizes the subject matter of apocalypse, and *Mass* Effect problematizes the digital behaviour of the apocalyptic video game, then this case looks at *DDLC* and its relation to the technical and material condition of the PC as an extension of ideology. In short, it tackles the material element of PC through its nonmaterial representation, demonstrating how reinforced planes of interpretation form multilayered zones of reinterpretation. I argue *DDLC* is a relatively unique case since it takes advantage of a frequent visual novel reading strategy – that of character-based reiterative story paths to demonstrate player coherence to its narrative – to critique broader discussions of assumed dimensions of a digital game's play space. *DDLC* accomplishes by taking advantage of a unique PC component: the ability to compromise the assumption of a 'safe,' bounded executable. This discussion of the bounded executable occurs in two ways. First, it uses what Nathan Grayson calls *permapermadeath* as means to push against player intelligibility of the visual novel worldspace, in that it explicitly aims to reject reiterative play, a core component of how visual novel players understand these texts. Second, its use of *real* traceback errors through the Ren'Py engine, which requires a basic technical understanding of the PC structure, fuzzies the game's assumed magic circle, integrating it into underlying processes into the game's operating system itself. These two elements work in tandem with its existential apocalyptic crisis as a limit case of digital control, to see how far one can push for a "way out," but it is precisely in Salvato's later release on console that the device shapes the way its developer now engages with their own creation. Through its unwillingness to discard its PC sensibilities, Salvato's *DDLC Plus* shows how even apocalyptic texts themselves play a role in reproducing relations of production. Its surrender to a specific digital framework

155

suggests an inability to conceive of a space beyond ideology. Yet at the same time, *DDLC* demonstrates the limits of played critique in the face of broader material concerns: this eventual re-release on consoles demonstrates how strategies of worlds beyond ideology are always negotiated at the level of procedural access. In *DDLC Plus*, the game becomes a victim of its own critique: instead of devising a solution appropriate for consoles, its solution to discuss the imagined space beyond the direct executable is to simply clone the conditions of its own procedural argument.

Doki Doki Literature Club and the Visual Novel
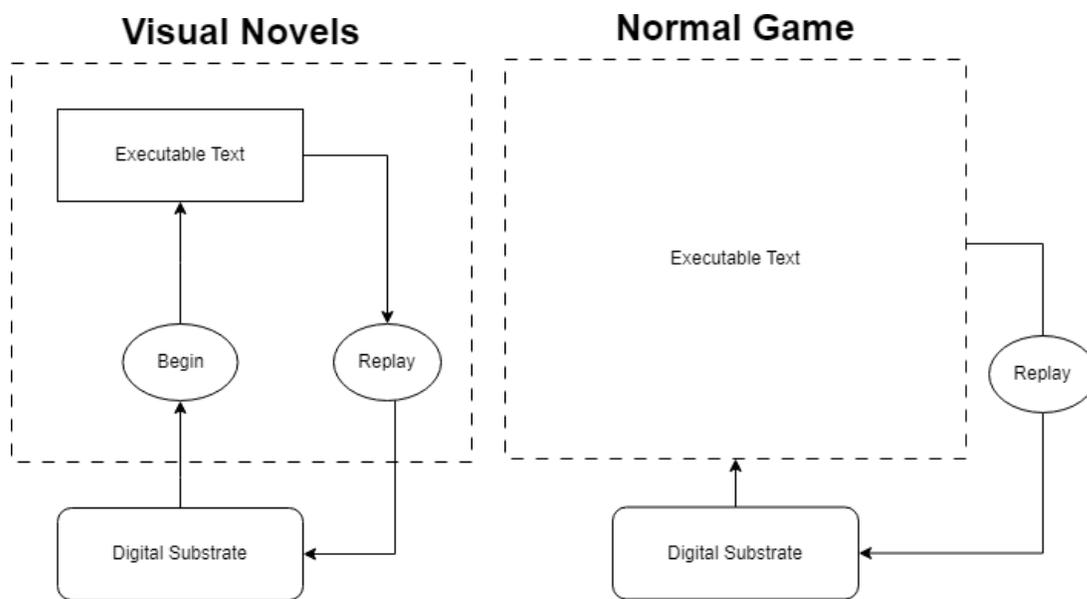
Figure 15. VN Diagram. The dotted lines show the play space of the visual novel.

As a visual novel, *DDLC* engages with specific database-driven reading strategies that largely define the visual novel subculture, specifically a focus on linear conversation paths which players retread to find the game's narrative topology. Visual novels largely refer to games heavily emphasizing branching narratives, large amounts of text, and limited, sprite-based animations.

156

Compared to other games, visual novels tend to lack a wide variety of game verbs, by which I mean action mechanics oriented on objects.[186] They operate like choose-your-own-adventure stories, though they often focus on heavy character introspection instead of massive worlds. As such, they are linear in the sense that their switches tend to lead players down specific threads, known as "routes" (see VN Diagram).

The switch-based logic of visual novel storytelling helps players develop modes of play which privilege iterative and overlapping reading, enabling a form of mastery. Here, mastery does not refer to domination over a narrative, but instead a clarifying understanding of the structure of a visual novel. Players tread and re-tread the same events, character lines, and situations over and over again to find new options and routes in hopes of discovering new endings or scenes.[187] In a sense, visual novels are puzzle-like: players unfurl the world through repeated and iterative engagements with the characters. This engenders what Patrick Galbraith calls a form of techno-intimacy,[188] where the process (working in tandem with cute designs) helps players form an affective bond with these characters. As players go through storylines, they seek to figure out which prompts trigger which, leading them to look for "flags." Though this began due to material limitations in the subgenre, nowadays the design is intentional: even when visual novel developers have the resources, they favour structuring their games through flag logic. For example, *Virtue's Last Reward* designer Kotaro Uchikoshi outlines the gameplay structure of studio Spike Chunsoft's earliest (and by his estimation, Japan's earliest) visual novels, *Kamaitachi no Yoru* (1994). Uchikoshi notes that this element to core to his own

---

[186] Schell, *The Art of Game Design*, 170.
[187] Some discoveries can be major: *Hatoful Boyfriend* and *Muv-Luv*, for instance, use the dating sim element of the visual novel to hide the "true" nature of their worlds: the former reveals a sci-fi experimentation program and the latter reveals an alien invasion.
[188] Patrick Galbraith, "Bishōjo Games: 'Techno-Intimacy' and the Virtually Human in Japan," *Game Studies* 11, no. 2. https://gamestudies.org/1102/articles/galbraith.

storytelling, that even years later, flag logic remains a core to the game genre.
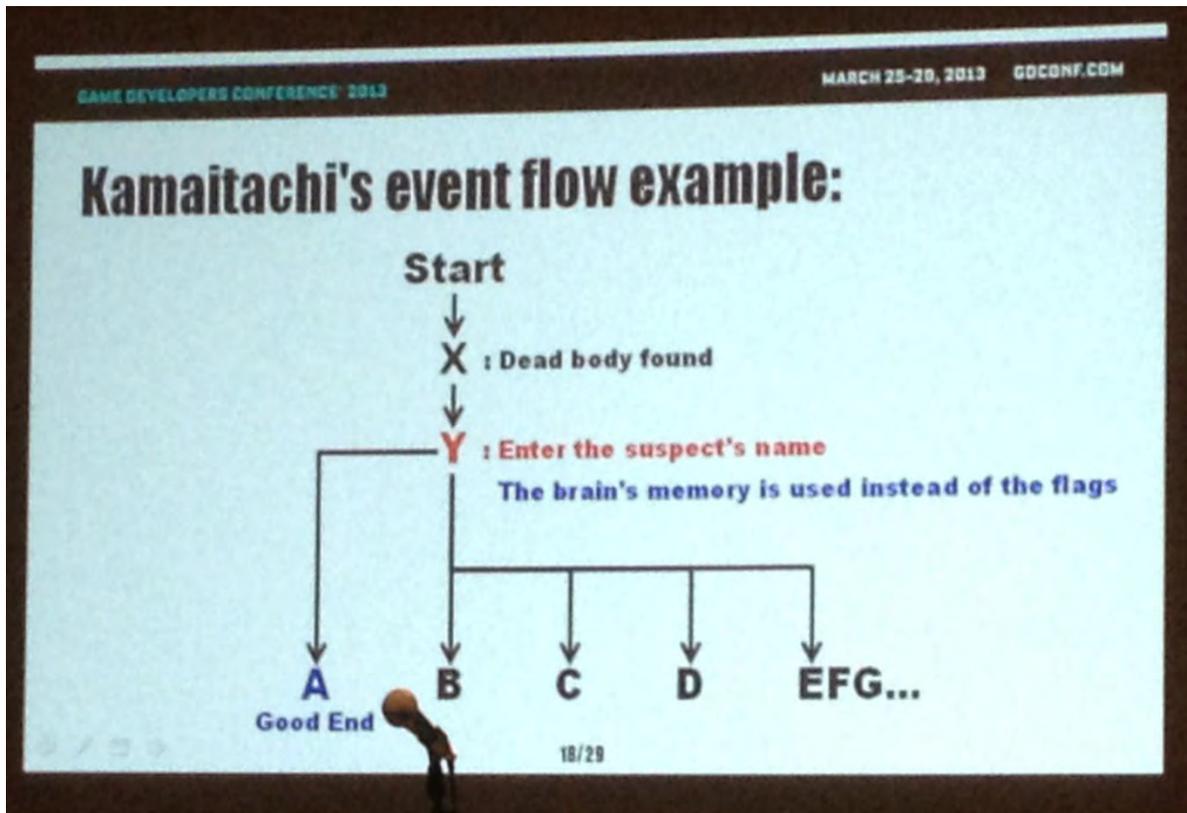
Figure 16. Kotaro Uchikoshi at GDC explaining the narrative flag logic of Kamaitachi.[189]

In this sense, the visual novel is not overdeterministic, where what's visible are symptoms of something hidden and underlying, but a navigable technical and cultural text. Visual novels are like a pipeline, where junctures are determined by valves directing water. The readers' response and interpretation of the visual novel is akin to the flow of water; by moving down specific routes, someone witnesses a particular direction and destination. If someone

---

[189] "Virtue's Last Reward Creator Talks About The Essence Of Visual Novels At GDC Panel," Siliconera, April 2 2013, https://www.siliconera.com/virtues-last-reward-creator-talks-about-the-essence-of-visual-novels-at-gdc-panel/.

changes the valves (or trips a different flag), they engage with a different configuration and consequently flow. Over time, the flow forms a sedimentary structure clarifying the visual novel's world; players begin to pick up on patterns and play with flags to find new routes. They are structural causality machines writ small: immediate interactions revealing horizontalized frameworks of said interaction. This process is not incidental; some visual novels exploit this reading strategy. For example, KeroQ's *Wonderful Everyday* utilises its boolean trips to create narrative loops, establishing narrative areas that are unlocked when players exhaust all options within that area. TheFox33 provides a chart which outlines the main choices and decisions to reach multiple endings:

Figure 17. Different paths and options required to explore all of SubaHibi, which keeps track of unlocked player endings to reveal more endings.[190]

The visual novel is a relevant case because, categorically, it's a device with relatively low

[190] "Subarashiki Hibi (Wonderful Everyday) Choice Flowchart," Reddit, September 22 2017, https://www.reddit.com/r/visualnovels/comments/71pc08/subarashiki_hibi_wonderful_everyday_choice/.

mechanical complexity that is compensated by strong subcultural approaches. Here, it is reflects structural causality as a map of relations *between* relations.[191] The mechanics of the visual novel is not simple because its material conditions demand it, but because there exists an audience which has developed a longstanding set of interpretive strategies for these limitations, reinforcing specific ways of playing. In turn, visual novels leverage familiarity with subcultural readings to form a bedrock of intertextual referentiality. From here I'll focus on how *DDLC* leverages *that* familiarity as a means of expressing its critique.

Doki Doki Literature Club Synopsis and its Apocalyptic Vision

Doki Doki Literature Club is the dating game visual novel by Team Salvato, an indie group fielded largely by Dan Salvato. Running on the Ren'Py engine, *DDLC* concerns a male protagonist who's invited to join the school's literature club at the request of their friend, Sayori. The game is split into four acts. The first presents the game as a bog-standard dating simulator, with the protagonist meeting four girls at the eponymous club (Sayori, Natsuki, Yuri, and Monika). The protagonist navigates the act by writing poems and spending time with each girl. Here, the game acts like a dating sim: players are led to believe their relationships shift based on player choices. Its visual novel logic is played straight: players go down routes of specific girls based on prompts. This determines how the act unfurls. Despite this, the act ends the same way in a dramatic turn: Sayori, the protagonist's neighbor and childhood friend, commits suicide. The game then throws up an error.

---

[191] Althusser and Balibar, *Reading Capital*, 227.
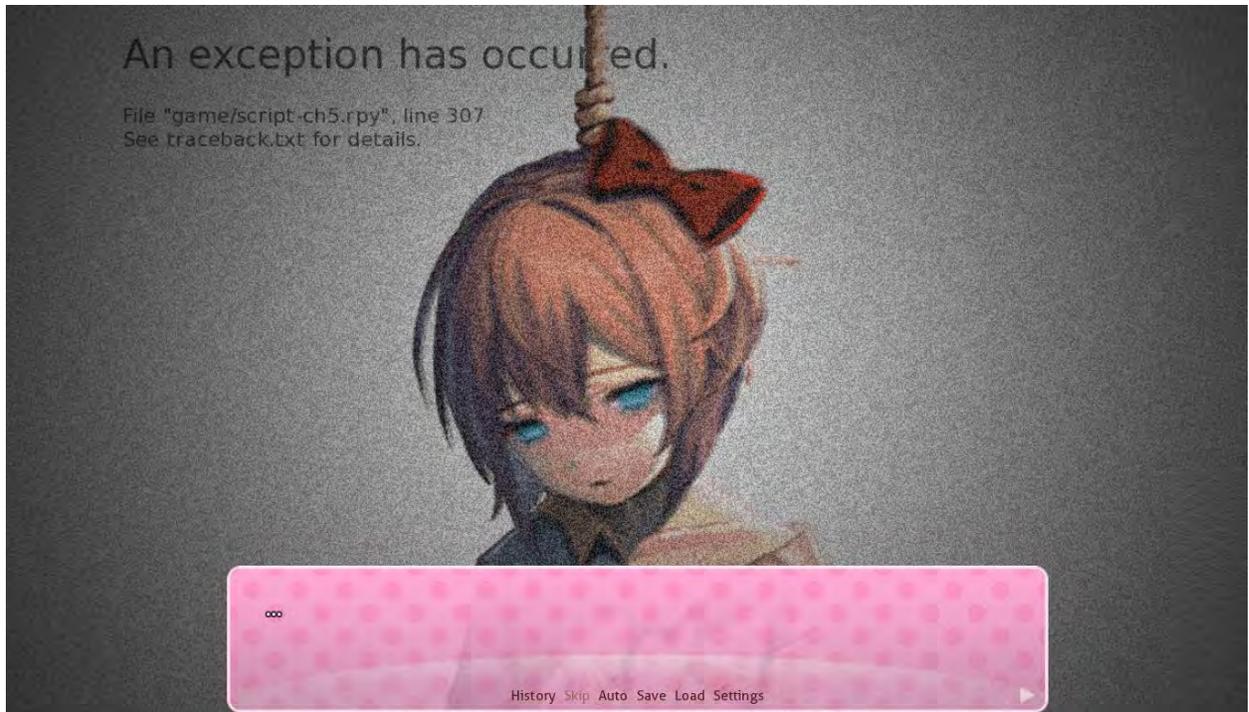
Figure 18. Sayori's suicide, which shifts the tone of the game.

This is the first clue on how Salvato mapped out *DDLC*'s magic circle: the traceback error is in a real traceback text. In other words, Salvato has created a true error as part of the game's mechanic and signaled to the player the magic circle has extended beyond the direct executable. If the player wishes to continue, they must load from another save. When they do so, the game restarts.

In Act 2, the player loads up the game, but now Sayori is missing. The club resumes as if she never existed. The other girls start disappearing. Here, the game's resistance to player expression becomes enacted in its executable. Players can select options in the dialogue, but the game will outright reject certain ones. Image assets are replaced with increasingly glitched and corrupted versions.

Figure 19. Monika in Act 2, whose menu portrait has been corrupted.

It turns out club president Monika has achieved self-awareness. She was corrupting the game and removing the other girls from the executable, in hopes that the only people left in *Doki Doki Literature Club* is her and the protagonist. This starts Act 3. Here, Monika taunts the player. The only way for the player to proceed is to delete her from the game's directory files. This unlocks Act 4, which resets the diegesis of the game to a time prior to the protagonist joining the club. However, the difference is that Monika is missing. Sayori is instead the president but is interrupted by Monika's spectre (she acts like an unresolved function call). At the end, Monika decides to delete the entire game, upon which the player must reinstall it if they wish to play again.

DDLC presents a different apocalyptic vision than the previous cases, specifically in terms of scale. For *The Last of Us*, *Mass Effect*, and *Tokyo Jungle*, each story tackles a broad impending or occurring apocalyptic event. In those cases, they deal with new horizons and

possibilities while simultaneously setting boundaries on aspects of culture. In comparison, *DDLC*'s story is extremely intimate: it focuses on the protagonist and four girls. The passage of time is only a few days, and most of it takes place in the clubroom. Even when the game slides into horror, it never extends beyond the classroom. However, *Doki Doki Literature Club*'s setting is no less apocalyptic, given that apocalypse is never about scale: it is about how a disaster changes the situation of a world through a revelation of assumptive claims of its order.[192] In this sense, what is revealed is the game itself. When Act 2 starts, the player experiences multiple revelatory events which reshape the world they are engaging with: one, Monika quite literally plays an active role in determining the structure that unfolds, and two, the game extends beyond the compiled borders of the executable. At the same time, early in the game, *Doki Doki Literature Club* hints at underlying tensions between player and machine. It is through these tensions that expectations begin to unravel.

---

[192] Kermode, *Sense of an Ending,* 5.

Figure 20. *A screen warning players there may be heavy subject matters discussed in the game.*

DDLC unveils its tensions by signalling to the player that something is awry through its obsessive use of anime dating sim tropes. The effect is an artifice by its orthodoxy: at first, the game demonstrates a strict adherence to dating game tropes. For instance, when the player is first introduced to Sayori, and the protagonist dismisses her concerns about him joining a club, she responds with, "Your happiness is really important to me, you know!" Sayori is presented as submissive, leaning on a character archetype known as the osananajimi (childhood friend), someone who develops a long, romantic bond with the protagonist. Another is when club memeber Natsuki bakes cookies for the protagonist's inception to the literature club:

Natsuki: W-Why are you thanking me? It's not like I…!
Protagonist: (Haven't I heard this before?)

Figure 21. The game's conversation log.

The defensive posture is a callback to the tsundere archetype, where a romantic (often female) character is both affectionate and defensive. Many of the characters engage in what Žižek (referencing Sloterdijk) refers to as the cynical rejection of ideology, or how believing yourself to be beyond ideology makes you extremely ideological.[193] This cynicism plays out in most of the characters, as despite their chatter that something is wrong or familiar, don't do anything to change the conditions of the game. They *know* they are trapped in a game, in a world of anime and visual novel tropes, but all they can do is talk about the supposed banality of these tropes. Salvato would oftentimes extend that to himself, using characters as mouthpieces for his own cynical rendition:

Yuri: Isn't it amazing how a writer can so deliberately take advantage of your own lack of imagination to completely throw you for a loop?

---

[193] Žižek, *The Sublime Object of Ideology*, 26.

166

The 'writer,' in this sense, referring to Salvato, describes his experience with anime dating sims as nonserious texts.[194] Salvato would explain his decision to write horror as means to force players to rethink such tropes, specifically through Yuri:

> Yuri: Surreal horror is often very successful at changing the way you look at the world, if only for a brief moment.

The use of world is playing double duty. On one hand, the world refers to the ideological space. On the other, there's the more specific definition of the world of anime and visual novel tropes, a subcultural "world" presented in what Otsuka Eiji might call a world, a totalizing space which forms narratively legible zones where smaller narratives emerge.[195] All of the characters are presented as trapped whether they realise it or not in both, and it's through Sayori's suicide that the world of *DDLC* supposedly unravels. But Sayori's suicide was not something she chose; it was set in motion by someone else. Someone else found a way out.

Finding a Way Out in Doki Doki Literature and the Bounds of the Executable

---

[194] "[Interview] Doki Doki Literature Club creator Dan Salvato on new Plus version, journey to Switch, more," Nintendo Everything, July 10 2021, https://nintendoeverything.com/interview-doki-doki-literature-club-creator-dan-salvato-on-new-plus-version-journey-to-switch-more/.

[195] Marc Steinberg, "World and Variation: The Reproduction and Consumption of Narrative," *Mechademia Second Arc* 5, no. 1 (2010): 101.
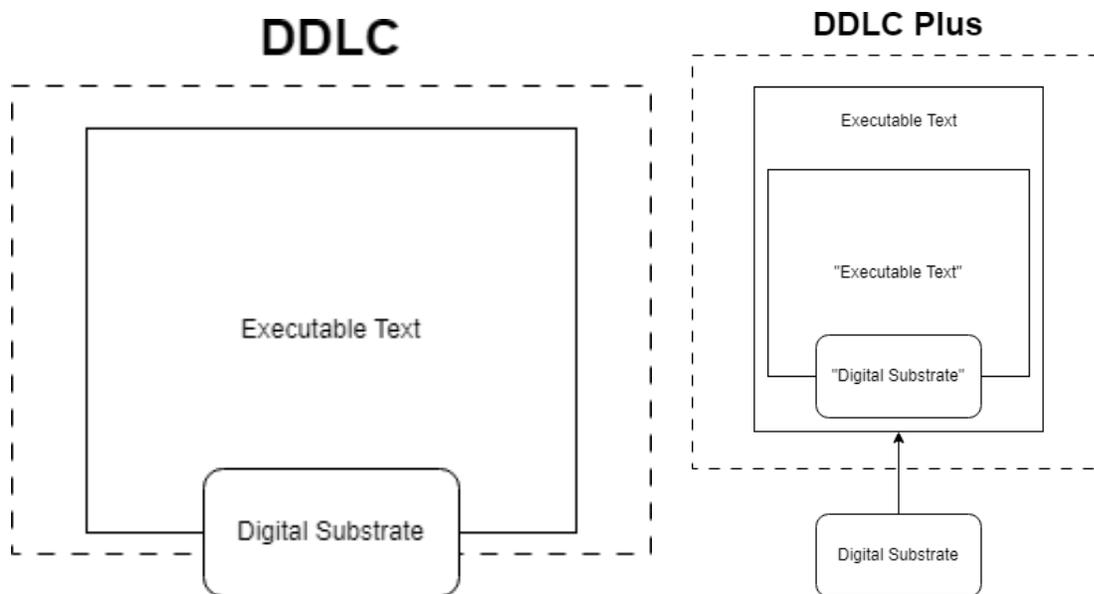
Figure 22. DDLC Diagram. Due to its permapermadeath, DDLC prevents players from figuring out the entire system. This gets complicated when DDLC Plus recreates this dynamic for consoles by creating a fake Virtual Machine.

DDLC is a case that examines what an apocalyptic game can tell us about how ideological subjects envision specifically the limits of their own subjectivity, as in what they perceive to be the boundaries in which they engage in something deemed political, social, and in this case, playful. The game attempts to play apocalypse by melding assumed limits of the reflected "world" with its procedural logic. This happens in two ways: one, by crafting felicitous errors through the game's Ren'Py engine as a metaphor for its characters' own struggle of a world beyond the digital executable. Two, how that process reproduces its ideological relations when re-released on console, a schematically different technical condition (see DDLC Diagram).

In the first act, the player can read and write poems by selecting a series of keywords, but given that the game does not unwind until the second act, none of it has any mechanical meaning. The poems, while they may seem like a way for the player to pursue romantic relationships, are symbolics in that players can interact, but it has no forward-bearing motion on the plot. Similarly, the poems allude to Monika's growing self-awareness. Her first poem implies

168

that she realises she's in a game:

Figure 23. Monika's poem, where she begins to realise something is awry.

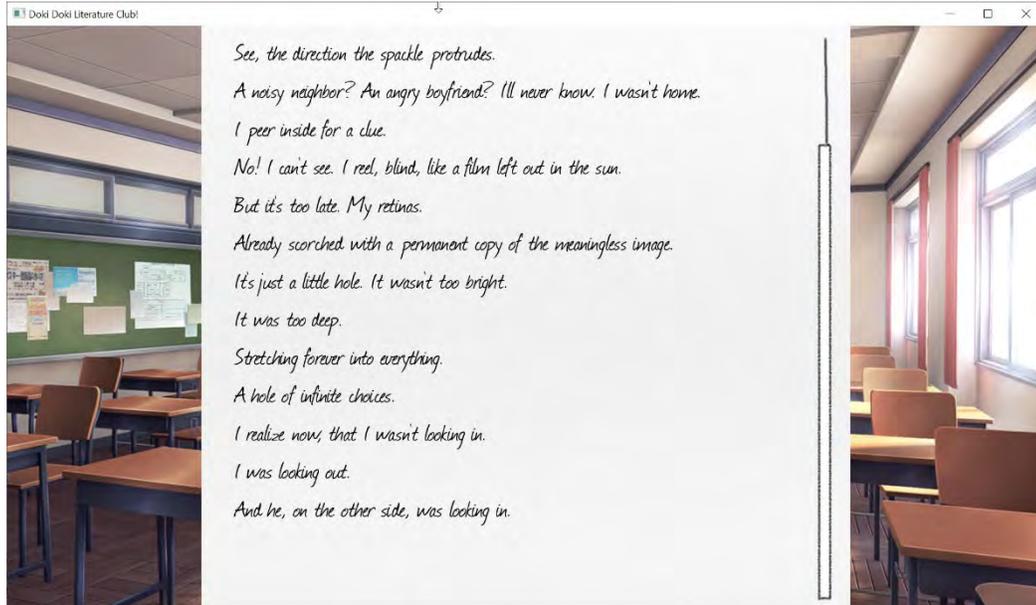The ending lines, "I realize now, that I wasn't looking in. I was looking out. And he, on the other side, was looking in," refers to her and the player. Monika's realisation of the limitations of the game world thus sets up the impetus for her later actions. Monika's self-awareness becomes even more pronounced when she advises you to save your game:

170
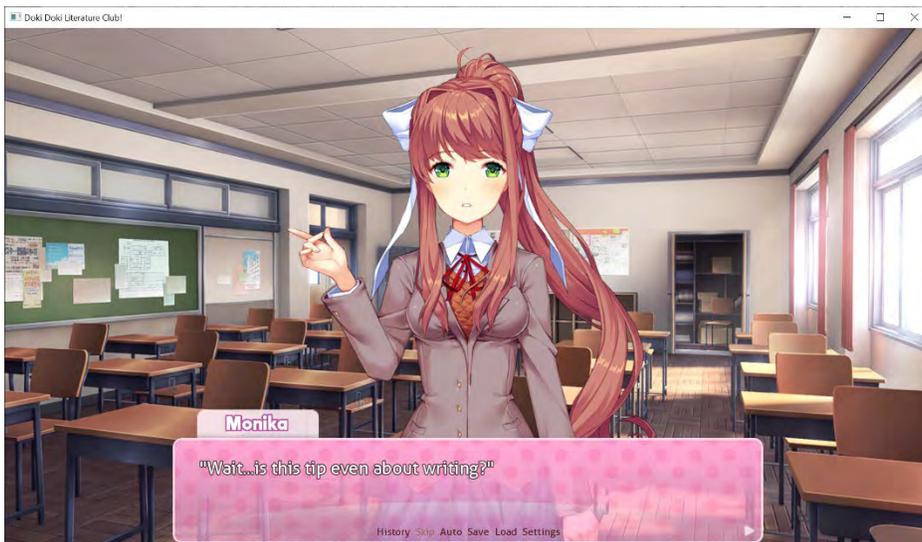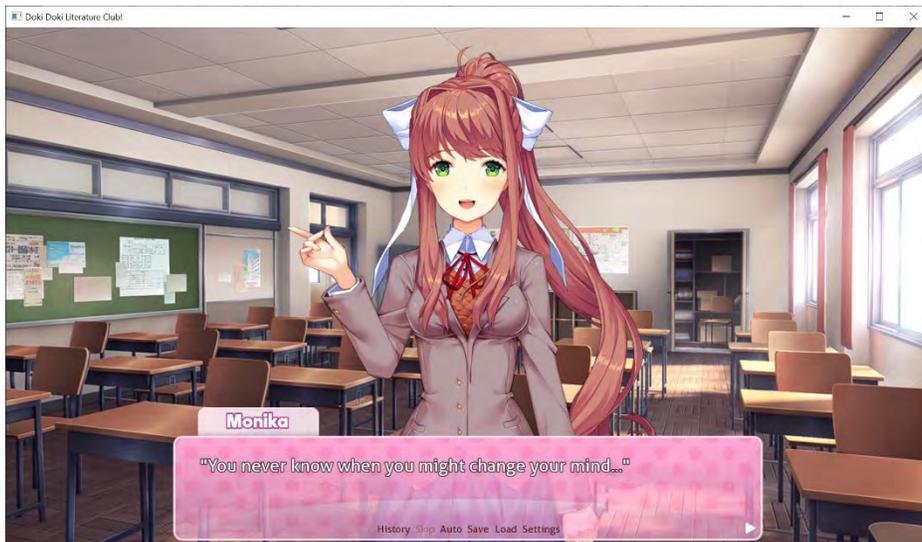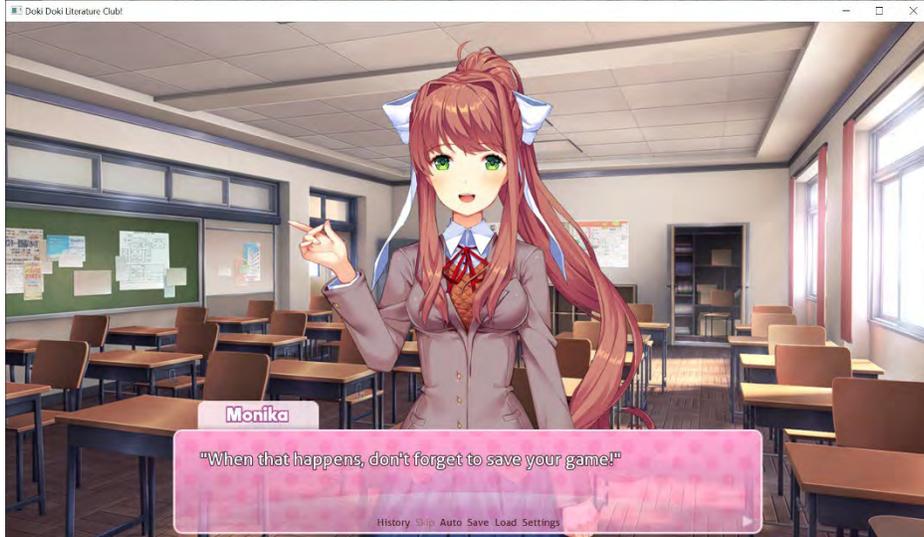
Monika's self-awareness shapes the apocalyptic core of *DDLC* by extending the game's imagined frame. This frame is, according to Salen and Zimmerman, protective, in the sense that boundaries of play are agreed upon (127). Colloquially, this sharply defines what they call the 'magic circle' (referencing Huizinga), a territory in which play occurs (129). The voluntary aspect of play is tied those boundaries: we don't like agreeing to play games where its limitations are unclear or noncommittal. In *DDLC*, the assumed magic circle is the compiled application on the screen.

Monika's expansion of the assumed magic circle by using real errors generated by the game's engine is apocalyptic in the sense it unveils and contests assumed relations of operation between the player, the device, and the game. *DDLC* is not the only visual novel to play with the assumed extension of the executable. *Kimi to Kanojo to Kanojo no Koi* (lit. You and Her and Her love) is another visual novel that transgresses the interfacial boundary of the game at the behest of a character's awareness of their diegetic limitations. There, the visual novel will force crashes to desktop errors (known as "CTDs") and delete save files as well. Likewise, digitally transgressive games like *Rensenware* and *Lose/Lose*, both of which are malware that negatively affect your computers as part of their play, also force the player to reconsider the dimensions of the executable. What differentiates *DDLC* are two things: one, how it breaks past the executable by folding its errors into its gameplay and after such errors are resolved. Second, how its later iterations reveal longstanding tensions between material and digital concerns with the concept of game itself.

The Executable Apocalypse in *Doki Doki Literature Club*

171

What makes *DDLC* a useful case for analysing digital approaches to ideology is that its errors are real. This process begins with Sayori's suicide, which makes a direct request for the player to check the game's (real) traceback, a file used to record exception handlers, which are events in a code that disrupt normal operation:
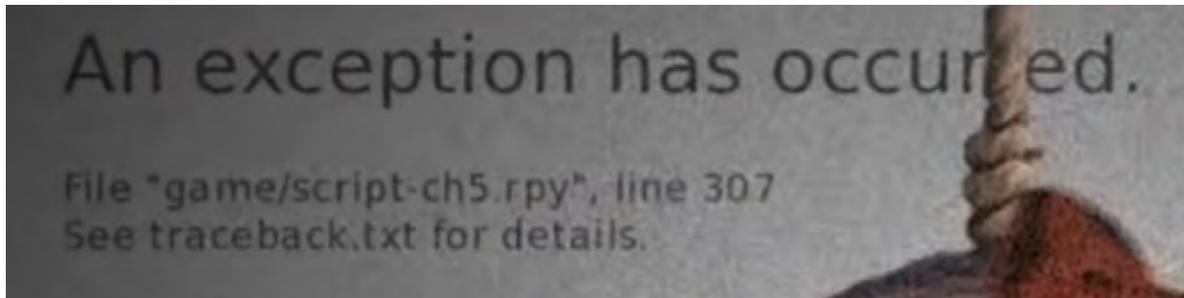
Figure 25. The game's Ren'Py script error, which is a felicitous error.

If the player chooses to review the traceback file, they will find this comment at the top of the .txt file:

```
File "renpy/common/00action_file.rpy", line 427, in __call__
renpy.load(fn)
RestartTopContext: Oh jeez...I didn't break anything, did I? Hold on a sec, I can probably fix this...I think...
Actually, you know what? This would probably be a lot easier if I just deleted her. She's the one who's making this so difficult. Ahaha! Well, here's goes nothing.
```

The RestartTopContext is from Monika. The comment implies she's manipulating the game down to its code, including Sayori's character file. The game then pseudo-resets. The player is kicked back to the menu, but Sayori is missing. In her place is a corrupted Monika character sprite. All of the player's save files are deleted, and they must restart the game. Sayori, however, is missing. The game runs a different, parallel set of narrative whereupon the player realises Monika has become self-aware. Here, the player is no longer playing a game where the

172

perceived limitations of play space extend beyond the compiler. Players must engage through metagaming, keeping track of what is and is not different. At the same time, the game also folds back into its compiled interface and constantly reminds the player of its file structure. Near the end of the game, Monika argues that it might be better to just delete the other characters remaining (Natsuki and Yuri). The player witnesses the deletion of the other characters, leaving only the protagonist and Monika alone in the club room.
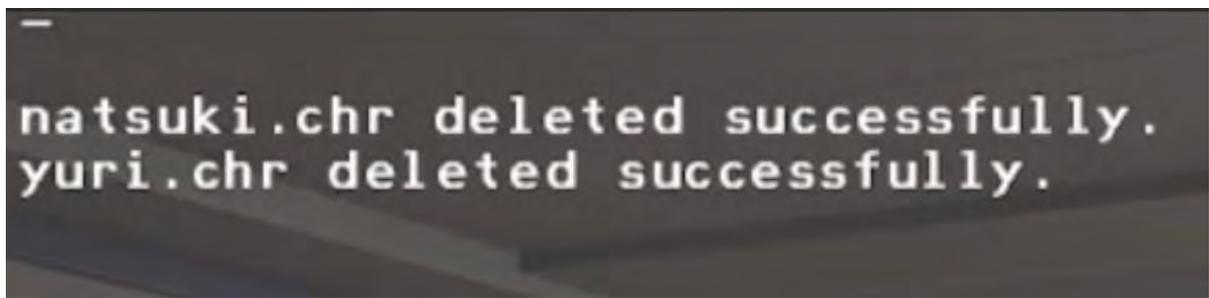
Figure 26. Character profile deletions caused by the game.

To proceed, the player must go back to the root directory of the game, go into the character folder, and delete Monika. The game will then loop one last time to the beginning, leaving the protagonist alone with Sayori. Sayori says she is aware of what is happening, and to avoid the pain caused by the system, decides that this should never have come to pass. *Doki Doki Literature Club* then ends up deleting the saves and becomes unplayable. If the player attempts to restart the game, they will be met with a message preventing them from doing so:

"Please stop playing with my heart. I don't want to come back."

In this sense, the game's engagement with and surrender to the digital structure through

173

which its messages are engendered is the stakes in claims its apocalyptic vision. In other words, its apocalypse manifests in how it uses the limits of its own procedural boundaries to discuss those limits, but also speaks on the inability of an given subject to speak beyond ideology. Apocalypse, in *DDLC*, heralds defeat; Monika's "defeat" at the end of the game leads to permapermadeath, in that she plants a file which prevents the player from trying to play it again. The consequence of permapermadeath is what Eleonora Imbierowicz describes as an inability to repeat (88), and consequently a rejection of game mastery. In this context, *DDLC* is at odds with many visual novels, which encourage iterative route-finding; *DDLC* attempts to shut players down from mastery of a system. Like Monika, the player is powerless in the system.[196] To reach the end, the player can only delete the saves and log off, destroying the world.

The Material Problem in the Apocalyptic Game

However, *DDLC* is a useful case study not just in terms of its procedural approach to apocalypse, but also because it stands as a case study for how games can fold back and reproduce specific technical and aesthetic relations on to their own developers. Compared to many other meta-horror games, *DDLC* made the jump to non-PC environments while attempting to maintain its PC antecedents, demonstrating how the technical and material conditions of games shape aesthetic boundaries in which these games. In short, *DDLC* was re-released for consoles while still trying to keep the feel of the PC play environment. Earlier I mentioned that what makes the computer game unique is its capacity for tinkering, something *DDLC* takes advantage of to tell its story. However, consoles do not have that luxury: Salvato cannot create real traceback logs on them. What emerges in the re-release is a deeply structural causal process, specifically in the

---

[196] Eleonora Imbieworicz, "Perma-dying Worlds and the Limit of Eternal Return in Digital Games," *Homo Ludens* 1, no. 12 (2019), 88.

sense that the console reveals itself to be a locus point on forming imagined relations of existence to material modes of existence.

Doki Doki Literature Club Plus, released June 30, 2021, is a console release where players cannot tinker with game files, modify directories, or extend beyond the executable. In other words, it cannot resolve its narrative the same way its PC release could. To maintain its procedural argument, Salvato chose to create a fake virtual machine (VM) to mimic the player practice of modifying system files. His game has interpellated him.

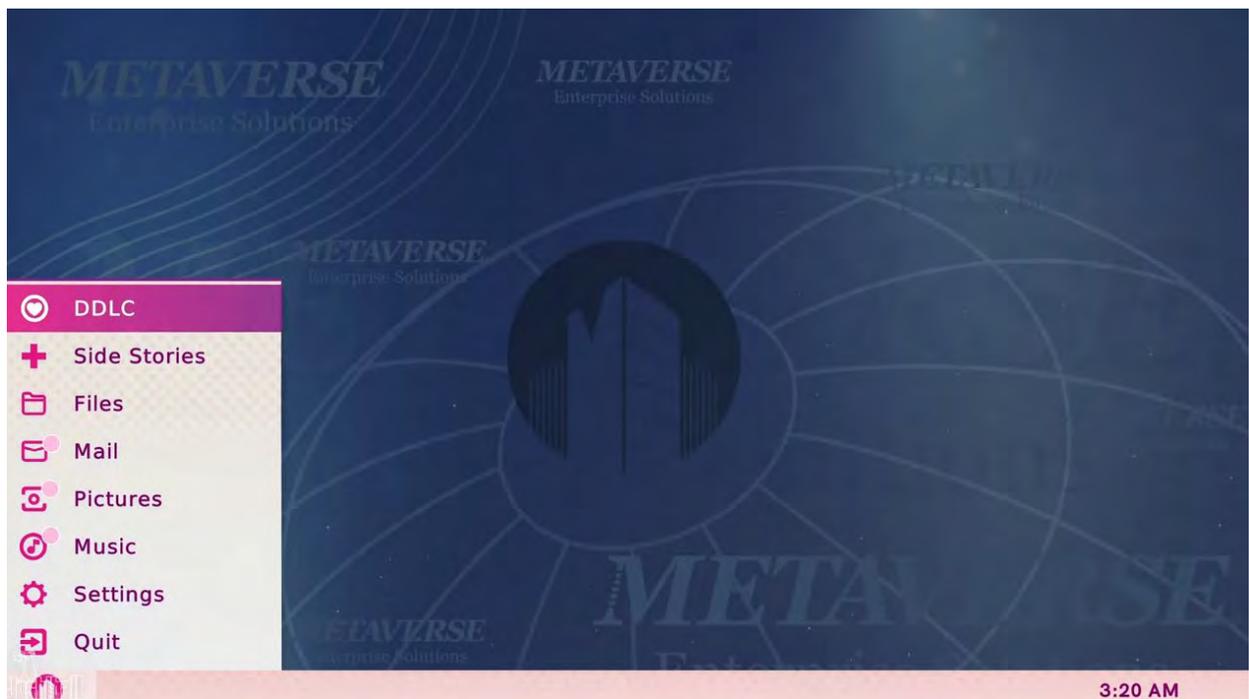*Figure 27. Doki Doki VM, the custom fake operating system for Doki Doki Literature Club Plus.[197]*

Doki Doki Literature Club Plus' inclusion of a fake operating system to mimic the original game's behaviour for consoles reveals a technological contradiction resolved through a

---

[197] "Doki Doki Literature Club Plus! (Full Game, No Commentary)," YouTube, July 7 2021, https://youtu.be/ubM_KcgFAJA?t=25942.

method not possible through the parameters by the platform. Salvato's solution is not to find a technological metaphor appropriate to the console, but to transplant a variation of the existing practices developed on the PC, staying true to the kind of apocalypse the original game explored.[198] *DDLC Plus*' mimicry of a PC operating system suggests that the technical machine also forms a constructive ideological substrate, in that specific practices rest on interlocked mechanical modes of operation (manipulating files), reinforcing an aesthetic circuit whose structure is unclear. The object known as the PC compresses set of relations which can move from one space to another. Just as how Monika cannot escape the game, Salvato cannot escape the imagined relations of production of his own game.

 DDLC's extension beyond the executable and DDLC's *insistence* beyond the executable serve as a case for how ideology – as reproducing relations of existence to material conditions – is much further even accounting for the sectioned dioramic approach of the digital game. In attempting to map out a vision of mechanical representation, the game nevertheless leans on and reproduces interlocked aesthetic and technical judgments on where a subject exists in relation to ideology. In this sense, *Doki Doki Literature Club* is a digital game that portrays an existential crisis where one is trapped in ideology, but its apocalyptic imagination is multi-layered in that a constant drive to peer "beyond" ideology reveals more of its horizon. What began as a game critiquing and deconstructing what he deemed are stock archetypes in anime, manga, and visual novels[199] ended up becoming a reproduction machine: Salvato did not find a solution to the material conditions of the console, but reproduced the conditions of the PC.

---

[198] Chris Wallace, ""Insisting that DDLC must be experienced in one specific way would be a very elitist and pretentious mindset for us to have." – Behind the scenes of Doki Doki Literature Club Plus!," MCV Develop, July 29 2021, https://mcvuk.com/business-news/insisting-that-ddlc-must-be-experienced-in-one-specific-way-would-be-a-very-elitist-and-pretentious-mindset-for-us-to-have-behind-the-scenes-of-doki-doki-literature-club-plus/.
[199] Alistair Wong, "Doki Doki Literature Club! Developers Talk About The Horror Of Losing Control," Siliconera, November 17 2017, https://www.siliconera.com/doki-doki-literature-club-developers-talk-horror-losing-control/.

In modifying and looking at the files, *DDLC* demonstrates how ideology is multi-layered and interlocking. More specifically, the game exemplifies Althusser's aphorism of economic in the last determinant: we know the game begins at the direct material files, but it's not clear *where*. Instead of interrogating the system, the system nods back, aware of what is going on.

Chapter 11: *Persona 4 Arena*

      This last case looks at what happens when more than one operator is working with a system, and how that changes the way players interpret procedural arguments in those games. The previous cases ask what an apocalyptic videogame can tell us about ideology, but the focus of that question now shifts to what the "us" entails. Here, "us" does not mean intertext or paratext, which are important, but outside the scope of this section. Instead, it refers multiplayer play and how procedural rhetoric emerges. In other words, when I say multiple players, I do not mean multiple players playing the same game and then discussing their interpretations of the procedural argument. Instead, I mean multiple players in the same game, in the same session, using the same system in relation to another real-time operator. Furthermore, does that relationship change or problematize the meaning-making process? After all, up until now, I was the only person playing and interpreting the game. What of Player 2?

      In the previous cases, when I play those games, the interpretive circuitry ends at me; I take in what I find, I figure out what a framework suggests, and that becomes the idea I think the system reveals to me. But a multiplayer game is different because I am not just trying to understand a system, but another operator engaging in that same system. If the digital game cna help us understand on ideology, then the multiplayer game is one where multiple subjects are navigating, being interpellated, and being reproduced as subjects within the same simultaneous instance of a framework. In other words, the interaction between the two sets in motion is another component to consider in the ideological process, specifically that of two subjects interacting not only with the system, but in relation to someone else who is also interacting with said system.

      But there is also another issue: is there still apocalypse? Previous cases happen because

there's one player, and abstract concepts like ideology and apocalypse pull off these themes by shaping player behaviour in ways commensurate with a concept of ending. But the inclusion of another player can affect how procedural arguments behave, especially when discussing abstract ideas like apocalypse?

This section is split into three main categories. First, I argue that player counts can empower specific messages through how players interact with a ruleset. Through the examples of Monopoly and Diablo 2, I show how players can not only perform specific procedural arguments through multiplayer games, but also abstract arguments (such as apocalypticism). My main claim is that rules in multiplayer can shape procedural arguments. However, Monopoly and Diablo 2 are presenting arguments that work in tandem with its setting. Those games reflect forms of engagement which play well with their messages, the former being negative-sum accumulation and the latter being paranoia.

Second, I argue that fighting games are a useful case for this question specifically because the genre is tied to close combat-oriented engagements. The question is not whether multiplayer games can make procedural arguments on abstract questions like apocalypse or ideology, but whether specific *types* of multiplayer games are limited by virtue of their mechanical conventions. While fighting games can have collaborative metas and environments, the fighting game itself always represents a competitive match. So in this situation, how does a genre traditionally focused on presenting one set of interactions (one-on-one fights) use those rules to discuss more abstract themes like apocalypse? Or do they have difficulties relaying specific ideas?

Third, I argue because of the issues brought up in the previous paragraph, an emphasis on mechanics enables us to see how units of ideology shape subjects. Fighting games are useful in

179

this light because their rules tend to be the same, but their mechanics vary wildly. This focus on mechanics is not too different from Althusser's suggestion of an ideological structure as being economic in the last determinant (ie. we *know* what the end rules are), but the perceivable causal structure is immanent in its effects (the ways to get there are so different). The samey-ness of the fighting game ruleset works in our favour: we can spend less time focusing on how broad rules change (since in fighting games they rarely do), but see how individualized mechanics are not only interpreted and modified, but also when players engage in these operations against each other. In other words, we can focus on lines of action and how they behave, especially considering when the primary method of constraint is not the game, but another player.

To work through this, I focus on *Persona 4 Arena*, a fighting game adaptation of turn-based JRPG *Persona 4*, specifically how the former translates mechanics based on the unit operations of the latter. *Persona 4 Arena* is a useful case because its mechanics are not just developed for the fighting game genre, but informed by its turn-based JRPG predecessor; it draws its context[200] from another game. As a fighting game, *Persona 4 Arena* allows us to see how players relate to one another in a system without needing to account for idiosyncratic overarching rules of engagement – gameplay rules-wise, it does not do anything particularly different from any other fighting game. More specifically, as a fighting game with an intentional recall to *Persona 4*, *Persona 4 Arena*'s mechanics are also a complex translation effort from *Persona 4*. The translation effort shows how mechanics – and ideologemes – persist in the wake of dramatically different rulesets, different operator/subject contexts, and different context delivery systems.

---

[200] This is a reference to Jesper Juul, who in *Half-Real* uses the word 'context' to define overall nonmechanical components that give mechanics their meaning.

Part 1: Player Count (and Why That Matters)

Though most of the previous cases have a multiplayer mode (*Tokyo Jungle*, *The Last of Us*, *Mass Effect*), multiplayer is neither the selling point nor necessary for the completion of the game's advertised content. Out of the three, only the *Mass Effect* trilogy attempted to force multiplayer into its single player through Mass Effect 3's war room mechanic, a point-based meter which determines the player's military force for the final battle against the Reapers, and thus a mandatory gate for the optimal endings.[201] However, multiplayer brings up a different set of challenges: the interaction stack exists not only between player and system, but between both player and system, and between players themselves. This section focuses on a genre built specifically on person-to-person interactions and how procedural arguments translate over when the number of players as well as the conditions of their engagement changes. Part of the issue in the previous cases is that while multiplayer exists, it is hardly where procedural arguments are nestled; instead, multiplayer in single-player heavy games reflect what John Sharpe calls phenomena instead of ideas.[202] In those games, multiplayer is in addition to a single player.

Yet at the same time, multiplayer is an important space for procedural arguments since multiplayer environments can generate meaning by virtue of being multiplayer. Multiple players increase the complexity of mechanical interpretation, letting players perform in ways commensurate with these engagements. The multiplayer games do not focus on a player in relation to a system, but in relation to other players *also in relation in a system*. This dynamism of a multiplayer game's procedural rhetoric empowers players to operate in different ways. *Monopoly*, for examples, frustrates its players, creating an endgame commensurate with its

---

[201] RJ Pierce, "[SPOILERS] 'Mass Effect 3:' How To Get the Best Ending | Tech Times," Tech Times, June 6 2021, https://www.techtimes.com/articles/261144/20210606/spoilers-mass-effect-3-best-ending.htm.
[202] John Sharp, *Works of Game: On the Aesthetics of Game and Art*, Mit Press (2015), 51.

critique. Despite Greg Costikyan's critique of its "excruciatingly extended endgame,"[203] as a critique of landlord capitalism, Monopoly's endgame is tied to how tiresome it is.[204] *Monopoly*'s procedural argument is nestled in its easy-to-understand long-term game. Players can only develop their properties when they own an entire block. To prevent players from developing, other players are required to capture individual properties, thus locking their opponents out from developing. *Monopoly*'s late-game is decided almost entirely by luck: which players are squeezed out of the game and which survive are determined by dice roll. In the frustration of its endgame, players start playing siege warfare: they whittle each other down for hours, deem the rules untenable and begin making up their own, or give up entirely. In other words, capitalism-as-metaphor becomes untenable and unfun. Thus, while Costikyan might deride *Monopoly* as not having clever design,[205] the game expresses its critique quite cleverly. It is only through *Monopoly*'s multiplayer that its procedural argument becomes clear, when a player looks at another player and proposes they *play differently*, which Magie presents through the alternative play mode, Single Tax.[206] Multiplayer in *Monopoly* demonstrates how multiplayer settings can generate procedural arguments that are formed *specifically* by its multiplayer.

It can be tempting to say that multiplayer games are good at expressing ideas inherent to issues between players (such as communication or alliance-building). Furthermore, someone might also argue that games must be built with multiplayer in mind so its rules can reflect that. This is especially relevant considering the topic of apocalypse: it can seem impossible for multiplayer to discuss apocalypse in the way previous cases have if players are focused on metas

---

[203] Greg Costikyan, *Uncertainty in Games*, Mit Press (2013), 37.
[204] "Ever Cheat At Monopoly? So Did Its Creator: He Stole The Idea From A Woman," NPR, March 3 2015, https://www.npr.org/transcripts/382662772/
[205] Costikyan, *Uncertainty in Games*, 37.
[206] Christopher Ketcham, "Monopoly Is Theft," Harper's Magazine, https://harpers.org/2012/10/monopoly-is-theft/.

and competitions. However, this is arguably not the case. See the case of *Diablo 2*, an

apocalyptic action RPG from 2000, where players grind for loot by killing monsters. The game

allows players choose a "Hardcore" mode, or permadeath. While permadeath is not unique to

Diablo 2, it is relevant given that *Diablo 2*'s online multiplayer allows players to leave parties,

turn hostile, and kill other players (known as "PKing," or Player Killing). This is important

considering that it's astronomically low loot odds require higher player counts for efficient item

farming: the threat of permadeath dissuades players from trusting others. Unlike *Monopoly*,

Diablo 2 does not need to be multiplayer-first (players can play single player and set loot tables

themselves), but by virtue of allowing multiplayer permadeath, which is ostensibly a minor

modification of the rules of the game, *Diablo 2* can set in motion a procedural argument on

apocalypticism. PKing in Hardcore dissuades many players from engaging in public games,

generating an environment of paranoia. This can seem incidental, but it was precisely the defense

argued by then Vice President Max Schaefer:

> The entire game is set up to kill your player. Every monster, boss, and trap has as it's only
> goal the death of your player. The addition of the occasional anti-social player only adds to
> the feeling of tension and fear that makes rewards of success that much better. Remember
> this: the world of Diablo II (sic) is not a safe, warm place. It is a place of great evil, and even
> greater good.[207]

Schaefer's response demonstrates how a minor modification in a multiplayer game expands the

possibilities of player-to-player behaviour, more specifically the possibility of dynamic of

procedural interpretations in multiplayer. In *Diablo 2*, since the game incentivizes sessions with

higher player counts, Hardcore generates two concurrent spaces: players who want to get loot

---

[207] "Blizzard's Response," Wayback Machine,
http://web.archive.org/web/20080921202537/http://www.warpcore.org/~sirian/diablo2/protest-2a.html.

and players who want to player-kill. The former is what most discussion on *Diablo* focuses on:[208] a skinner box running an accumulative trade economy.[209] The latter is one only empowered by permadeath, but the *threat* of permadeath is possible specifically because players are incentivized to make large games to maximize the odds of getting better loot. Both are tied together by their rules: loot grinders need more players, but that dramatically increases the odds of player killers.

Both, however, are systems that are abstract enough to be able to express ideas. Sharpe notes that games are not always (or innately) idea machines, oftentimes they simply reflect phenomena. He notes the example of *Pong*: two paddles a ball – it's a tennis court. It is modelling tennis. Monopoly, while its multiplayer can be a procedural argument on the limits of landlord capitalism, models an idea, and thus is so abstractly distanced from its phenomenological source system that it can use rules to express those ideas. Likewise, in *Diablo 2*, it utilizes the loot grind mechanic as a possibility space for a more abstract idea of survivalist apocalypticism. While both are hardly what Sharp calls artgames, both are nevertheless abstract enough that what they reflect is not a physical or social world, and instead an idea. This is where fighting games are a useful case, since fighting games are always mapping out player-versus-player combat engagements, and thus they always model an event or experience (what Sharp calls "phenomena"). This raises a difficult question: how might they model ideas or concepts if their overall systematic language is dependent on a reflection of a specific social event, specifically player-versus-player combat engagement? Or are certain genres at a disadvantage when it comes to grappling with specific ideas?

---

208 Douglas Schules, Jon Peterson, and Martin Picard, "Single-Player Computer Role-Playing Games," in *Role-Playing Game Studies*, eds. Sebastian Deterding, José Zagal, Routledge (2018): 111.
209 "How One Gameplay Decision Changed Diablo Forever | War Stories | Ars Technica," YouTube, August 19 2020, https://www.youtube.com/watch?v=huPF3Gid7DE.

Part 2: The Fighting Game (and its Simulation Problem)

Outside of a few articles, the procedural rhetoric of fighting games is underdiscussed. Instead, most fighting game analysis focuses on its infrastructural and sociocultural elements, in other words its socioeconomic makeup and its players.[210] Even in its community, outside of a few aesthetic analysts,[211] fighting game discussion tends to focus on technical commentary, or more generally, "how to get good." Yet fighting games are procedurally notable because the genre has maintain a consistency in its higher-order rules, despite continual verb innovation (beat a 1-on-1 opponent continually new mechanics). In other words, fighting game analysis has largely been technical or social, and analysis of procedural rhetoric in fighting games is relatively limited.

Yet both *Monopoly* and *Diablo 2* are examples where the rules work in tandem with player engagement to express specific procedural arguments. However, not all multiplayer games are purpose-built to express specific arguments, and even more importantly, not all multiplayer games have shape rules commensurate to intended procedural arguments. Some games have rules laid out by social conventions on overarching rules, and those can play a role in informing how procedural arguments emerge. In other words, by virtue of being attached to specific genres, ecologies, or groups, some games – especially multiplayer games – come in with assumed, conventional rules which, in theory, could make expressing specific kinds of procedural arguments more difficult than others.

The fighting game emblematizes all the questions from the previous section: fighting

[210] Michael Ryan Skolnik, "Tusslers, Beatdowns, Brothers: A Sociohistorical Overview of Video Game Arcades and the *Street Fighter* Community," *Games and Culture 14*, no. 7-8 (2019), https://doi.org/10.1177/1555412017727687., Lee Farquhar, "Fighting Games and Social Play," in *Understanding Esports: An Introduction to a Global Phenomenon,* ed. Ryan Rogers, Lexington Books (2019).
[211] "Majin Obama," YouTube, https://www.youtube.com/@doogies, "TheoryFighter," YouTube, https://www.youtube.com/@TheoryFighter.

games always model a specific social phenomenon (person-versus-person), but the games so heavily uphold player-versus-player interactions that any procedural arguments *must* account for inter-operator engagements. They are, by definition, close combat simulators[212] with a consistent set of engagement rules,[213] so any conceptual engagement must deal with the combat sport procedural substrate. At the same time, because of the genre's low-level consistency (beat the other player up) but high-level verb variance (many, many ways to beat the other player up), fighting games have many possibilities to express ideas specifically through mechanics.

However, a procedural analysis of fighting games is challenging considering that fighting games tend to situate their procedures at the level of phenomenological simulation. In other words, no matter how complex the games and their mechanics are, oftentimes they exist to help players navigate towards the end goal of beating the opponent. This can be difficult since stories tend to be the primary motor on how mechanics have meaning:[214] a lack of story can seem like a lack of context. An event object, for example, has little meaning until we give it context: it is not just a moving object, but perhaps a train, and its operations generate more meaning when we realise a destination.[215] Fighting games tend to have no story modes, are defined by their win conditions, and heavily lean on their competitive ecology. The rules for context from the previous cases are difficult to apply to fighting games. Instead, for fighting games, mechanics become ways players express themselves, either in direct manipulation[216] or in the emergent storytelling of their struggles.[217]

---

[212] Jesper Juul, "A brief note on games and narratives," *Game Studies* 1, no.1 (2001). https://www.gamestudies.org/0101/juul-gts/.
[213] Todd Harper, *The Culture of Digital Fighting Games: Performance and Practice*, Routledge (2013), 13.
[214] Jesper Juul, *Half-Real: Video Games between Real Rules and Fictional Worlds,* Mit Press (2011), 115.
[215] Brenda Romero's *Train* is one such example that comes to mind.
[216] "Player Expression and Punching Bodies," YouTube, https://www.youtube.com/watch?v=kF46_c27ToQ.
[217] "Things of Beauty: Super Smash Bros. as a Spectator Sport," YouTube, https://www.youtube.com/watch?v=8qxVDOc-oV8.

However, it's less that fighting games aren't good at expressing procedural arguments; rather, it places heavy emphasis on second-to-second, player-to-player interactions. Every fighting game has the same fundamental core gameplan, but what matters is what sort of tools they provide players to achieve it. Here, the system emerges in operation in that the linear relations of its components form the cobweb of an ideology, and those operating, interrelated linear relations form the bedrock of further relations of operation. What might be considered the overall sameness of the lower-level endgame might also be what Althusser considers a limit of an approach in regarding smoothened, totalizing rules of genre, and instead redirects our focus on mechanics in relation to its operation. In other words, the consistency of lower-level rules in fighting games allows us to examine *how* mechanics operate not just as expressions of a broader purpose, but the direct experienced operation acts as the primary site in which ideology is navigated. In a fighting game, it doesn't matter what the player aims to do – they will always aim to beat the opponent – instead, expression and navigation emerges entirely in the *how.*

At the same time, the question also becomes whether apocalypse can help us shed light on those structures. In terms of focusing on how mechanics work, any fighting game might do, but that no longer becomes a question of what the apocalypse in a digital game can tell us about ideology, but what can a fighting game tell us about ideology. In keeping track with this project, we need a fighting game, but we also need an apocalyptic fighting game. At a glance, any fighting game with an apocalyptic setting might suffice, but having an apocalyptic setting does not necessarily suggest it engages with apocalypse in a mechanical sense. Recalling Berger, one of the elements of apocalypse is its ability to clarify, to transform and burn away structures until on its foundational forms remain.[218] To see how immanent effects – mechanics – shape structural

---

[218] Berger, *After the End*, 7.

causalities, we need to see how mechanics persist with different broad rules (what Althusser would call unities). This mechanical transplant helps us examine how processes of apocalyptic clarification use digital games to examine ideology. To do this, we need a game with a genre shift that, by the beliefs of its developers, constitutes a mainline and faithful adaptation of the games' core elements.

Part 3: The Structure of the Cases and *Why Persona 4* and *Persona 4 Arena*

This is how we come to Persona 4 and Persona 4 Arena. By focusing on similar mechanics in dramatically different environments and rulesets, we see how objects shift in relation to conditions of operation in an ideology. Seeing *how* mechanics change suggests a state of object invariant: in this sense, even when the number of players change, there is a performed unit operation of any given object which, theoretically, remains consistent in the operation process.

This chapter traces three mechanics (navigators, Personas, and status conditions) in *Persona 4*, and then the same three mechanics in *Persona 4 Arena*. These mechanics are chosen specifically because they are components with a home in *Persona 4*, a turn-based JRPG, but at the time of Arena were never translated into the fighting game genre, especially at the level and complexity of Arena. The intention is not just to trace an aesthetic form of turn-based *Persona 4* to real-time combat in *Persona 4 Arena*, but to also discuss challenges and reconciliations in the face of broader procedural changes. The tug-and-pull relationship between mechanic and its ruleset sheds light on the effects of the ideologeme in relation to its ideology.

I'll first explain the mechanics in *Persona 4* and what they entail within that game. Then, I will shift to the same mechanics in *Persona 4 Arena* and describe what they entail. Then, I will

parse the similarities between the two, specifically regarding what they simulate. These similarities, I hope, trace down to an immanent effect of ideology, a bare representation of a simulated form that, even in the midst of multiple players and radically different systems, what constitutes the *thing* on a mechanical level. I have selected these three because of two general reasons. One, they show up as integral elements of *Persona 4 Arena.* Two, they are extremely idiosyncratic mechanics that, in the process of bringing over to a procedurally different genre, undergo dramatic changes to reflect that genre.

If games can be seen as devices bearing similarities to a structural causal system then we can trace how small units of ideology are designed in relation to broad overarching changes in a ruleset. This transition reflects Althusser's examination of the shift from expressive to structural causality: the transitive mechanism is, in overdeterministic fashion, modified in some intelligible way in relation to an assumed system.[219] What makes the fighting game premise especially useful for this question, compared to any other genre transition, is its two-player element. Instead of a game changing its mechanics to reflect a shift in genre convention (what Althusser might argue is a shift in expressive totality), the fact that two players are simultaneously negotiating a complex structure sets up a motive approach to ideology. In short, if a game gives context to an operation,[220] what happens to that operation when two things change: the conditions of that context, and change in the conditions of the audiences of that context? Ideology, here, is not just an engagement between an operator and a structure, but operators in relation to positions within a structure.

In other words, by tracing components from a single-player turn-based JRPG to a two-player competitive fighting game, we can see what lingers: they can reveal an immanence of a

[219] Althusser and Balibar, *Reading Capital*, 187.
[220] Juul, *Half-Real*, 38.

mechanic, a stickiness to its constituent operations. I use this approach because *Persona 4 Arena* is different – yet loyal – to *Persona 4*. The game is radically different in genre and presentation from *Persona 4*, but it inhabits a position as a mainline entry series and, as I will later note, wholeheartedly attempts to reproduce crucial and idiosyncratic elements of *Persona 4* in a fighting game. If a digital game is a way for us to analyse a system, then seeing how a single-player, turn-based game becomes a multiplayer fighting game *while still remaining a mainline entry* shows how systems reproduce themselves. Furthermore, as a turn-based RPG, *Persona 4* has the luxury of variance in both its core loops and its lower level mechanics. However, *Persona 4 Arena* is locked in by its core fighting game conventions: it must end the same way as every other fighting game.

    Persona 4 Arena is an example of a system reproducing a socially expected set of interactions (beat the opponent, this is how you win in a fighting game) while juggling the procedural arguments espoused by its predecessor (form friendships). In this sense, *Persona 4 Arena* is a beneficial case study because it is how structure reproduces itself in new ways but retains an intelligible "form," specifically through its mechanics. Furthermore, these mechanics reflect not only the studios' assumption on how to *preserve* an assumed immanence of specific unit operations, but also broader design philosophies specific to these genres. For this example, I focus on navigators, Personas, and status conditions, and how these mechanics change when there is a dramatic shift in playerbase, player count, and procedural structure. However, I also focus on what remains on a mechanical level. I suggest that despite all these changes, there is an inherent element to these mechanics. Both Atlus and Arc Systems Works are developing mechanics for fighting games, but they are still mechanics idiosyncratic to the world of *Persona 4* that makes it a faithful rendition of the mechanic. They are not trying to make a fighting game

with *Persona 4* characters, but a *Persona 4* game that happened to be a fighting game: how the studios accomplish that when the higher-order rules are so different can provide insight on how units of ideology persist.

This is possible because, despite the massive differences between the two games, both are seen and intended to be faithful renditions of the *Persona 4* experience. *P4A* was a fighting game collaboration between JRPG developer Atlus and fighting game developer Arc System Works. *Persona 4* and *Persona 4 Arena* are useful cases since, despite the former being a JRPG and the latter being a fighting game, both studios aimed to create what they felt was a legitimate successor to Atlus' *Persona 4*, a turn-based JRPG. Kazuhisa Wada, head of P-Studio, felt that the strength of the Arc System Works team (specifically headed by Toshimichi Mori) was its ability to create media that "happened to be fighting games."[221] This chapter studies the game's genre shift through its procedure, and how it mimick (and differs from) the structure of its JRPG predecessor, *Persona 4*.

Persona 4 (and its Apocalypse)

A JRPG originally released in 2008 for *Playstation 2* by Atlus, *Persona 4* (P4) is split into two world spaces. One, it is a school-based slice-of-life simulator where the player takes on the role of a high schooler (Yu Narukami) who has moved from Tokyo to rural Inaba. After meeting new friends, Narukami learns of something called the Midnight Channel, a supernatural television broadcast which plays during stormy nights. The situation turns awry when it turns out that the people who show up on the Midnight Channel end up dead. There is a killer on the loose.

---

[221] "P4U はペルソナ 4 の正統な後継作です——「ペルソナ 4 ジ・アルティメット イン マヨナカアリーナ」について，ディレクターの和田和久氏にインタビュー," 4Gamer, March 10 2012, https://www.4gamer.net/games/139/G013961/20120310002/.

Coincidentally, Narukami and his group of friends find themselves able to enter the world of the TV, setting in motion a cat-and-mouse chase. This sets up the second world, where the player battles in turn-based combat in quasi-procedurally generated dungeons. These dungeons distort to the desires and social expectations of the people trapped within them. At the heart of this conspiracy are Shadows, the game's main antagonists: monsters that have emerged from the distortions of a person's inner will. The plot resolves when the team stops the culprit, restoring peace of Inaba.

Figure 28. As the fog continues, NPCs clamor for apocalypse.

P4 is an apocalyptic game drawing upon subcultural antecedents, specifically a "world-style," or *sekaikei* apocalypse, which can make it feel non-apocalyptic until its very end. Here, sekaikei stories focus on close personal relationships (known as *Kimi to Boku*, or 'You and I') that affect the fate of the world.[222] Intermediary institutions such as the state, government, and

---

[222] Christopher Howard, "Ethics of Sekai-kei: Reading Hiroki Azuma with Slavoj Žižek," *Science Fiction Film and Television* 7, no. 3 (2014), 367.

parents, are underdiscussed or entirely ignored. The apocalyptic logic of sekaikei is that a lack of

faith in collective institutions leads to people needing to depend on close, immediate relations,

what Motoko Tanaka calls the foreground.[223] To note, sekaikei has been criticized for its

(sometimes unhelpful) fluidity: Satoshi Maejima, in *Sekaikei to ha Nanika* ("What is Sekai-kei")

notes that much of its use is less in prescribing a definition and more so in describing a general

trend in early-mid 2000s Japanese pop media.[224] Maejima, following critics like Kasai Kiyoshi

and Toshio Okada, noted that even quintessential sekaikei works rarely follow the genre

formula.[225] In other words, the game's apocalypse can come off at points as non-apocalyptic.

Rather, its apocalypse is more idiosyncratic to a specific genre of mass media, specifically one

where broad catastrophes through personal relationships is a mainstay of that genre. The mystery

is resolved specifically through face-to-face interactions with people and addressing their

personal grievances over the course of a long period of time. In other words, the player

establishes intimate relationships with people in Inaba, which helps them crawl the dungeon

more effectively. Close relationships, in other words, are what determine the fate of the world

(Inaba). This framing is not to suggest that *Persona 4* is apocalyptic on a categorical basis, but

rather what it seeks to clarify is more idiosyncratic to a cultural and mass media logic that comes

up less often in western media. Indeed, until the last few months of the game, *Persona 4* hardly

feels apocalyptic, but the stakes it sets in motion is similar to all of the previous cases, even if its

scale is not.

Procedurally, *Persona 4* concretizes the value of interpersonal relationships by tying

forward progression with the player's progress in fostering friendships. The face-to-face

[223] Tanaka, *Apocalypse in Japanese Science Fiction*, 55.
[224] Satoshi Maejima, セカイ系とは何か, SB Creative (2010), 38.
[225] Ibid 39.

interaction logic of the game informs its core gameplay loop, in that the daily high school life in Inaba and the dungeon-crawling of the unnamed world in the TV are interdependent. The former operates like a slice-of-life simulator; the player takes on the role of a Japanese high schooler for one year. Players take quizzes and tests (largely memorization puzzles and trivia questions), speak to other students, study, and work. Each day allows two actions, one in the evening and one at night. When players "do" two things, it progresses to the next day. Among them can be developing friendships and relationships with people in Inaba, go fishing, drinking coffee, studying, etc. The friendships and relationships accrue points known as Social Links. Social Links are crucial in the second game space, which are unlocked over the course of the school year as the story progresses. Here, dungeons are psychical manifestations of victims who have fallen into a "TV world," and the player must save them before specific times during year. In this TV world players fight Shadows, and players must fight them using avatars known as Personas. In *Persona 4*, players are discouraged from levelling up their Personas through orthodox RPG grinding. Instead, they level up through a process known as fusion, where they take multiple Personas and combine them into higher-level ones. The amount of additional experience players receive after the fusion is determined by the level of the corresponding Social Link. Thus, the core gameplay loop of Persona 4 is one where you pursue Social Links, fuse stronger Personas, and use stronger Personas to pursue more Social Links. Here, *Persona 4* is a resource management game: players must make very deliberate decisions on what they want to do on any given day, a decision-making process which is further problematized by the game's dungeon time limit - if they cannot save the next victim in time, the game is over.

The next section focuses on three components: navigators, Personas, and status conditions, three relatively concrete mechanics with strong thematic implications in *Persona 4*

that have been carried over to *Persona 4*. The focus is on how they've changed, what might warrant those changes (on a procedural level), and what that reflects back on discussions of ideology if digital games can help shed light on Althusserian structuralism.

Navigators in Persona 4

Navigators inform the player on what happens in dungeons. They are passive party members who, through the course of the story, narrate the psychical breakdown of the TV world. In the first few months of the game, Teddie serves as the navigator until he is replaced by Rise Gameplay-wise, Navigators help inform the player on the space of the battle: they keep track of weaknesses and strengths of the Shadows. They do this through an analyze screen, where players pull up information on shadows that have been logged into a backend. When members are affected by status conditions, navigators explain the conditions and will sometimes make recommendations on what to do. Even though navigators don't fight, they level up through Social Links, and as navigators level up, they provide increasingly powerful intermittent buffs and healing spells. This extends the life of every party member and subsequently time in the dungeons. As the navigator, players are incentivized to spend time with Rise specifically because her higher-level passives gives players more information on the enemies, the dungeons, and the overall world inside the TV. Quality-of-life choices are often locked behind Social Links, incentivizing players to develop bonds with the navigator.

They are not unique to *Persona 4*: navigators are core to both *Persona 3* and *Persona 5*, though narratively they are more involved in *Persona 4* specifically because of *Persona 4*'s thematic connection with television. In *Persona 4*, television dominates the visual language and how it engages with the player. The protagonists enter and exit through whirling gates of

chromatic aberration. The Midnight Channel is likely a reference to late-night television

timeslots.[226] Narukami's dizziness, when he first encounters the Midnight Channel is reminiscent

of the Pokémon Phenomenon, a case where elementary school students were sent into shock

during an epileptic airing of an episode of Pokémon.[227] Static dominates the game's interface; in

the dungeons, the game layers on looping static animations within the borders of the rounded

rectangle of the TV world interface. The TV screen becomes a plane of spectatorship, peering

into what film and TV theorist Francesco Casetti describes as another world.[228]
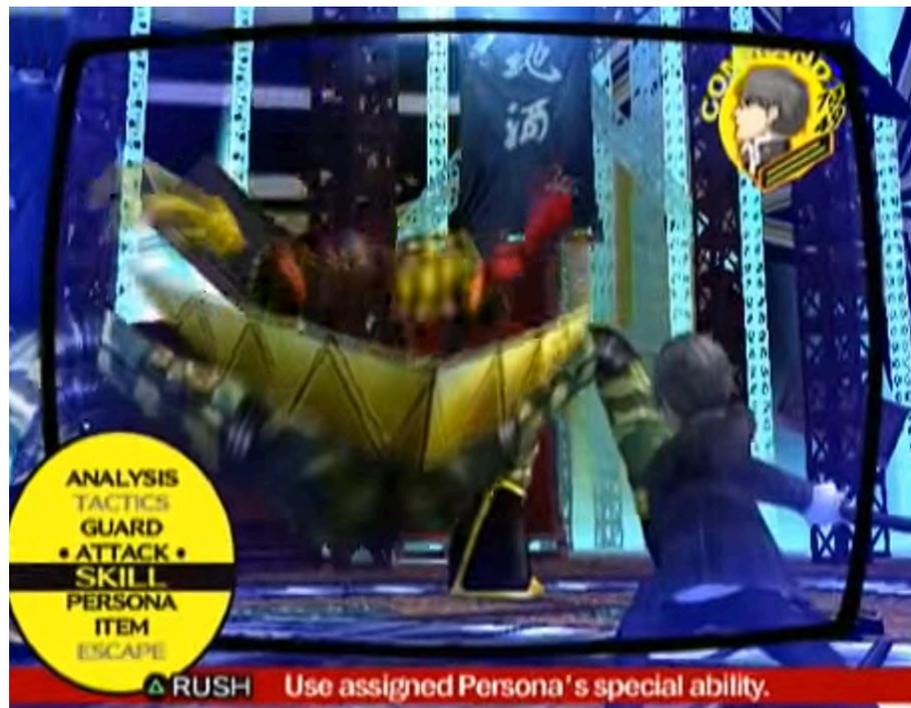
Figure 29. Persona 4*'s battle interface mimics the TV interface.*[229] *At times the game is covered in static.*

---

[226] Thomas Lamarre, *The Anime Ecology: A Genealogy of Television, Animation, and Game Media*, University of Minnesota Press (2018), loc. 3728.

[227] Ibid loc. 6658.

[228] Francesco Casetti, "What is a Screen Nowadays?" in *Public Space, Media Space*, eds. Chris Berry, Janet Harbord, Rachel Moore, Springer Nature (2013), 18.

[229] "Endurance Run: Persona 4 - Part 09," YouTube, October 26 2011, https://youtu.be/c2JueRMuG6s?list=PLXlhzeWIuTHJT8A2En1e8Jbb9NpI0qcXJ.

Navigators are important because they're informing mechanics, in that they guide players in both narrative and mechanical ways on how to engage with a space. Narratively, navigators keep the story in motion: players need to solve the puzzles set out by the navigator to find the next dungeon. Dungeon-wise, navigators reward "proper" player behaviour with information. Previously, I mention that *Persona* encourages players to recycle their Personas instead of raising singularly strong ones, specifically through fusion. Navigators play a similar role: as players cycle through Personas with different spells, navigators reward that form of play by revealing Shadow information *if* the player Persona can exploit its weaknesses. In this sense, navigators concretize the televisual aesthetic by rewarding players with information, not unlike a gameplay version of talking head commentators. Not only do they help find the location of the next dungeon, but also explain what is going on. Gameplay-wise, they chatter by giving commentary on the state of the battle, what needs to be done, and if issues arise. They are informers.

Personas in Persona 4

Personas are objects that allow the protagonist and his teammates to use magical spells against Shadows, the enemies in the dungeons. Originally Shadows themselves, Personas take on stylized renditions of mythological and popular culture characters. In the *Persona* games, Personas are summoned through idiosyncratic rituals reflecting the thematic motif of their respective games. In *Persona 3*, the party summons them by shooting themselves with a gun-like device known as an Evoker. In *Persona 5*, characters break their masks. In *Persona 4*, characters summon them using Tarot cards. Personas are also the material reward when a player nurtures their bonds. When players interact with characters in the Inaba world space, they are rewarded with access to increasingly powerful Personas. Party members, likewise, unlock their most

197

powerful Personas when the player-character has nurtured their Social Links to the maximum potential.

The procedural rhetoric of *Persona 4* revolves around bonding, in that because Personas dictate strengths and weaknesses of an individual, players must pursue bonding moments with their party members to strengthen the Personas. Over the course of the game, Personas change as character resolutions change. However, given the unilinear nature of *Persona 4*'s conversation system, where characters don't progress until the player-character gets involved, they are also manifestations of a player's bonds. How these changes occur differs from entry to entry, but in *Persona 4*, changes occur at the resolution of a character's arc: players act as the commencement site of a character's personal journey, in that they must socialize with members for their Personas to level up. The player, in other words, acts as the fulcrum of character change. This is different from *Persona 3*, where party members change through the plot.

Personas also form the game's core combat loop, which is crucial given that *Persona 4* is turn-based game. Here, players and enemies take turn attacking. Both have Pokemon-style elemental weaknesses, and if their weaknesses are hit, the game rewards the player (or enemy) with and additional turn, known as "one more turn." While players can accomplish this with a regular attack by landing a critical hit, the advantage of a Persona is that if a player knows a certain Shadow's weakness, they will *always* trigger an extra turn. What prevents players from abusing Personas is their usage cost: magical spells cost SP (mana), and physical skills cost HP (life).

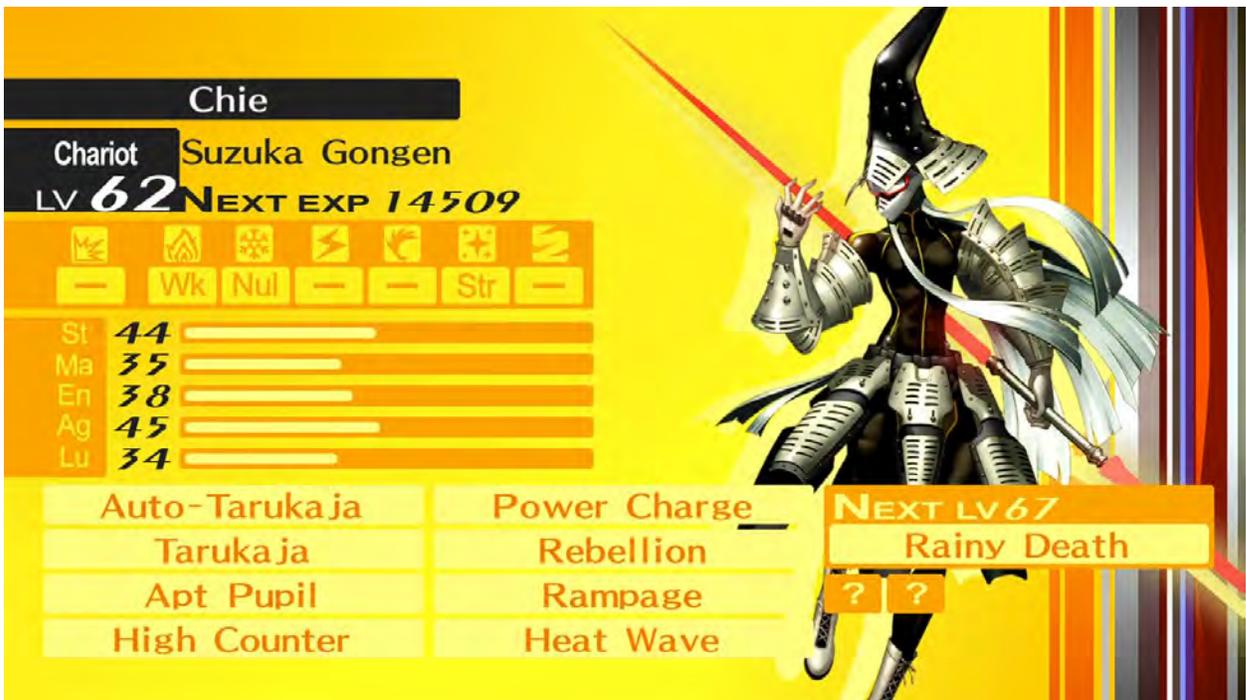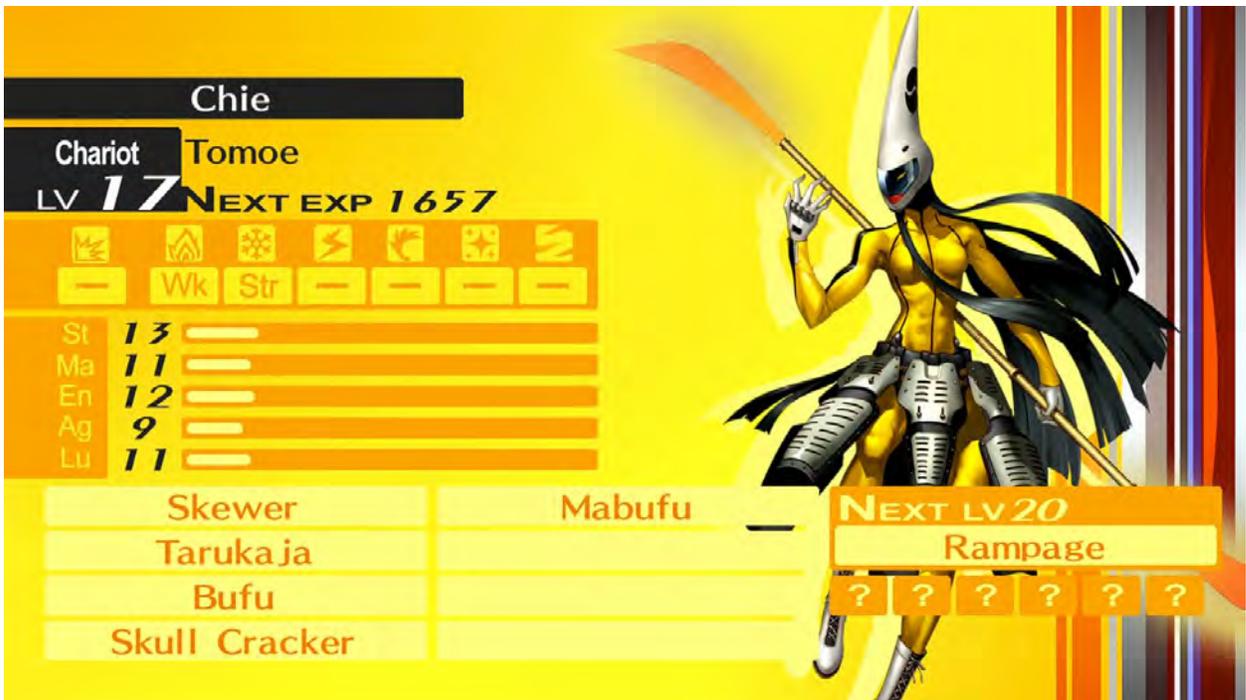*Figure 30. Party member Chie Satonaka's Persona, Tomoe, and her upgraded Persona, Suzuka Gongen. The upgrade is only possible when the player pursues her Social Link, rewarding players for spending time with her and helping her with her troubles. If the player does not spend time with Chie, they will never unlock her upgraded Personas.*

Personas also tether the game's dungeon-crawling and everyday-life worlds together,

specifically by quantifying the rewards of player interaction. Personas have different, steeper

level curves than the protagonist level. Since protagonist stats are tied to Persona stats, swapping

to a low-level Persona means protagonists effectively function as if they're lower level. Yet

because Personas level more slowly than the protagonist, players are incentivized to recycle

Personas they have with new ones, a mechanic known as Fusion. However, since fusing can cost

money, players maximize the benefits of fusing by stacking experience multipliers, which are

raised by a relationship mechanic known as a Social Link. Social Links are where players speak

to other members in the town of Inaba, and as their character dilemmas are addressed, so too are

their social links. Personas, in other words, become the played psychical link between the

dungeon TV world and the world of Inaba: players engage in Social Links and solve problems,

allowing them to fuse stronger Personas.

Status Conditions

Status Conditions are the third and last mechanic I'll be tracing. As a turn-based game,

status conditions keep combat in *Persona 4* exciting. They are as follows:

Poison: Loss of Health (HP)
Rage: Characters will ignore player's commands
Dizzy: Characters cannot attack for a turn
Panic: Characters are uncontrollable and will randomly attack, defend, or throw away money
Enervation: Stats are halved
Exhaustion: Characters lose SP
Silence: Characters cannot use their Personas

Status conditions in *Persona 4* revolve around the loss of a turn. Each status condition, directly

or indirectly, forces control away from the player by replacing the input with a pre-set attack.

Even status conditions like Enervation, where stats are halved, also flip on whether Persona

attacks even occur. Likewise, while afflictions like exhaustion purportedly use only SP, the

increased cost translates to lost future turns. Since SP has limited recovery options, status conditions give up potentialities. The same is for poison: since physical skills require HP, poison not only does damage, but also sacrifices future turns by magnifying the damage players take by casting physical spells.

While status conditions are not rare in JRPGs, they are one of the sites in which the game's bond-focused ludonarration is tested, making them a crucial component of the game's overall friendship-the-face-of-apocalypse themes. Like many other games, status conditions eventually go away. However, players can sidestep the entire process through passive cures where party members hit each other, forcing them out of their ailments. To unlock this, players must rank up specific Social Links for each respective character. In other words, status ailments present two driving elements in the game's battle flow. On one hand, the status condition is the flip side to the Persona mechanic, in that while Personas enable players to stack on turns by abusing weaknesses, status conditions are regulatory in that the threat of losing their turn always forces specific team compositions. On the other, the status condition further incentivizes the player to engage in the Social Link system; the threat of lost turns forces players to spend more time with their teammates to unlock cure passives, gamifying their friendships.

Figure 31. Yukiko slapping Yosuke using the "Wake-Up Hit" passive, which removes his status ailment.[230]

I focus on these three mechanics because they also show up in *Persona 4 Arena* but almost nowhere else in other fighting games. This is useful because of two contexts. One, these mechanics allow me to examine to what extent does the fighting game multiplayer ruleset affect them. While there are some similarities (commentators in *Street Fighter 6*, buffs in *Pokken*), none of them reach the complexity and specificity demonstrated in the *Persona 4 Arena* games. Second, the point of emergence is not *Persona 4 Arena*, but *Persona 4*, meaning these mechanics come with pre-existing assumptions on what such mechanics should entail. Furthermore, while these mechanics are not entirely unique to *Persona 4*, they are integrated in very specific ways to the game's ludonarration, specifically that of friendship and bonding. These mechanics are not just mechanics that exist in both games, but both games with specific thematic intentions that the developers aimed to recapture in the later *Persona 4 Arena* entry.

---

[230] "Persona 4 Golden - ALL Wake-Up Hit Animations [PC]," YouTube, June 23 2020, https://www.youtube.com/watch?v=qEdHGrRyORU&t=15s.

Persona 4 Arena

 Persona 4 Arena (P4A) is a 2012 collaboration between Atlus and fighting game

publisher Arc System Works. Known as an "airdasher," a fighting game which specifically

revolves around aerial movement, the game sold roughly 220,000 copies within its first six

months.[231] Persona 4 wouldn't have just a fighting game adaptation: Atlus would go on to

develop *Persona: Dancing All Night* (2015), a rhythm game, and *Persona Q: Shadow of the*

Labyrinth (2014), an *Wizardry*-style first-person dungeon crawler. *Persona 4 Arena* was

instrumental proving that a genre shift was possible and profitable.[232] By December 2011,

location tests – arcade areas where players could playtest the game against other players in

arcades – were announced in Tokyo and Osaka.[233] A promotional video (PV1) would be released

online, mainly with an emphasis on the combat premise: players can fight against each other with

Persona characters, specifically from *Persona 3* and *Persona 4*.[234] At the heart of *P4A*'s

marketing strategy is a focus on multiplayer. *P4A* would go on to be one of the main games at

Evolution Championship Series 2013, with a sequel (*Persona 4 Arena Ultimax*) announced for

late 2013.

 P4A emerged during a period in fighting game history where developers were actively

courting newer players. This was certainly the core aim of both Atlus and Arc Systems works:

---

[231] "Persona 4 Arena Sales Surpassed Expectations, "Golden" Sales Also Strong," Siliconera, October 19 2012, https://www.siliconera.com/persona-4-arena-sales-surpassed-expectations-golden-sales-also-strong/.

[232] "How One of the PlayStation 2's Best RPGs Turned Into a Dancing Game," The Verge, September 29 2015, https://www.theverge.com/2015/9/29/9408679/persona-4-dancing-all-night-playstation-vita-interview.

[233] "来春稼働予定の AC「ペルソナ４ ジ・アルティメット イン マヨナカアリーナ」，ロケテストが東京・大阪の２店舗で 12 月２日から４日まで実施," 4Gamer, November 24 2011, https://www.4gamer.net/games/139/G013961/20111124055/.

[234] "Persona 4: The Ultimate in Mayonaka Arena PV1 (1080p)," YouTube, September 10 2011, https://www.youtube.com/watch?v=HRkaccsWURg.

the studios wanted to turn *Persona* fans into fighting game fans.[235] To accomplish this, *P4A* implemented dramatic top-down design changes, specifically input accessibility, by completely removing inputs more idiosyncratic to fighting games, such as "half-circle" and "dragon punch" inputs. The game reflected what Gerald Lee notes as a transitional text between issues accessibility in fighting game design and input depth desired by a game's player base.[236] While fighting games did have "simple" inputs prior to *P4A*, most of them were beginner modes with significant in-game drawbacks (less damage, replacing specific buttons, etc.). P4A was the first fighting game to design around simplified inputs: players can mash buttons to do autocombos and escape options are mapped to buttons instead of motions. While these decisions generated praise from gaming press,[237] many players derided P4A's input variance, arguing that it supposedly watered down game complexity.[238] In short, *P4A* was a transitional text in an ongoing tension in fighting game design, specifically the move from arcade-centered "hardcore" stick-based games to more "casual" console-oriented, controller friendly games.

This development period contextualizes *P4A* in the sense that it's a game that attempts to translate and teach an audience specific subcultural practices while retaining the meaning to the mechanics it brings over from *Persona 4*. More specifically, *P4A* is playing double duty: it is trying to turn non-fighting game fans into fighting game fans while simultaneously retaining a core essence of the original *Persona 4*. It leverages this combat engagement to also set up its apocalyptic setting.

---

[235] Shigenori Soejima, trans. Kirie Hayashi, *Persona 4 Arena Official Design Works,* Udon Entertainment Corp (2013), 138.

[236] "Analysis: The Consequences of Reducing the Skill Gap," YouTube, May 28 2017, https://www.youtube.com/watch?v=iSgA_nK_w3A.

[237] Matt Edwards, "Persona 4 Arena Preview: Back to School," Eurogamer, https://www.eurogamer.net/persona-4-arena-preview-back-to-school.

[238] "The Beginner's Guide to Persona 4 Ultimax," YouTube, https://www.youtube.com/watch?v=8UChzPtdsKc.

Persona 4 Arena: Apocalypse

Persona 4 Arena uses combat spectatorship as a means to engage with the genre shift in an apocalyptic context. *P4A*'s story concerns Yu Narukami revisiting Inaba, only to find out the Midnight Channel, once disabled, is back on the air. This time, however, all of the members of the Investigation Squad are advertised in a P-1 Grand Prix combat tournament. In visual novel style, members of the Investigation Team find out that the P-1 Grand Prix is a revenge plot set in motion by a captive machine known as Labrys, whose psychical subconscious has generated the fighting tournament. Labrys' backdrop comes full circle when it is revealed that they had been forced to fight and kill each other in a twisted experimental program, and after their escape they turned into Inaba into a giant competition.

Unlike other fighting games, where the apocalypse is the setting that sets in motion the player-versus-player combat, *Persona 4 Arena*'s story mode is an apropos choice specifically because its story mode is a meta-commentary on its own genre translation. The story happens after the main events of *Persona 4*, where members of the Investigation Team have come together to solve the mystery and established long-standing friendships. However, in the P-1 Grand Prix, the story sets up situations where friends are forced to fight against each other: misspeaking. Characters do not speak to each other, but rather only hear negative dialogue, which always sets in motion another fight. The Shadow world here becomes an occluding media, distorting the relationship between characters to force them into one-on-one engagements. Labrys' backstory, likewise, serves as the catalyst for the incident but also acts as the reasoning for the combat focus: speaking through Chie, Labrys' Shadow laments that they had to kill for the amusement of others, and that they wished for other people to experience that suffering. The game, in other words, uses its story mode to not only explain how a turn-based RPG about

bonding becomes a fighting game, but also to emphasize that Atlus and Arc System Works used the story to comment on the nature of combat sports in general.

However, even if players do not engage with the story mode at all, the multiplayer aspect retains these sorts of messages, setting up multiple levels in which the stakes of the combat environment is emphasized. In other words, if most players don't engage with the single-player story, the different ecological conditions of *Persona 4 Arena* still reflect the same apocalyptic sentiments presented in its story mode. Just as how the Investigation Team is forced to fight each other for the amusement of others, *Persona 4* fans are learning to fight against other *Persona 4* fans through the genre of fighting game, often at the enjoyment of other players.

Approaching similar mechanics while staking claims on the nature of these mechanics also bears traces of a somewhat apocalyptic design, even if that seems a bit dramatic. Recalling Berger, apocalypse is an alchemical process, a burning distillation which anticipates and prefigures the conditions of its post-apocalyptic form.[239] In other words, it is a genre focused on destruction that, even before its event, begins to make claims of essence by its vision of preservation. In this light, the translation from *Persona 4* to *Persona 4* Arena and the two studios' insistence on recreating a *Persona* game in a fighting game environment suggests an apocalyptic design logic, even if never explicitly stated as such. Wada and Ichiguya's intentions, after all, were to turn RPG players into fighting game players (and vice versa).[240] As Motoko Tanaka mentions, modern-day apocalyptic rhetoric is concerned with disaster,[241] that discussions on revelations are taken less seriously in a colloquial sense.[242] These decisions, on a design level, carry the language of preservation core to apocalypse: based on the incredibly idiosyncratic

---

[239] Berger, *After the End*, 6-7.
[240] Soejima, *Persona 4 Arena Official Design Works*, 162.
[241] Tanaka, *Apocalypse in Japanese Science Fiction,* 12.
[242] Ibid, 11

mechanics that were never replicated in later fighting games, Atlus and Arc System Works did not make a fighting game with *Persona 4* aesthetics, but attempted to replicate a *Persona 4* game under the genre totality of the fighting game. In other words, the mechanics, while not directly apocalyptic themselves, have gone undergone processes that in some senses seem apocalyptic in a revelatory, clarifying sense. When this folds back on to the question of what an apocalyptic digital game can tell us about Althusserian ideology, the component of the game at stake here is not the aesthetic visuals, but the process of its mechanics as it undergoes a transformation in relation to massive procedural shift. In each of the three mechanics (navigators, Personas, and status conditions), there are several addendums to Althusser's structural causality: that subjects do not become subjects uniformly, that rules are also things in relation to the instructions set in motion, and that relations of production also concern the space in which relations of production reproduce.

Navigators in *Persona 4 Arena*

Navigators return in *Persona 4 Arena* as talking head commentators, but instead of providing commentary on the space of the dungeon, they commentate on the flow of battle. Teddie and Rise reprise their roles as navigators, but also in the first half of the Arena's story as villains. In *Persona 4*, navigators inform the narrative plot but also serve a mechanical function as an information gatherer. Players depend on the navigators to keep track of Shadows, provides buffs and debuffs, and map out the dungeons. Yet in *Arena*, navigators are intermediary actors that give limited false information, and whenever they do provide useful advice, most of it revolves around a specific form of play. They have become, in other words, disinformation mechanics.

207

Part of this might be because the televisual logic employed in *Persona 4 Arena* is different from *Persona 4*. *P4A* engages with television through the lens of spectatorship: as a fighting game developed around the arcade environment, Atlus and Arc System works makes a thematic pivot on televisual technology by focusing on television as a spectating device. In *P4A*, spectatorship is not so much witnessing a presumed truth as it is entering an ecological configuration. While *Persona 4* takes on the aesthetics of late-night television, *P4A* takes on the aesthetics of combat entertainment. In this context, while *Persona 4* engages with flickering TV reminiscent of the Pokémon Phenomenon (as Lamarre suggests), *P4A* engages with combat TV.

The P-1 Grand Prix is relevant since combat television is tied to a history of public Japanese broadcasting, which in turn informs its ludonarrative. Until the mid-1960s, TV sets in Japan were mainly owned by the wealthy; until the mid-60s, TV sets were public affairs, primarily due to competing philosophies on content delivery by broadcasters. Two stations defined the airwaves: Nippon Housou Kyoukai (NHK) and Nippon Television (NTV). While the former largely catered to Japan's bourgeois (and those who owned TV sets), NTK set up public TV plazas where people could watch for free. Known as *gaito terebi*, or "plaza TVs,"[243] NTV's strategy was to sell advertising space thanks to its dramatically expanded viewership. To retain viewership, then president Matsutaro Shouriki aired exciting material, specifically American pro wrestling (27). Combat entertainment is thus deeply tied to a televisual history of acquiring and retaining audiences, reflecting Atlus and Arc System Works' challenges with generating an audience for *Persona 4 Arena*. On a practical basis, the game adopts the combat entertainment aesthetic because it is a fighting game; it is modelling the phenomena of a combat sport. However, its relation to television provides deeper context, in that its approach recalls *Persona*

---

[243] Jayson Makoto Chun, *A Nation of a Hundred Million Idiots*, Routledge (2009), 27.

4's perspective televisual consumption, but the context of its televisual viewing is situated on a different element of TV. Furthermore, like *Persona 4*, *Persona 4 Arena* demonstrates this through the navigator and its mechanical role throughout the match.

In *Persona 4 Arena*, navigators are sports commentators that chatter about the flow of the match, but they are also unreliable narrators that specifically aim to push players towards more exciting play. At the same time, navigators demonstrate different levels of structural intelligibility: navigators give inexperienced players actionable on how to get better, but to experienced players navigators serve as environmental chatter. Yet for the former, navigators are notable in that they don't teach players how to play better, but more wildly. Navigators do not account for critical elements of advanced fighting game tenets such as controlling space (known as 'neutral' game) or understanding property-based engagements (known as attributes and 'frame data'). Instead, navigators push players to expend resources and chide them for playing defensively. Part of this is because of the nature of the game: players are fighting other players in complex interactions in a round while mindful of factors that cannot be quantified (like distance, mind games, set play). Still, what solutions *are* given are ultimately in favour of flashy, overexcited decisions. In other words, they want exciting, intense, watchable, flashy gameplay.

Figure 32. An example of a navigator in the top right. Throughout the match, navigators given actionable advice for newer players on how to win based on the game's perceived state of play.

Even in fighting games, procedural commentators are rare, with the only other notable example being *Street Fighter 6* (2023). However, even then, *Street Fighter 6* commentators are not instructional mechanics: they react to instances during the match to build up hype, but almost never provide advice. In this sense, *Arena*'s navigators are unique in that they interface with newer players to tell them what to do, reprising their role as context-givers in *Persona 4*. In both games, they are the intermediaries between the player and the TV world, but in *Persona 4 Arena*, by virtue of having players not familiar with fighting games, they also teach players how to operate.

Navigators demonstrate how a subject's familiarity with a social relation informs their relationship to an ideological unit. To a new player, navigators are both instructional and ambient – they teach players how to get better. Yet advanced players don't benefit from the limited advice of the navigator: navigators become purely ambient. Yet notably the navigator doesn't make a beginner player an advanced player; it makes them an aggressive player. Navigators prefer and

espouse resource expense, aggressive gameplay, and constantly pressure new players to behave in specific ways that are often not commensurate with high-level play. In story mode, this is explained as a critique of spectatorship and the need for blood. In multiplayer, the same sentiments are performed: advice funnels players into becoming more aggressive.

Ideologically, the navigator mechanic suggests that ideologemes are uneven, in the sense that the same ideologeme can function very differently in relation to the same overall procedural ruleset. One subject sees the navigator as an advice dispenser, in the process of hailing, while another can see it as a different, reinforcing mechanic, specifically that of ambient chatter. The overall rules have not changed in the navigator, but there is a parallax element to the mechanic, where how much the player understands the system informs their relation to the commentary. Here, ideologemes are uneven, implying an associated processes like interpellation is not just a process which occurs between subjects, but the means in which it hails is contextualized by the pre-existing conditions of the subject itself. Different players relate to mechanics in different ways, specifically in the sense that the mechanic is not just an empowering device in which they relate to a system's rules, nor is it also just a hailing mechanism which makes players to behave in certain ways, but also is a site of negotiation in which players translate the conditions of their player status into new relations of playing. The reason why this is a more notable incident in a multiplayer game is that these noncommensurate interpretations of the mechanic happen at the same time, in parallel, and that parallel relationship suggests a web of ideology stacking layers of interaction together. This is not to say the way ideology affects subjects was smooth or even in the first place, but rather to draw attention back to how the uneven and perspectival elements of an subject reconfigures these ideologemes. Different subjects relate to intelligible units of ideology in different ways, but the ways in which they relate can be a driving mechanism of

211

subjectification.

Personas in *Persona 4 Arena*

This issue over the pre-existing conditions of the subject is what defines the mechanical changes in the Persona mechanic in *Persona 4 Arena*. In *Persona 4*, Personas are the manifestation of a character's personal journey, a quantification of the bonds they've developed with others. Personas grow specifically by players nurturing others through Social Links. In *Persona 4 Arena*, the relation to Personas change specifically due to the ruleset of the fighting game, but also because players do not have the time or capacity to build bonds, especially in a player-versus-player environment. This is even more important considering that members of the Investigation Team are pitted against each other: they are not nurturing bonds, but trying to hold on to the ones they have. The benefit of nurturing personas is greater and stronger spells.

Persona 4 Arena's real time combat forced a dramatic re-shift of how players interact with Personas, but Personas continue to control what is known as a possibility space, or a contained system of multiple interactions and encounters. In *P4A*, Personas take up the C and D buttons on a gaming pad, a spot where, in most fighting games, would be devoted to heavy button inputs. Players "summon" their Personas by pressing the button. However, Personas are different in that, unlike regular attack buttons, they act as separate sub-units for the player: a player can tell their Personas to commit to specific attacks while they do other things. This form of engagement is usually the hallmark of an archetype known as a "puppetmaster," where a player controls two character simultaneously. In *P4A*, Personas can be attacked, and when they are, players lose one of four tarot cards. If players lose all four tarot cards, they're unable to use their Personas for a specific period of time. In *P4A*, Personas do not cost magic (SP) and they

don't take up turns. Furthermore, since there are no Social Links in *P4A*, they're not used for fusing. Their role as currency within a larger RPG gameplay loop does not exist, since those higher-order mechanics don't exist in *P4A*.

Yet despite those changes, what *does* remain is the Persona's status as a special attack and as a specific form of currency. In the JRPG, Personas increase player spell variance at the expense of quantifiable resources (HP and SP). In *P4A*, Personas reprise their role as possibility mechanics, but they exchange a non-quantifiable resource – moveset access – for the possibility of greater mechanical expression. In fact, Personas are so valuable that a common advanced player advice is to break the other opponent's Persona.[244] This takes the form of player control over their input options. Since players risk having their Personas broken by their opponents when they call them out, players must weigh the value of their Persona in relation to the cost of *future* buttons. This is especially important considering Personas are not tied to offensive or defensive mechanics, but *special* mechanics; any button which has a property requiring a Persona is tied to whether that Persona is available. Some mechanics, such as Burst (an explosion that pushes enemies away) require players have access to their Personas.

In this sense, while Personas are fundamentally different on a technical level in *P4A*, they fulfill similar roles as they do in the original *Persona 4*. They warp the combat space around them, specifically in the sense that they provide player opportunities. But notably is the cost of their use: if the opponent breaks the Persona, the engagement space magnifies each following cost. Just like how both physical and magical skills in *Persona 4* makes each subsequent use more costly, so too is every moment when players call out their Persona. Here, the space is

---

[244] "「P4U2」5 Major Mistakes Persona Players Make," YouTube, April 2 2015, https://www.youtube.com/watch?v=t4-BIYrijxE.

reflected not by mimicking the spell system of *Persona 4*, but by simulating the resource mechanic of *Persona 4* in a real-time fighting game space where the cost is associated with the other player.

What makes this departure even more important is that Atlus and Arc System Works reflects the resource simulation of Persona summoning likely due to issues with accessibility. In other fighting games, puppetmaster archetypes are often limited by literal spell resource mechanics: Carl from the *Blazblue* series and Zato-1 from the *Guilty Gear* series are both puppet characters who partners are limited by moves, much like an RPG, and much more faithful in a literal sense to Persona summoning. However, those characters are widely considered extremely difficult characters to learn: players not only need to learn real-time direct resource management, but also must keep an eye on the available number of moves for those characters. Atlus and Arc System Works, instead of adopting that formula, sidesteps the puppetmaster limitation by pushing cost into a regulatory space: players only feel the cost of Persona breaks if their opponents take advantage of it, and as opponents become more skilled they will more frequently do so. If Bogost's simulation is the gap between the source system and its rules-based representation, Atlus and Arc System Works' vision of the Persona summoning in a fighting game does not draw from a spellcasting source system, but a consequentialist view of the decisionmaking process of the Persona summoning mechanic. There is very little, on a technical level, that mirrors the original JRPG, but Atlus and Arc System Works' solution is not to mirror the actual mechanic, but the cost-benefit analysis the player makes that is set in motion by the existence of the mechanic, specifically in its combat environment.

The Persona mechanic suggests a motive element to an ideologeme, in that its ideological intelligibility occurs in relation to a system in motion. Even with a change in overarching rules,

the "essence" of the Persona mechanic is not reflected as a direct reconstruction of the JRPG

summoning, but by desires put in motion and in relation to player behaviours. Here, the

directional component of Althusser's structural causality is at play: instead of an object dictated

by rules, they are dictated by objects moving in relation to constraints of those rules. *Persona 4*

Arena suggests that what matters to the Persona, mechanically, is a resource-focused possibility

object that allows players to do other things. The translation of the Persona mechanic is an

example of a reproduction of conditions of reproduction,[245] in that the schematic shapes the

space of ideological motion itself. Plays do not reproduce mirrors of the turn-based combat, but

reflect similar resource sentiments in a different space. Thus, if the mechanic here is an

ideologeme, a unit which betrays the ideology (structure) of the subject, then the resource logic

of *P4A* is not determined by an immanence in rules, but the rules as they are set in motion in

relation to its operators.

Status Conditions

Motion in ideology continues to be at play with how *P4A* adapted status conditions,

specifically in the sense that the shift from access to turns to access to buttons led to a reworking

of most of the status conditions. Status conditions are already extremely rare in fighting games.

Status conditions are a useful mechanic to examine specifically because their tangibility: the

status condition doesn't reflect a general overall space like navigators and television, and it isn't

tied to an interlocked world spaces like Personas and Social Links. In both *Persona 4* and

Persona 4 Arena, status conditions only exist in the dungeon, in combat, and have specific,

limited properties. However, what makes *P4A*'s status condition a useful example is also how

---

[245] Althusser and Balibar, *Reading Capital*, 235.

rare this mechanic of this complexity is in fighting games. In games like *Pokken Tournaments*, a Pokémon-based 3D fighter, status conditions exist but only act as buffs or debuffs, where Pokémon do more or less damage, become faster or weaker. This is a far cry from the complex status conditions afforded by turn-based RPGs.

Figure 33. Panic state, where all directional inputs are reversed.[246]

Arc System Works' solution for *P4A*'s status conditions reveals a significantly different perspective on flow: status conditions in *P4A* revolve around access and input. While not all of *Persona 4*'s status conditions carry over to *P4A*, the ones that do are revamped for real-time combat. Panic, for instance, while it gave up a turn in *Persona 4*, gives up player space in *P4A* by reversing player inputs. These status conditions mimic the JRPG flow on procedural levels by taking advantage of what T.L. Taylor calls Embodied Play, the kinaesthetic relationship between

---

[246] ""UNDERSTAND THIS About Persona 4 Arena Ultimax Status Effects!," YouTube, March 24 2022, https://www.youtube.com/watch?v=CUqwZ36d7A0.

player, device, and system that reflects gameplay circuitry.[247] As a real-time fighting game, *P4A* has no codified turns, but players still use the same language in these situations: when they back off from pressure or can commit to an offense, they are seen as "losing" or "taking" their turns.[248] While *Persona 4*'s status condition affects literal turns, *P4A* uses options-in-relation to space to dictate who gets access to which turns.

The way status conditions change from turn-based to real-time combat suggests that a relation of production carries a performed element. "Losing turns" is the source system of the mechanic, but what defines the turn loss in the real-time fighting game is not a literal turn loss, but one that is seen as a turn loss only when players realise a basic intelligible flow of the space they're engaging in. The change in status conditions for simultaneous play reveals how even mechanics of ideology can not only be approximated, but also how the constituent rules of those mechanics are reworked in relation to the overall structure. At same time, the presence of the structure in its effects is revealed in the change of the configuration of the structure itself. *P4A* is a fighting game where players engage simultaneously. The status condition was initially developed for a turn-based game (*Persona 4*). Atlus and Arc System Works cannot directly transplant the mechanic as it is into the fighting game, so they opt to replicate *effects* of the turn in relation to the structure, but that only is only possible if the developers acknowledge the status of the structure itself. Panic, in this case, mimics the loss of the "turn" by employing different rules of interaction (reversing inputs) – but mimicking the loss of the turn is precisely the reproduction of a *relation* which undergirds Althusser's hypothesis on ideology.[249]

---

[247] T.L. Taylor, *Raising the Stakes: E-Sports and the Professionalization of Computer Gaming*, Mit Press (2012), 52-53.

[248] Enpicie, "Learning to Learn in Fighting Games," Medium, https://medium.com/@enpicie/learning-to-learn-in-fighting-games-c37c75f3bbd1.

[249] Althusser and Balibar, *Reading Capital*, 232.

By focusing on status conditions, we also open two important avenues for understanding procedural arguments. First, the argument is oriented by a spatial demand, in that the space of play guides engagement. If status conditions shape expectations on player engagement, reorienting the rules of engagement gives insight on assumptions of how orientations shape those engagements in the first place. Certain status conditions such as Enervation (halving stats) cannot work because the expected behaviour of engagement in a fighting game has no balancing solution. This balancing concern, while not explicitly mentioned by Arc Systems staff, can be seen recently. In *Dragon Ball FighterZ* (2018), a later entry by Arc System Works, introduced a character that debuffs enemy damage by 21%. The effect is dramatically longer match times, warranting major tournament CEO to ban her from competitive play.[250] Second, status conditions provide insight into how smaller elements affect broader, more generalized arguments around them. Previous examples (television and Shadows) have varying levels of abstraction. However, we can track status conditions minutely, allowing us to focus on how genre and player shifts affect game mechanics without accounting for too many variables at once.

In conclusion, what can *Persona 4 Arena* tell us about ideology?

This thesis focuses on a few interlocked claims. One, that Althusser's description of ideology, as structurally causal imagined relations to economic modes of existence, is a helpful framework for understanding digital games. Ideology is a set of interlocked and in-motion processes (Darstellung) which reproduce its relations of reproduction. This emphasis on structure is analogous to Bogost's claim that games express arguments through their rules, in that both Bogost's black-box analysis and Althusser's immanence of effects focus onthe mechanisms of

---

[250] Justin Gordon, "Lab Coat Android 21 announced to be banned from CEO 2022's Dragon Ball FighterZ event," EventHubs, June 1 2022, https://www.eventhubs.com/news/2022/jun/01/lab-coat-banned-ceo-dbfz/.

interactions. The result is a reminder of a player or subject's relation to a system, even when overarching rules – both abstract and technical – can be hidden. Second, apocalyptic games are useful in that they engage with a pervasive element of ideology, specifically that of its subjects' perceived limitations. Apocalypse is often presented as a vision of an end of ideology through an ideological subject's viewpoint. If a structural analysis of ideology can be found in terms of how the digital game is negotiated with its players (its subjects), then how these games present and grapple with its own end helps us dissect the way pathways of subjectivation persist. In other words, the value of analysing a digital game about apocalypse is how it procedurally engages with visions of its own end, and how that maps out to how ideology crafts rules of interaction to preserve its own lanes of control. This can happen in several ways. One, that games bear the socioeconomic conditions of their own production. Whether this is the AAA design environments of both *The Last of Us* and *Tokyo Jungle*, apocalypse is packaged in a way meant to be palateable to its players. Second, that the digital substrate of a game helps inform the extent of its messaging, specifically in that technical elements inform its aesthetic judgments (as seen in *Mass Effect* and *Doki Doki Literature Club*).

The third and last point is that players, like subjects, become subjects differently, even in the same zones with similar end points. *Persona 4 Arena* reframes the question in two ways: one, what happens when multiple subjects (players) engage in the system at the same time, and two, when one set of rules form another set of rules, and it is in the latter where a game makes its procedural arguments? The case of *Persona 4 Arena* and how it attempts to keep mechanics from *Persona 4* shows not only how mechanics remain, but also how modification of rules can be used to preserve these mechanics. However, in *Persona 4 Arena*, the modification of these rules is negotiated culturally: navigators, Personas, and Social Links are different in *Persona 4 Arena*,

219

but they are different because they are meant to be intelligible to their player audiences. In the fighting game genre, terms like "turns" exist, but fighting game players perceive turns differently. In this sense, turns are intelligible through possibilities and space, so Personas end up reflecting those sentiments. A focus on mechanics and how they translate from one system to another sheds light on how subjects of ideology might perceive the immanent effects of an ideology.

Additionally, while players might not necessarily engage with its apocalyptic narrative, the game is apocalyptic nevertheless. The game's premise of the Investigation Team stuck fighting against each other to unveil a mystery reflects a player's engagement with the game. The game's apocalypse is not about players learning about the end of the world, but how engaging with critically new challenges that makes claims on old ones.

Engaging with Production

Throughout all five cases, a recurring question has been what the apocalyptic digital game can tell us about ideology. On one hand, apocalypse and ideology have been literal. These stories directly concern the state of the world, its end, and what we envision those new worlds to be. On the other hand, apocalypse engages with more abstract questions on ideology, specifically what the apocalyptic imagination reflects back on our assumptions on ideology. Here, apocalypse is revelation, struggle, forcing new pathways of play made possible by the instructional demand of a system, the direct limitations of the digital framework which makes these games possible.

In attempting to figure out the dimensions of this topic I began with an orthodox apocalyptic scenario, specifically *The Last of Us*. Then, as cases proceed, I attempt to problematize one variable at time. I focus on technical and structural issues to reflect the

materialism of Althusser's approach. I also focus on games which do things that are relatively rare. What happens when you are no longer representing human entities, to change the perspective? Here we have *Tokyo Jungle*. What happens when apocalyptic stories give you choice, and digital games attempt to account for that? That brings us to *Mass Effect*. There, I argue that apocalypse becomes an enactment of violence on its own, a reflexive analysis of preservation and technological violence in the form of a trilogy that *must* enact technical violence to sell its experience. Then, I extend the question to beyond the immediate mechanical interface, to think about how deep can apocalypse and ideology go if the daemonic interface has subsumed the supposed code of the game itself. That's what we can see in *Doki Doki Literature Club* and its extension of the magic circle to its operating system. Finally, I turn to the players in relation to a system, examining the relationship between operator and game. Here, I focus on how interpretation complexity may force a rethinking of a game as an ecological device, problematizing the question of apocalypse. If apocalypse is about revelation with regards to ideology, our imagined social relations to real modes of existence, then what role exists in the singular operator, a factor taken for granted in previous cases? Here, I bring up questions about how to translate apocalypse and its tendrils into another genre, another space, and more specifically, how a developer might account for procedural arguments through games with different players and different player counts. In doing so, I aimed to fold back revelation to my own status as a single reader.

From all of these examples, the apocalypse is much more malleable and applicable than images of dead Americana or exploding worlds. In fact, each one draws attention to apocalypse in an orbital sense: how is something remembered? What remains and for what reason? The apocalyptic game concerns not just envisioning post-ideological worlds, but also navigating

them, to make them understandable. The structural analysis of apocalypse is not simply capturing

every apocalyptic game, but some of the ways in which apocalyptic games can help shed light on

our relationship to ideology, and how playing through them calls up questions of instruction.

However, at the same time, these questions remain the domain of players; one question has

always been, "what does the apocalyptic game tell us about ideology?" It does not have to focus

specifically on players. Here, I will move on to a research-creation project focused on making an

apocalyptic game.

Chapter 12: Producer as Subject

Thus far, this research focuses on the premise on where the apocalypse (conceptually) is applied to a digital game in an attempt to construct a procedural argument. However, given how much emphasis I place on the value of digital games as means to discuss ideology, and how I emphasize relations of production reproducing itself, understanding the challenges of how those connections reproduce provides valuable insight not immediately clear from the perspective of a player. The aim is not only to consider analytical but also artistic effort, primarily to evaluate the role production plays in the direction of games analysis. The focus is to devote more attention to elements that are underdiscussed by virtue of it emerging as topics of analysis through the development (and updating) process. Though there is material out there on how to produce games, and there is material on apocalyptic games, there are much fewer pieces of work which grapple with the entangled process of analysis and production. Even as the number of publications on apocalyptic games rise, there remains much fewer pieces on the challenges of developing, and ultimately, the implications of developing ludic eschatology. This chapter aims to add to this discussion.

This research is split into three main sections. The first project concerned the theoretical reasoning behind both apocalypse and ideology. There, I argue that Althusser's structural causality is a useful springboard for understanding procedural arguments, specifically digital games, since digital games reflect a series of horizontalized relationships between player and system, technical and aesthetic. Furthermore, the digital game serves as a helpful metaphor for ideology because the digital game is not just player and code, but a mesh of relationships manipulated by players who, in the process of playing and manipulating the game, relate to and engage with a device constituted by interlocked physical and digital layers. Digital games can

push back against players at numerous levels, whether it is the procedural level (rules and boundaries of the game itself), its meta-procedural levels (digital rights management, its accessibility, its infrastructure), or its physical level (the mere possibility for players to play such games at all). In this sense, Althusser's suggestion of a reproducing base and superstructure is represented in the digital game. I land on apocalypse, therefore, as a useful subject matter, since an allure of apocalypse is a world beyond our prevailing ideology, that an apocalyptic subject is also a subject that – directly or not – lays claims about their position in the world.

The second section looks at several games and how they handle apocalypse, and what they do to reflect some of their apocalyptic sentiments. Starting from the more controlled, AAA game of Naughty Dog's *The Last of Us* to Atlus and Arc System Works collaborative project *Persona 4 Arena*, I examine where our ideology persists in these games in the face of apocalyptic events. In each case, I argue that, due to the nature of digital games as systems which aim to resolve contradictions (sometimes minor, sometimes major) which have arisen through apocalypse, such games engage in Jameson's Symbolic Acts, or motions which resolve tensions while maintaining the contradictions which necessitated the acts in the first place.

The third section seeks to develop a game that maps out Althusser's ideological structure. Then, l release that build it to players. Instead of focusing on how Althusser can help us expand on digital game analysis, the third project takes Althusser's concept of structural causality somewhat literally, imposes it onto an apocalyptic game, and sees how players engage with it.

Game Plan

As mentioned in the first and second projects, Althusser's concept of structural causality to account for how subjects of an ideology perceive that ideology; what he and Balibar note is

the impossibility "to think in the category of global expressive causality of a universal inner essence immanent in its phenomenon."[251] This discussion causality, as mentioned in the first project, informs the way Althusser and Balibar compose this idea of structural causality. More specifically, they note that causality tends to be framed in two forms; a mechanistic, linear causality in which subjects and objects affect each other in almost Newtonian fashion. The second, they note, is an expressive causality, in which the back-and-forth action-reaction engagement is reflective of a totality, that whatever emerges is expressive of a greater set of social political procedures. The problem, they note, is that neither account for a crucial problem with ideology, in that if people are tautologically ideological, then the means in which they grapple with ideology is itself ideological. The subject is not only figuring out how to navigate the ideology of which they are subjected, but the tools, paradigms, and practices which empower them to do so are also ideological. However, simultaneously, Althusser and Balibar acknowledge there is some elusive materiality, some non-ideological components (what they deem "scientific") that end in an economic state in the last determinant. While Althusser and Balibar do not suggest this as a "way out" of ideology, this approach, where relations of linear relations form a mesh of connections, shed insight on how to navigate ideology even as it informs the way in which we think about its own navigation.[252]

I used that image of ideological to build the game, specifically in terms of how the game's narrative structure works. *Portal Story* is a short, 15-30 minute action-RPG game where the player takes on the role of an unnamed protagonist who, after dying from overwork, wakes up to find themselves in a fantasy world. The situation quickly turns awry when the implication

---

[251] Althusser and Balibar, *Reading Capital*, 187.

[252] Althusser and Balibar, *Reading Capital*, 224.

of that world is post-apocalyptic: something has happened, though precisely *what* is happening is largely obscured from vision.

I use *RPGMaker MV* for two reasons. On a practical level, it was an engine I was familiar with, and given limited time and resources working with an engine I had some experience with was better than learning a new engine entirely. Second, more idealistically, since RPGMaker is a turn-based game, using it to build an action-RPG game acts as a bit of a stress test of the engine's design logic. Being able to use an action-RPG setup with what is meant to be turn-based gives me a lot of insight on the push and pull factor the engine plays, specifically on individual levels. I also chose the fantasy genre specifically because of my familiarity and interest the portal fantasy genre, specifically where protagonists find themselves in, fantasy-style worlds. As someone who has written about portal fantasies (in both academic and non-academic publications), my decision to include them stems from my interest in these premises as subjects envisioning worlds beyond their immediate economic conditions. The drive and desire to be elsewhere, and to seek out new pastures, was a compelling, familiar, and apropos setting for a discussion on ideology (and the subject's imagination of being outside of ideology).

These two factors were also influenced by my experiences in games where the term "narrative" is conceived among its players less as direct, canonical storylines and more as accounts of player experiences. Influenced by my experiences playing Diablo 2 and Persona 4 Arena, both of which are cases where players describe their interactions with the game's mechanics as the narrative (and not so much the plot), I used the action-RPG setting to lock the plot and the mechanic together: my hope was players would find and accrue bits and pieces of stories much like loot, and the fantasy setting was the perfect place to do it.

The narrative was set up so each interaction with NPCs is defined by a roll from 0 to 2. These rolls determined what enemies said. For example, if the player encounters an NPC, the game will do the following process:

1. Check to see if the player has engaged with them before

2. If not, then turn on the check

3. Roll the conversation

4. Load up the conversation based on the roll

5. If the player encounters the NPC again, then load up the conversation they rolled

The purpose is so every interaction between every NPC, while simple, creates a game experience where every player will experience different things depending on which NPCs roll which conversations. In some of the more complex interactions, players would also have random branches as well: when a player responds to a comment, NPCs will respond back with the same roll mechanic.

```
Contents
◆If : Aggro-Convo-Switch is OFF
    ◆If : Southern-Arm-East-North-Spearman is OFF
        ◆Control Switches : #0062 Southern-Arm-East-North-Spearman = ON
        ◆Control Variables : #0064 Southern-Arm-East-North-Spearman-1 = Random 0..2
        ◆
    : End
    ◆If : Southern-Arm-East-North-Spearman is ON
        ◆If : Southern-Arm-East-North-Spearman-1 = 0
            ◆Text : None, Window, Bottom
            :       : \pop[-1]What a damned place.
            ◆
        : End
        ◆If : Southern-Arm-East-North-Spearman-1 = 1
            ◆Text : None, Window, Bottom
            :       : \pop[-1]I worry for the captain.
            :       : \|He doesn't have the might to continue.
            ◆
        : End
        ◆If : Southern-Arm-East-North-Spearman-1 = 2
            ◆Text : None, Window, Bottom
            :       : \pop[-1]What caused all this?
            :       : \|Was it what we did?
            ◆Show Choices : What did you do? (Window, Right, #1, -)
            : When What did you do?
                ◆Text : None, Window, Bottom
                :       : \pop[-1]How much did they tell you?
```

Figure 34. Breakdown of Portal Story*'s switch to roll logic, allowing randomized but consistent branches.*

An NPC interaction always checks to see if this is the first interaction and then rolls one of three conversation options. Once players have engaged with an NPC, they will always receive that roll in that playthrough, so players must either save scum or replay to access all the dialogue. These variables also play a role in the final act, a short denouement where the pseudo-antagonist, Melancholy, reveals why the portal (which was never shown) was opened. However, instead of Melancholy divulging what happened, players are given a procedurally generated exposition, with each word and structure linked together to form basic sentences that become an explanation of the narrative. When stitched together, it forms sentences where the context of the event behaves based on the actions the player undergoes.

	A	B	C	D	E	F	G
	A1	▾	fx	Prince Barthol			
1	Prince Barthol	Queen Peram	The fools		6		pronoun
2	gave us	sent us	made way through		8		past tense verb
3	an order.	a letter.	an opportunity.		9		noun
4	Find	Prepare for	Set in motion		10		command
5	a way out.	the Bantu.	an escape.		11		subject
6	We	The army	These people		12		object
7	were	seemed	felt		13		article
8	bogged down	prepared	desperate		14		past tense
9	in the south.	for the worst.	against the elves.		15		location
10	The elves	High elves	They		16		noun
11	stole the plains.	came from the mountains.	marched and marched.		17		past tense verb
12	"The Marigold Shield."	"Ostheim's Horizon."	"The Weaving Wall."		18		topic
13	We	Nobody	They		19		noun
14	called	remembered	named		20		past tense verb
15	It	it	it		21		noun
16	?				22		

Figure 35. The Sheets document organizing one of the expository sections. Each column is a word drawn from a variable, and since each variable rolls from 0 to 2, there are three columns.

Once players understand how the ending stages of the game works, they can choose to reroll by looting corpses, giving players the chance to force a new value. Like the interactions with enemies, looting corpses can give either one of three things: a general item (such as gold), a specific item (such as a potion or a sword), or a personal item (a nonconsumable item that describes the NPC the player is looting). The purpose of looting is a second chance at a reroll; players can affect the narrative of the game's ending based on what they do to these bodies, though to what ends and how much is always unclear. After all, they might reroll and get the same values. The aim is to avoid surrendering players entirely to the system's roll mechanic: if players feel that the game's narrative is determined by chance, in that they have no control over what variables are determined as the game unfolds, then it strips them of the possibility to affect those chances. Looting bodies allows them to determine which variables affect which, thereby allowing them to navigate the system, but because the variables are still randomized, they do not have complete control over what the result is.

In fact, a recurring element of the game is the interruption between the nonmechanical storytelling of the game and how the mechanics interrupt the player experience. As players fight

229

enemies, the enemies will shout out randomized death cries specific to their roll. However, because the death shout is tied to the dialogue system, and enemies can attack while this is happening, players need to choose between paying attention to what the enemies are saying versus fighting. This relationship is meant to reflect the tension between the system and the narrative contextualizing it in a procedural sense; as players navigate the world (much like an interloper), they are incentivized to care less about what the enemies say and more about staying alive. Though it doesn't make a direct point about ideology, its aim is to set in motion a series of linear mechanistic relations which produce a specific set of engagements, mainly that players prioritize paying more attention to certain elements of the game. This is not only because they are interacting with multiple mechanics, but they must make decisions on the priority of each mechanic, even if the game itself – on a broader systemic level – does not set out preferences.

Chapter 13: The Challenge in Producing

I developed this game on my own, so its development needed to be manageable, short, and relatively humble. Major technical issues needed to be fixed on my own, so implementing complex systems that I couldn't fix later was out of the question; I couldn't risk locking myself into a game-breaking bug that I couldn't later fix (or patch). All music and artistic material needs to be self-produced or sourced with permission. The art style is a modification of Final Boss Blue's *Time Fantasy* pack, and the animations are those I made in *Aseprite*. The music is either made with permission, or spliced together audio from audio libraries with license holder permissions.

Beyond narrative, technical issues inform the way I produce the narrative logic that was meant to reflect my perspective on ideology. *Portal Story* operates on the turn-based *RPGMaker*

MV engine, meaning an action RPG combat setting needs an additional layer that handles and interprets action RPG mechanics. This was possible through the use (and permission) of Phoenix KageDesu's *AlphaABS*, a plugin that allows a library of real-time combat engagements. KageDesu themself was influenced by World of Warcraft mechanics, so while there are action RPG mechanics, they are not modern by any standards.

Using KageDesu's *AlphaABS* system on top of *RPGMaker MV* for a purpose the latter was not intended for meant handling two levels of bug fixing and being able to interpret two different systems. Even if *AlphaABS* uses the Maker engine to interpret its instructions, it nevertheless draws upon instructional logic that makes sense to KageDesu. Part of the challenge in bug fixing is figuring out which issue is caused by an implementation of KageDesu's plugin, my own logic issue while working with the Maker engine, or a mix of the two.

Despite these challenges, the decision to focus on an action RPG system in an engine famous for its turn-based gameplay is to drive attention to the tension between what the engine is meant for and what I can attempt to accomplish with it. This is relevant considering engines, as Mia Consalvo and Dan Staines (citing Mikhail Fiadotou) note, bring over a look and feel to their games by virtue of their developmental architecture.[253] The game doesn't begin with its development but with the community space that supports it, the ways in which support is given, and ultimately, how people relate to these games and how they look and feel.

Over a few weeks, I sent several iterative builds of my game through the itch.io link to several friends, both content creators and non-content creators. I told them very little other than that I would be watching how they played and that the game is primarily an exploration piece, so

---

[253] Mia Consalvo and Dan Staines, "Read Ren'Py: Game Engine Affordances and Design Possibilities," Games and Culture 16, no. 6 (2020), 2. https://doi.org/10.1177/1555412020973823.

it might not be a "fun" game. I also encouraged them to play to their tolerance; there was no need to reach an ending, just for them to get to wherever they felt they had enough. Everyone who played the game sent me a stream of their playstyle, and it was through watching how they played that I came to several realizations of the production process, which would not have been noticeable through the analysis of these games.

First is that games cannot just be planned but must be playtested since my assumptions on how to play this game were extremely different. In making the game, when I playtested it on my own, I focused on how to make certain events happen as quickly as possible. In general developmental terms, this would be fulfilling the conditions for the game's next event triggers, where the conditions are met for progression in the game through the way I need it to. Yet fulfilling these state machines doesn't translate to actual play: players don't play like developers, so bugs that never showed up in the original testing began to emerge minutes into the playthroughs. As I tested and tested, I came to the realisation that I would reproduce the motions I needed to address noticeable issues that I could perceive as a developer. However, players would come in with completely different perspectives on the game. Therefore, where they go would be completely different from how I intended for them to go.

Figure 36. A player getting stuck in the game after triggering ghost code.

One player ran into the beta-testing version of the game map, making them completely unable to fight, frustrating them. They triggered ghost code which sent them into an old area of the game. This bug was completely unknown to me because they pursued a specific event that, until they told me, I did not pursue because I was focused on optimizing the "correct" way to get to the next area. Furthermore, the beta map and code as an old event trigger from an early stage development process that had not been completely removed. The game, in effect, bore traces of earlier stages of development completely unbeknownst to me, the sole developer.

Second was that players spent much more time in specific areas and much less time than in others. While this may seem like a mundane claim, the implication is that players need or want more guidance through the game than I as a developer had assumed. In *Portal Story*, the player is meant to breeze past the initial apartment level, but not a single player aimed to breeze past it on the initial run. This is how one of my players found my first major bug, specifically that I didn't

delete an old event, and with enough player interaction with it, that event sent them to a testing map, locking them out of the game.

The overall problem was that as a developer, I lost sight of how players would behave by focusing on making specific elements work. It was only through players exploring the apartment's geography that those game-breaking bugs were found. More generally, it implies that the pipeline for developing a procedural argument is also noticeably different from experiencing it. Returning to the initial apartment level, the level is meant to reflect a frustrating everyday life, which would be the experiential impetus for players to desire another place (namely, the fantasy world in which they eventually find themselves). This is accomplished through a series of events where the player goes down the stairs and goes to work. Every time they go down the stairs, a specific value might increase. Players are sent to the fantasy world when this value reaches a threshold. Since players don't know when they will jump over to the game, they might wish to do something else, setting in motion a procedural rhetoric akin to everyday work life; players, like workers, are stuck in a seemingly endless loop without a way out, and it is only by happenstance that they might one day find a "way out." However, one of the main issues is that the goal I've set out (to mimic a sense of everyday boredom) might not be recognizable to the players. To address that issue, I've added a journal which more explicitly outlines the issues the player character faces at the beginning of the game, setting in motion the motivation.

However, while frustration was the key goal, players mainly focused on the details of the apartment. Many assumed that, given the continual loop, they were missing a key detail; they believed this was a puzzle they had control over, and they simply had not yet found a critical component to make it work. The issue didn't even become a situation of players not feeling frustration the way I intended but not feeling frustration at all; players did not come in thinking

234

they were meant to be frustrated or even became frustrated, but instead saw the situation as a challenge. Playing the frustrations of everyday life did not mimic the feeling of everyday life; instead, it acted as a fenced-off site for playful engagement that tempered the intended frustrations of feeling for everyday life.

This disconnect between my goal to frustrate and the players' goal to solve what seemed like a puzzle is reminiscent of what Clint Hocking refers to as a dynamic framework,[254] or a set of working assumptions underpinning procedures of play and production. Hocking uses Ernest Hemingway's *Hills like White Elephants* as a frame of reference: he argues that while Hemingway never explains the meaning of White Elephants, there is a collective presumption on what those elephants mean. Hocking argues a similar convention is at play in game design: players register to a set of collective expectations on what specific frameworks entail, and it is up to designers to figure out what that framework might be.

Third was that development and performance on a hardware level was crucial, yet utterly impossible at my software development level to control. I developed *Portal Story* on my work laptop without a dedicated graphics card. I assumed since the game functioned well on my laptop, it would function well on others. However, one problem I hadn't considered is that players who engage with it might have devices that perform not as well as mine. Furthermore, despite my experiences with the game during testing, I hadn't considered performance issues after compiling and deployment; at certain moments, the game ran into performance issues that never showed up during development.

While I mentioned some of the hardware considerations in the second project, most of the discussion was to draw attention to the role of material limitations as a crucial point for how

---

[254] "Dynamic Frameworks."

players engage with digital games. However, on the developer side, hardware limitations are much more pressing, especially considering that as a developer, my issues were not how the hardware affects the player's relation to the digital game on a theoretical level, but how the hardware forms a baseline experience to even make player-system interactions enjoyable enough for any procedural arguments to be intelligible.
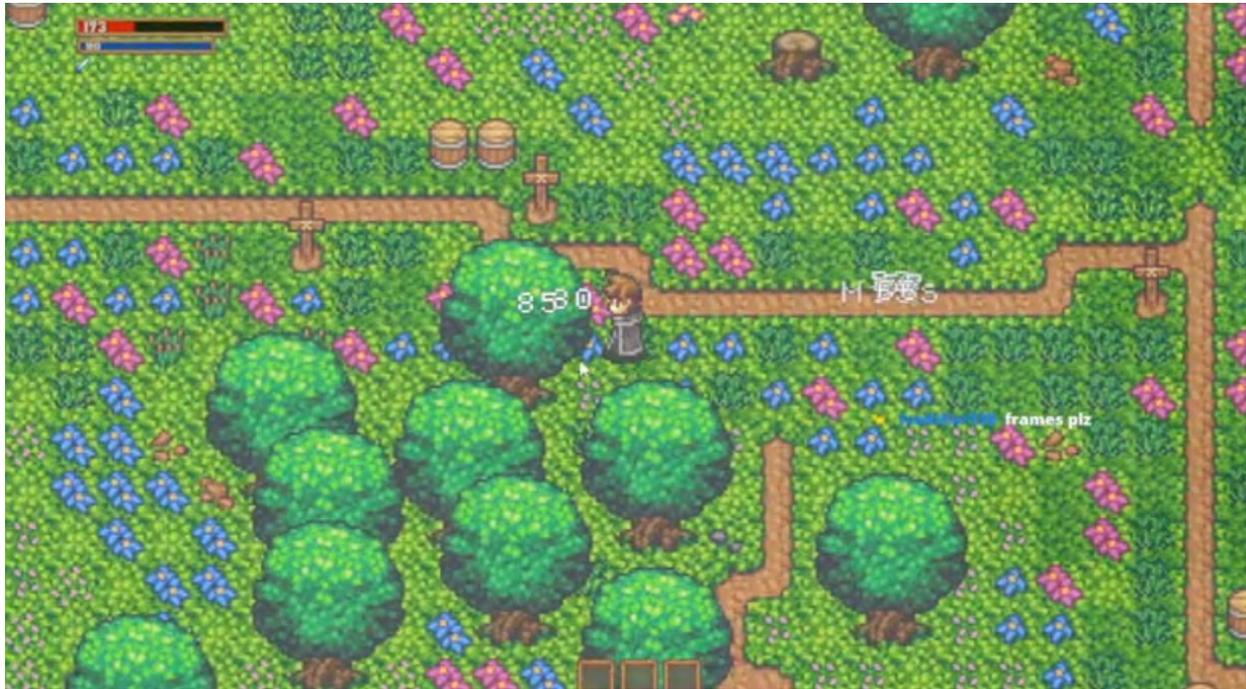

Figure 37. A player commenting "frames plz," meaning they experienced significant performance issues.

One player whose computer could not process the game well enough led to significant frame drops and performance issues, leading to the comment "frames plz". More than one player has expressed playing only for a short period of time specifically because of significant hardware issues due to the limitations of their computer. From my perspective as the game's developer side, this suggests that even if I wanted to express a specific idea or set in motion a specific set of social relations, those are also made somewhat in anticipation of a presumed subject; I *assumed* that my computer was a reflection of a baseline device upon which the game can be played, but

failed to realise that even then, the material conditions (hardware requirements) can be even broader.

Fourth is that not all players will engage with the game's procedural rhetoric. While that might seem like an intuitive claim, it is a very different experience when building a game specifically around hoping players engage with the game in a specific way. In situations where they didn't notice the game's mechanics or how I attempted to present them as arguments, one of the challenges was figuring out how to get players on track. Everyone who has played it has done it in very similar ways: they speak to the others, find as much material as they can in the initial levels, and then the moment they see a sword, they start killing enemies. This is a realisation that seems more important in the creation (and playtesting) process than the game analysis section. In the previous chapters, the presumption on how someone plays a game is less discussed, but development very much stresses how assumptions of play begins before players even get into the game. There, I spoke very little of - and at moments didn't notice - my role as a player of these games, and how I came in with particular patterns and playstyles which could affect my ability to break down the procedural arguments I see in those games.

Figure 38. One of the players responding to another player in the Twitch chat, mentioning that they didn't speak to any characters until their fifth time booting up the game.

While game studies discusses types of players and conventions associated with players (Bernard Suits *The Grasshopper* comes to mind), developing a game and seeing how players engage with the game from a developer's perspective also suggests that conventions exist on an aesthetic level; the players who know of the Maker-style aesthetic more readily engaged with the world in a way commensurate with those styles of game. The nonmechanical imagery of *Portal Story*, reminiscent of older *Chrono Trigger* and overall *RPGMaker* games, signalled to some of the players of specific control schemes, that certain endings were possible, and what sorts of interfaces to expect.

Sometimes these conventions worked in favour of expressing the game's procedural rhetoric; one player, hoping to find more information from an NPC, started dialogue only to find out that NPC enacted a completely different dialogue branch (since the NPC had rolled a completely different branch). The player, surprised, believed they had done something

238

completely different to warrant triggering a different set of dialogues, and briefly backtracked to find out what had happened. In this case, the conventional assumption of RPG dialogue trees with consistent dialogue tree flows was undermined by the rolling system. Here, the player assumed that because they failed in the first playthrough, they would fix it in the second playthrough, but realised that the second playthrough was not giving them the same information.

Ideology and the Creator's Perspective

Creating a digital game to examine the apocalypse as it pertains to ideology was, ultimately, a lesson in skepticism on purely structural analysis of play. While the previous chapters aimed at focusing more on how these digital games (as complex systems in the vein of Althusserian structural causality) tackled visions of the end of the world, the production of a game along those lines reaffirmed the cultural aspects required to make even those interrogations intelligible. Though some of the players realised that there was a mechanic affecting the way in which the dialogue occurred, nobody knew (or bothered to find out) how that worked or why it affected their experience with the world. To most players, *Portal Story* was a straightforwardly bland action-RPG whose mechanical underpinnings never came up; even when most players realised the dialogue and behaviours were changing, none of it interested them enough to pursue further as to why that was the case.

In a way, attempting to map out ideology on these structural grounds led to a brush-up against another form, a sort of ideology of play in which players came in with very specific presumptions on how to interpret and engage with meaning-making in the game. More than one player read the dialogue available religiously, hoping to find clues on how to pursue and navigate the world, though did not register the dialogue as randomized branches of a system presenting a

specific *image* of an otherworldly experience. Another kept fiddling with the sound options, believing the long bouts of silence to be a technical issue. A third player was stuck on a puzzle that seemed to go nowhere and gave up. I even warned them that this was a game specifically for the purpose of analyzing a certain topic and a certain structure. Every player knew this game has something beneath the hood, so to speak. Yet that did not stop them from coming in with specific assumptions on what this game, in this way, through these controls, was meant to be played. Not a single player sat down and passively engaged with the game as something they would digest. They saw it as a machine that tugged and pulled and, in the process of playing, revealed their own assumptions of how this game *should* be, which seemed in a few ways like acts of resistance.

Chapter 14: Conclusions and Final Considerations

This research aimed to add to discussions of digital games in a way that expands on ongoing discussions on procedural arguments, not to reject or undermine pre-existing ones, but to build upon them. More specifically, it aimed to examine the intersection concepts of boundaries and how they play out in digital spaces through the highly abstract concept of apocalypse and how it can be reflected in digital games. Attached to that definition of apocalypse is also the implication of ideology, specifically in the sense that ideological subjects in moments of apocalyptic vision also partly speak on the conditions of their subjecthood. At the same time, deploying ideology also brings a lengthy discussion of it. This project focused on Althusser's definitions and concepts, not only because Althusser's outline presented a flexible and expansive definition of ideology but Althusser's definition was deeply concerned with reproductive relations of ideological subjectification. In that sense, this thesis was a springboard for broader discussions through a structuralist lens.

This structuralist lens on ideology, separable from both Marxist and political (in a colloquial sense) definitions of ideology, helps shed light on how relations of production and play as it relates to the ontological object of the digital game. If the digital game is a helpful device for understanding subjects and ideology, and its subject matter of apocalypse is a valuable way for engaging with such situations, then how digital games engage with apocalypse in various ways and various challenges demonstrate various insights on the extent and boundaries of ideology. The engagement with metaphorical and analogical forms of ideology has become even more critical in the face of the COVID-19 pandemic, where economic, social, political, and personal forces have attempted to move past it – in the wake of a real-life apocalyptic event with real stakes, the totalizing efforts to reconvene pre-apocalyptic relations of production have

241

stressed the importance of fiction: fiction is one of the few moments where we truly entertain a way out of ideology.

There is still much work to be done, in the sense that despite this research focusing on broader discussions of culture – cultures of games, cultures of players of these games, cultures of development – this research has been hesitant to stick to an analysis of a singular culture. Part of this hesitation is partly because of the increasing importance of flow, or the necessity of intercultural movement between texts and localities. Such discussions of what it means to be apocalyptic, to be ideological, and to play in a digital space can not only differ by culture, but is always in difference, always moving.

Likewise, as research material on the apocalypse, there is relatively little material which covers the very real apocalypse in which this thesis was written and re-written: the COVID-19 pandemic. In some instances, it can seem like a missed opportunity not to discuss the shadow of COVID on the development of digital games, the distribution of digital games, how digital games are played, and the reflection of worldviews and ideologies in the face of the pandemic. These concerns shape the research of this work, the distanced approach is arguably more valuable at this stage, to give a blueprint on a discussion of perceived limits and thresholds of human belief on their own subjectivity. There is a practical limitation to the avoidance of COVID: the pandemic is, to many, still ongoing. However, there is also a theoretical value to it as well: visions of apocalypse, even as COVID continues to slip from collective human memory, will remain. The emphasis on specific, reactive visions of the apocalypse can risk compartmentalizing the continual drive for visions of the end, and in a discussion about the persistent shadow of ideology, an emphasis on climate change or COVID – while they are necessary subjects to address – risks turning the research emphasis into something more

generalized. It is thus more importance than ever, in realising how quickly ideology heals the wounds of its contradictions, that a discussion of the apocalypse – not just *this* apocalypse or *that* apocalypse, but of the end times in general – is more essential than ever before.

Likewise, beyond the discussion of apocalypse, there is also the discussion of ideology and digital games alike. To many Marxist theorists, the emphasis on Althusser may be a puzzling examination, even of ideology, as critiques have been levied against him by scholars like Poulantzas, Callinicos, and even Jameson (who I regularly refer to). However, the inclusion of Althusser is not meant to be a revitalization of a strictly orthodox definition of Althusserian ideology, but rather to stress that ideology – as Althusser and Balibar have conceived of it in relation – finds a striking bedfellow in more contemporary discussions of systems and wires and layers of electrical obfuscation. It is because of these concerns I use these ideas as primarily a springboard, expanding on pre-existing discussions of ideology in digital games through the subject of apocalypse, ideology's own seeming demise.

This discussion, however, is not far from finished, as future examinations would need to dig deeper into the real effects of the apocalypse on games and their digitality. New lanes of infrastructure (such as netcode), new configurations of information databases (such as a platformatized internet), and new relations of labour (such as AI and its implication on production) are questions that cannot be ignored. In fact, in the shadow of this dissertation looms the new apocalypse of artificial intelligence, where battles of creative rights, personhood, and labour are waged both discursively and legally. For this reason, the future of this project would need to more seriously consider the works of scholars such as Bruno Latour and Gilbert Simondon, whose works relative to actor-network theory and technical objects would expand on the research I have set out here. This departure would not be so strange: Bogost, who's concept

243

of procedural rhetoric underlines my research here, has already shifted towards more of a focus on object-oriented ontology in more recent works (such as *Alien Phenomenology*). In a sense, one can say that even if I attempt a respectful distance from the ongoing apocalypses happening around us, there is an inevitability to it all and that the apocalypse will in due time come for me.

Bibliography

Althusser, Louis and Balibar, Etienne. *Reading Capital*. Francois Maspero, 1968.

Althusser, Louis. *On Ideology*. Verso, 2020.

"Analysis: The Consequences of Reducing the Skill Gap." YouTube. May 28 2017.

    https://www.youtube.com/watch?v=iSgA_nK_w3A.

Azuma, Hiroki. *Otaku: Japan's Database Animals*. trans. Abel, Johnathan and Kono, Shion.

    University of Minnesota Press, 2009.

Bailes, Johnathan. *Ideology and the Virtual City: Videogames, Power Fantasies, and*

    Neoliberalism. Zero Books, 2019.

Berger, James. *After the End: Representations of Post-Apocalypse*. University of Minnesota

    Press, 1998.

Berman, Marshall. *All That Is Solid Melts Into Air: The Experience of Modernity*. Penguin

    Publishing Group, 1988.

Berry, Chris, Harbord, Janet, and Moore, Rachel, eds. *Public Space, Media Space*. Springer

    Nature, 2013.

"Blizzard's Response." Wayback Machine.

    http://web.archive.org/web/20080921202537/http://www.warpcore.org/~sirian/diablo2/pr
    otest-2a.html.

Bogost, Ian. *Persuasive Games*: *The Expressive Power of Videogames*. MIT Press, 2007.

Bogost, Ian. *Unit Operations: An Approach to Videogame Criticism*. MIT Press, 2008.

"Casey Hudson Interview - How Mass Effect Began." YouTube. November 17 2011.

    https://www.youtube.com/watch?v=Zi0EvhiDPUQ.

Chang, Alenda. *Playing Nature: Ecology in Videogames*. University of Minnesota Press, 2019.

Chun, Jayson Makoto. *A Nation of a Hundred Million Idiots*. Routledge, 2009.

Chun, Wendy. *Programmed Visions.* MIT Press, 2013.

Cohn, Norman, *The Pursuit of the Millennium: Revolutionary Millennarians and Mystical Anarchists of the Middle Ages.* Pimlico, 1993.

Condis, Megan. "Sorry, Wrong Apocalypse: *Horizon Zero Dawn*, *Heaven's Vault*, and the Ecocritical Videogame." *Game Studies* 20, no. 3 (2020). https://gamestudies.org/2003/articles/condis.

Consalvo, Mia and Staines, Dan. "Read Ren'Py: Game Engine Affordances and Design Possibilities." *Games and Culture* 16, no. 6 (2020). https://doi.org/10.1177/1555412020973823.

Debord, Guy. *The Society of the Spectacle*. PM Press, 2021.

Derrida, Jacques. *Archive Fever: A Freudian Impression*. University of Chicago Press, 1997.

Deterding, Sebastian, Zagal, José, eds. *Role-Playing Game Studies*. Routledge, 2018.

"Doki Doki Literature Club Plus! (Full Game, No Commentary)." YouTube. July 7 2021. https://youtu.be/ubM_KcgFAJA?t=25942.

Dowling, William. *Jameson, Althusser, Marx.* Routledge, 2016.

Drew Karpyshyn, Mass Effect and Optimism in Space: Chasing Atlantis." YouTube. November 10 2018. https://www.youtube.com/watch?v=V0yEoPHFqgM.

Dyer-Witheford, Nick and de Peuter, Grieg. *Games of Empire: Global Capitalism and Video Games* . University of Minnesota Press, 2009.

Ebberts, Dan. "Realistic Bounce and Overshoot." MotionScript. 2012. https://motionscript.com/articles/bounce-and-overshoot.html.

Edwards, Matt. "Persona 4 Arena Preview: Back to School." Eurogamer. July 16 2012.

    https://www.eurogamer.net/persona-4-arena-preview-back-to-school.

"Endurance Run: Persona 4 - Part 09." YouTube. October 26 2011.

    https://youtu.be/c2JueRMuG6s?list=PLXlhzeWIuTHJT8A2En1e8Jbb9NpI0qcXJ.

Enpicie, "Learning to Learn in Fighting Games." Medium. December 21 2022.

    https://medium.com/@enpicie/learning-to-learn-in-fighting-games-c37c75f3bbd1.

"Ever Cheat At Monopoly? So Did Its Creator: He Stole The Idea From A Woman." NPR. March

    3 2015. https://www.npr.org/transcripts/382662772/.

Ferguson, Frances. "The Nuclear Sublime." *Diacritics* 14, no. 2 (1984): 4-10.

    https://doi.org/10.2307/464754.

Fisher, Mark. *Capitalist Realism: Is There No Alternative?* Zero Books, 2009.

Flanagan, Mary and Nissenbaum, Helen. *Values at Play in Digital Games.* MIT Press, 2014.

Foley, Barbara. *Marxist Literary Criticism Today*. London: Pluto Press, 2022.

Ford, Dom. "The Haunting Ancient Societies in the Mass Effect trilogy and *The Legend of*

    Zelda: Breath of the Wild." *Game Studies* 21, no. 4 (2021).

    https://gamestudies.org/2104/articles/dom_ford.

Franklin, Chris. "Errant Signal – The Last of Us (Spoilers)." YouTube. July 22 2013.

    https://www.youtube.com/watch?v=bAzqDgKYfiM.

Frederic Jameson, *The Political Unconscious* (Cornell University Press, 1982), 79.

Freedman, Alisa, ed. *Introducing Japanese Popular Culture*. Routledge, 2017.

Galbraith, Patrick. "Bishōjo Games: 'Techno-Intimacy' and the Virtually Human in Japan."

    Game Studies 11, no. 2. https://gamestudies.org/1102/articles/galbraith.

Galloway, Alexander. *Protocol: How Control Exists after Decentralization*. MIT Press, 2004.

Garite, Matt. "*The Ideology of Interactivity* (Or, Videogames and the Taylorization of Leisure)."

    LEVEL UP Digital Games Conference Proceedings. DIGRA, 2003.

Genette, Gerard. *Paratexts: Thresholds of Interpretations.* Cambridge University Press, 2010.

Gibson, Ellie. "Tokyo Jungle Review." Eurogamer. September 25 2012.

    https://www.eurogamer.net/tokyo-jungle-review.

Gordon, Justin. "Lab Coat Android 21 announced to be banned from CEO 2022's Dragon Ball

    FighterZ event." EventHubs. June 1 2022.

    https://www.eventhubs.com/news/2022/jun/01/lab-coat-banned-ceo-dbfz/.

Green, Amy. "The Reconstruction of Morality and Evolution of Naturalism in *The Last of Us*."

    Games and Culture 11, no. 7-8 (2015): 745-763.

    https://doi.org/10.1177/1555412015579489.

Greene, Doug Enaa. "Benjamin, Blanqui, and the Apocalypse," Red Wedge. September 13 2016.

    https://www.redwedgemagazine.com/online-issue/benjamin-blanqui-and-the-

    apocalypse0.

Greg Costikyan, *Uncertainty in Games*, MIT Press (2013), 37.

"Grounded: The Making of The Last of Us." YouTube. March 1 2014.

    https://www.youtube.com/watch?v=yH5MgEbBOps.

Haraway, Donna. *Staying with the Trouble: Making Kin in the Chthulucene*. Duke University

    Press, 2016.

Harding, Chris. "Far Cry 4's Alternate Ending is Actually the "True" Ending According to

    Narrative Director." The Games Cabin. https://www.thegamescabin.com/far-cry-4s-

    alternate-ending-is-actually-the-true-ending-according-to-the-games-narrative-director/.

Harilal, Shailini. "Playing in the Continuum: Moral Relativism in The Last of Us." *Praxes of popular culture* 1, no. 9 (2018).

Harper, Todd. *The Culture of Digital Fighting Games: Performance and Practice*. Routledge, 2013.

Hirata, Keiko and Werschauer, Mark. *Japan: The Paradox of Harmony.* Yale University Press, 2014.

Hocking, Clint. "Dynamics: The State of Art." YouTube. January 7 2021. https://www.youtube.com/watch?v=St2fE049ULI.

"How One Gameplay Decision Changed Diablo Forever | War Stories | Ars Technica." YouTube. August 19 2020. https://www.youtube.com/watch?v=huPF3Gid7DE.

"How One of The PlayStation 2's Best RPGs Turned Into a Dancing Game." The Verge. September 29 2015. https://www.theverge.com/2015/9/29/9408679/persona-4-dancing-all-night-playstation-vita-interview.

Howard, Christopher. "Ethics of Sekai-kei: Reading Hiroki Azuma with Slavoj Žižek." *Science Fiction Film and Television* 7, no. 3 (2014): 365-386.

Hughes, Scott. "Get Real: Narrative and Gameplay in The Last of Us." *Journal of Comparative Research in Anthropology and Sociology* 6, no. 1 (2016): 149-154.

Imbieworicz, Eleonora. "Perma-dying Worlds and the Limit of Eternal Return in Digital Games." *Homo Ludens* 1, no. 12 (2019), 77-91.

"[Interview] Doki Doki Literature Club creator Dan Salvato on new Plus version, journey to Switch, more." Nintendo Everything. July 10 2021. https://nintendoeverything.com/interview-doki-doki-literature-club-creator-dan-salvato-on-new-plus-version-journey-to-switch-more/.

Isbister, Katherine. *How Games Move Us: Emotion by Design.* MIT Press, 2016.

Jameson, Frederic. *Ideologies of Theory.* Verso, 2009.

Janik, Justyna. "Ghosts of the Present Past: Spectrality in the Video Game Object." *Journal of the Philosophy of Games* 2, no. 1 (2019). https://journals.uio.no/JPG/article/view/2943.

Juba, Joe. "Mass Effect 3 Extended Cut: The Good, Bad, and Ugly." GameInformer. http://www.gameinformer.com/b/features/archive/2012/06/26/mass-effect-3-extendedcut-the-good-bad-and-ugly.aspx.

Juul, Jesper. "A brief note on games and narratives." *Game Studies* 1, no.1 (2001). https://www.gamestudies.org/0101/juul-gts/.

Juul, Jesper. *A Casual Revolution: Reinventing Games and Their Players.* MIT Press, 2009.

Juul, Jesper. *Half-Real: Video Games between Real Rules and Fictional Worlds.* MIT Press, 2011.

Kennedy, Emmett. "'Ideology' from Destutt de Tracy to Marx." *Journal of the History of Ideas* 40, no. 3 (1979): 353-368. https://doi.org/10.2307/2709242.

Kermode, Frank. *Sense of an Ending.* Oxford University Press, 2000.

Ketcham, Christopher. "Monopoly Is Theft." Harper's Magazine. October 19 2012. https://harpers.org/2012/10/monopoly-is-theft/.

Lamarre, Thomas. *The Anime Ecology: A Genealogy of Television, Animation, and Game Media*, University of Minnesota Press (2018), loc. 3728.

Lee, Gerald. "Shaq Fu: Analysis." YouTube. July 14 2016. https://www.youtube.com/watch?v=L-6GM6UVZSQ.

"Let's Play Tokyo Jungle Co-op (Survival Mode) Part 12 – A Costly Mistake (Beagle and

    Retriever)." YouTube. August 6 2014.

    https://www.youtube.com/watch?v=nGvEUAzq41I.

Lowenthaupt-Tsing, Anna. *The Mushroom at the End of the World: On Possibility of Life in*

    Capitalist Ruins. Princeton University Press, 2021.

Lucat, Bertrand. "Playing with Patriarchy: Fatherhood in Bioshock: Infinite, The Last of Us, and

    The Witcher 3: Wild Hunt." *DiGRA* (2017): 1-18.

    https://dl.digra.org/index.php/dl/article/view/933/933.

Lukacs, Gyorgy. *History and Class Consciousness*. MIT Press, 1972.

Maejima, Satoshi. セカイ系とは何か. SB Creative (2010).

"Majin Obama." YouTube. https://www.youtube.com/@doogies.

Marx, Karl and Friedrich Engels. *The German Ideology*. Prometheus, 1998.

"Mass Effect 3 – The Indoctrination Theory Clevernoob Documentary Reupload." YouTube.

    May 21 2015. https://www.youtube.com/watch?v=BSE0osxQvA8.

"MEHEM The Mass Effect 3 Happy Ending Mod." Nexusmods. February 24 2015.

    https://www.nexusmods.com/masseffect3/mods/66/.

Modern Vintage Gamer. "How Diablo was completely Reverse Engineered without Source

    Code." YouTube. July 1 2019. https://www.youtube.com/watch?v=5tADL_fmsHQ.

Narcisse, Evan. "Here's Why Mass Effect Villains Were So Excellent." Kotaku. April 11 2013.

    https://kotaku.com/heres-why-mass-effects-villains-were-so-excellent-472348799.

"Nexus is Down." Reddit. September 14 2022.

    https://www.reddit.com/r/skyrimmods/comments/xe5spb/nexus_is_down/.

"「P4U2」5 Major Mistakes Persona Players Make." YouTube. April 2 2015.

https://www.youtube.com/watch?v=t4-BIYrijxE.

"P4U はペルソナ 4 の正統な後継作です——「ペルソナ 4 ジ・アルティメット イン マヨ

ナカアリーナ」について，ディレクターの和田和久氏にインタビュー." 4Gamer.

March 10 2012. https://www.4gamer.net/games/139/G013961/20120310002/.

Paik, Peter. *From Utopia to Apocalypse: Science Fiction and the Politics of Catastrophe.*

University of Minnesota Press, 2010.

Pérez-Latorre, Óliver. "Post-apocalyptic Games, Heroism and the Great Recession." *Game*

Studies 19, no. 3 (2019). https://gamestudies.org/1903/articles/perezlatorre.

"Persona 4 Arena Sales Surpassed Expectations, "Golden" Sales Also Strong." Siliconera.

October 19 2012. https://www.siliconera.com/persona-4-arena-sales-surpassed-

expectations-golden-sales-also-strong/.

"Persona 4 Golden - ALL Wake-Up Hit Animations [PC]." YouTube. June 23 2020.

https://www.youtube.com/watch?v=qEdHGrRyORU&t=15s.

"Persona 4: The Ultimate in Mayonaka Arena PV1 (1080p)." YouTube. September 10 2011.

https://www.youtube.com/watch?v=HRkaccsWURg.

Pierce, RJ. "[SPOILERS] 'Mass Effect 3:' How To Get the Best Ending | Tech Times." Tech

Times. June 6 2021. https://www.techtimes.com/articles/261144/20210606/spoilers-mass-

effect-3-best-ending.htm.

Pitteti, Connor. "Uses of the End of the World." *Science Fiction Studies* 44, no. 3 (2017): 437-

454. https://doi.org/10.5621/sciefictstud.44.3.0437.

Pitts, Russ. "Escort Missions Suck." The Escapist Magazine. November 21 2007.

> https://www.escapistmagazine.com/escort-missions-suck/.

"Player Expression and Punching Bodies." YouTube. July 29 2021.

> https://www.youtube.com/watch?v=kF46_c27ToQ.

Pöhlmann, Sascha, ed. *Playing the Field: Video Games and American Studies*, Sascha Pohlmann.

> De Gruyter Oldenbourg, 2019.

Quinby, Lee. *Anti-Apocalypse: Exercises in Genealogical Criticism.* University of Minnesota

> Press, 1994.

Reinhard, Andrew. *Archaeogaming: An Introduction to Archaeology in and of Video Games.*

> Berghahn Books, 2018.

Rogers, Ryan, ed. *Understanding Esports: An Introduction to a Global Phenomenon.* Lexington

> Books, 2019.

Rogers, Tim. "Action Button Reviews The Last of Us." YouTube. June 20 2020.

> https://www.youtube.com/watch?v=MGSTEKapIAg.

Roser-Renouf, Connie, Maibach, Edward, Leiserowitz, Anthony, and Rosenthal, Seth. "Global

> Warming, God and the 'End Times'." Yale Program on Climate Change Communication.

> July 26 2016. https://climatecommunication.yale.edu/publications/global-warming-god-

> end-times/.

Schell, Jesse. *The Art of Game Design: A Book of Lenses*. A K Peters/CRC Press, 2017.

Schmalzer, M. D. "Janky Control and Embodied Play: Disrupting the Cybernetic Gameplay

> Circuit." *Game Studies* 20, no. 3 (2020). https://gamestudies.org/2003/articles/schmalzer.

Sharp, John. *Works of Game: On the Aesthetics of Game and Art*. MIT Press, 2015.

Shepard, Kenneth. "After Years of Silence, Mass Effect 3 Devs Talk About What it Took to 'Fix'

    Its Ending." Fanbyte. October 22 2021. https://www.fanbyte.com/legacy/after-years-of-

    silence-mass-effect-3-devs-talk-about-what-it-took-to-fix-its-ending.

Sicart, Miguel. "Against Procedurality." *Game Studies* 11, no. 3 (2011).

    https://gamestudies.org/1103/articles/sicart_ap.

Sicart, Miguel. *The Ethics of Computer Games.* MIT Press, 2009.

Skolnik, Michael Ryan. "Tusslers, Beatdowns, Brothers: A Sociohistorical Overview of Video

    Game Arcades and the *Street Fighter* Community." *Games and Culture 14*, no. 7-8

    (2019). https://doi.org/10.1177/1555412017727687.

Skrimshire, Stefan. "Climate Change and apocalyptic faith." WIREs Climate Change 5, no. 2

    (2013): 233-246. https://doi.org/10.1002/wcc.264.

Sloterdijk, Peter. *Critique of Cynical Reason*. University of Minnesota Press, 1988.

Soejima, Shigenori, trans. Kirie Hayashi. *Persona 4 Arena Official Design Works.* Udon

    Entertainment Corp, 2013.

Steinberg, Marc. "World and Variation: The Reproduction and Consumption of Narrative."

    Mechademia Second Arc 5, no. 1 (2010): 99-116.

Stewart, Kathleen. *Ordinary Affects*. Duke University Press, 2007.

Stone Fish, Isaac. "The End of Days is Coming – Just Not to China." Foreign Policy. July 29

    2016. https://foreignpolicy.com/2016/07/29/the-end-of-days-is-coming-just-not-to-china-

    apocalyptic-fiction-movies/.

"Subarashiki Hibi (Wonderful Everyday) Choice Flowchart." Reddit. September 22 2017.

    https://www.reddit.com/r/visualnovels/comments/71pc08/subarashiki_hibi_wonderful_ev

    eryday_choice/.

Swinburne, Tomas. "The Apocalypse Pysche: A Look at Chinese Eschatology." The Diplomat.

    November 10 2015. https://thediplomat.com/2015/11/the-apocalypse-psyche-a-look-at-

    chinese-eschatology/.

Tanaka, Motoko. *Apocalypse in Contemporary Japanese Science Fiction*. Palgrave Macmillan,

    2014.

Taylor, Ivy. "The Last of Us director on Ludonarrative Dissonance." GamesIndustry.biz. January

    7 2020. https://www.gamesindustry.biz/the-last-of-us-director-bruce-straley-on-

    ludonarrative-dissonance.

Taylor, T.L., *Raising the Stakes: E-Sports and the Professionalization of Computer Gaming*, MIT

    Press, 2012.

Terry Eagleton. *Ideology: An Introduction*. Routledge, 2016.

"The Beginner's Guide to Persona 4 Ultimax." YouTube. April 1 2022.

    https://www.youtube.com/watch?v=8UChzPtdsKc.

"The Inside Story of Mass Effect 3's Endings, Finally Told." YouTube. October 21 2021.

    https://www.youtube.com/watch?v=nhtgjmkcht8.

"The Last of Us (PS4) – Full Game – No Commentary." YouTube. August 4 2016.

    https://youtu.be/aLg98S4sxsE?t=4296.

TheoryFighter." YouTube. https://www.youtube.com/@TheoryFighter.

"Things of Beauty: Super Smash Bros. as a Spectator Sport." YouTube. August 29 2015.

    https://www.youtube.com/watch?v=8qxVDOc-oV8.

Toh, Weimin. "The Economics of Decision-Making in Video Games." *Game Studies* 21, no. 3

    (2021). https://gamestudies.org/2103/articles/toh

"Tokyo Jungle and Japan's Gaming Potential." GDC Vault.

      https://www.gdcvault.com/play/1018095/Tokyo-Jungle-and-Japan-s.

"Tokyo Jungle Story Mode: Act 14 - Tokyo Jungle (Final) (Both Endings)." YouTube. April 13

      2013. https://www.youtube.com/watch?v=-2MDlEcZBNQ.

"Tokyo Jungle Walkthrough: Act 10 - A Fateful Meeting." YouTube. December 9 2012.

      https://www.youtube.com/watch?v=zHw1TncW5Zw.

"Tosa." Tokyo Jungle Wiki. https://tokyojungle.fandom.com/wiki/Tosa?file=1nNjt.jpg.

Tsunehiro, Ueno. "Imagination after the Earthquake: Japan's *Otaku* Culture in the 2010s." *Verge:*

      Studies in Global Asia 1, no. 1 (2015): 114-136.

      https://doi.org/10.5749/vergstudglobasia.1.1.0114

"UNDERSTAND THIS About Persona 4 Arena Ultimax Status Effects!" YouTube. March 24

      2022. https://www.youtube.com/watch?v=CUqwZ36d7A0.

Vasso, Gabrielle. "An environmental critique of America post-apocalypse narratives:

      ecocriticism and ethics." MA Diss., San Francisco State University, 2018.

"Virtue's Last Reward Creator Talks About The Essence Of Visual Novels At GDC Panel."

      Siiconera. April 2 2013. https://www.siliconera.com/virtues-last-reward-creator-talks-

      about-the-essence-of-visual-novels-at-gdc-panel/.

Voorhes, Gerald A., Call, Joshua, and Whitlock, Katie. *Dungeons, Dragons, and Digital*

      Denizens: The Digital Role Playing Game. Continuum (2012), 66-87.

Wallace, Chris. ""Insisting that DDLC must be experienced in one specific way would be a very

      elitist and pretentious mindset for us to have." – Behind the scenes of Doki Doki

      Literature Club Plus!" MCV Develop. July 29 2021. https://mcvuk.com/business-

      news/insisting-that-ddlc-must-be-experienced-in-one-specific-way-would-be-a-very-

elitist-and-pretentious-mindset-for-us-to-have-behind-the-scenes-of-doki-doki-literature-

club-plus/.

Webley, Stephen J. and Zackariasson, Peter, eds. *The Playful Undead and Video Games*.

Routledge, 2019.

Winkie, Luke. "10 years later, the Mass Effect 3 ending controversy still haunts gaming culture."

PC Gamer. June 2 2021. https://www.pcgamer.com/10-years-later-the-mass-effect-3-

ending-controversy-still-haunts-gaming-culture/.

Williams, Raymond. *Keywords*. Oxford University Press, 1985.

Wong, Alistair. "Doki Doki Literature Club! Developers Talk About The Horror Of Losing

Control." Siliconera. November 17 2017. https://www.siliconera.com/doki-doki-

literature-club-developers-talk-horror-losing-control/.

Žižek, Slavoj. *The Sublime Object of Ideology*. Verso, 2009.

来春稼働予定の AC「ペルソナ 4 ジ・アルティメット イン マヨナカアリーナ」，ロケテ

ストが東京・大阪の 2 店舗で 12 月 2 日から 4 日まで実施." 4Gamer. November 24

2011. https://www.4gamer.net/games/139/G013961/20111124055/.

Ludography

Acid Wizard Studio. *Darkwood*. 2014. Acid Wizard Studio, Multi-Platform.

Arc System Works. *Dragon Ball FighterZ*. 2018. Bandai Namco, Multi-Platform.

Arc System Works. *Persona 4 Arena Ultimax*. 2013. Atlus, Multi-Platform.

Arc System Works. *Persona 4 Arena*. 2012. Atlus, Multi-Platform.

Atlus. *Persona 4*. 2008. Atlus, PlayStation 2.

Bandai Namco Studios. *Pokkén Tournament*. 2015. Bandai Namco, Wii U.

Bethesda Game Studios. *Fallout Shelter*. 2015. Bethesda Softworks, Multi-Platform.

Bethesda Game Works. *The Elder Scrolls V: Skyrim*. 2011. Bethesda Softworks, Multi-Platform.

Bioware. *Dragon Age: Origins.* 2009. Electronic Arcs, Multi-Platform.

Bioware. *Mass Effect 2*. 2010. Electronic Arts, Xbox 360.

Bioware. *Mass Effect 3*. 2012. Electronic Arts, Xbox 360.

Bioware. *Mass Effect*. 2007. Electronic Arts, Xbox 360.

Blizzard North. *Diablo*. 1997, PC.

Blizzard North. *Diablo II*. 2000, PC.

Capcom. *Resident Evil Village*. 2021. Capcom, Multi-Platform.

Capcom. *Street Fighter 6*. 2023. Capcom, Multi-Platform.

Capcom Production Studio. *Resident Evil 4*. 2005. Capcom, GameCube.

Chunsoft. *Kamaitachi no Yoru*. 1994. Spike Chunsoft, Super Famicom.

Crawford, Chris. *Balance of Power*. 1985. Mindscape, Amiga.

Dejitaro. *Kimi to Kanojo to Kanojo no Koi*. 2013. Nitroplus, PC.

Delphine Software. *Shaq Fu*. 1994. Electronic Arts, Super Nintendo.

FromSoftware. *Dark Souls*. 2011. Namco Bandai Games, PlayStation 3.

Galactic Cafe. *The Stanley Parable*. 2013. Galactic Cafe, PC.

Interplay Productions. *Wasteland*. 1988. Electronic Arts, PC.

KeroQ. *Wonderful Everyday: Diskontinuierliches Dasein*. 2010. KeroQ, PC.

Big Blue Box Studios. *Fable*. 2004. Microsoft Game Studios, Xbox.

Naughty Dog. *The Last of Us*. 2013. Sony Computer Entertainment, PlayStation 3.

Philips. *Cosmic Conflict*. 1978. Magnavox, Odyssey.

P-Studio. *Persona: Dancing All Night*. 2015. Atlus, PlayStation Vita.

P-Studio. *Persona Q: Shadow of the Labyrinth*. 2014. Atlus, Nintendo 3DS.

Rockstar North. *Grand Theft Auto V*. 2013. Rockstar Games, Multi-Platform.

Square. *Chrono Trigger*. 1995. Square, Super Nintendo.

Team Salvato. *Doki Doki Literature Club Plus!* 2021, Multi-Platform.

Team Salvato. *Doki Doki Literature Club!* 2017. Team Salvato, PC.

Ubisoft Montreal. *Far Cry 4*. 2014. Ubisoft, Multi-Platform.

Ubisoft Montreal. *Assassin's Creed*. 2007. Ubisoft, Multi-Platform.

Volition. *Saints Row IV.* 2013. Deep Silver, Multi-Platform.

Westwood Pacific. *Red Alert 2*. 2000. Electronic Arts, PC.

Westwood Studios. *Command & Conquer: Tiberian Sun*. 1999. Electronic Arts, PC.

Westwood Studios. *Command & Conquer*. 1995. Westwood Studios, PC.

Yager Development. *Spec Ops: The Line*. 2012. 2K, Playstation 3.