Cameron Kunzelman
The World Is Born From Zero

Video Games and the Humanities

Volume 8

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Understanding Speculation and Video Games

DE GRUYTER
OLDENBOURG

ISBN 978-3-11-071832-4
e-ISBN (PDF) 978-3-11-071945-1
e-ISBN (EPUB) 978-3-11-071947-5
ISSN 2700-0400

Library of Congress Control Number: 2022932716

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the internet at http://dnb.dnb.de.

Cover image: Lichenia, © Molleindustria, 2019.
Printing and binding: CPI books GmbH, Leck

www.degruyter.com

Acknowledgements

This book began when I was working on the prospectus for my dissertation while completing my PhD at Georgia State University. Looking at the works I had selected to write about, I realized that I had accidentally become a science fiction scholar, and decided to commit to that rather than to disavow it. Alison Sperling suggested that I attend the Science Fiction Research Association conference, and there I encountered a vibrant scholarly community. That encounter with science fiction studies, and the friction I felt when trying to line up how my home disciplines of game studies and film studies understood their objects of study, produced this book.

I could not have completed any of those initial investigations in graduate school without the critical support of my colleagues at Georgia State. Alessandra Raengo, my advisor for many years of graduate school, taught me how to read. I would not have accomplished much without that tool, and I am always grateful. Discussions with Jennifer Barker, Angelo Restivo, Ted Friedman, and Ethan Tussey were critical to developing how I understood media objects and what they can do. A class on feminist theory with Amira Jarmakani literally changed my life. I am deeply thankful to my fellow graduate students who helped me learn in immeasurable ways: Laurel Ahnert, Adam Cottrel, Jason Derby, Daren Fowler, Jenny Gunn, Justin Horton, Jazmine Hudson, Kristin Juarez, Dewey Musante, and Jenn Olive. A special thank you is reserved for my friend John Roberts, who is always willing to go on an absurd intellectual journey in order to figure out a hard philosophical problem. This book would also have been impossible without the support and critique of Lauren Cramer, who is a brilliant scholar and has always pushed me to think more deeply and complexly about the world that we all live in.

Since coming to Mercer University, I have had the benefit of enjoying the company of, and critical discussions with, a number of excellent colleagues. Thank you to Natalie Bourdon, Tom Bullington, Kevin Cummings, David Davis, Frank Macke, Mary Alice Morgan, Michele Prettyman, Deneen Senasi, Laura Simon, James Stanescu, and Vasile Stănescu. Ben Dunn and his work at the McEachern Art Center has been crucial to my psychic life here. My students and teaching have also been critical to the development of the ideas in this book, and I want to thank Cam Wade, Luke MacIver, and Mallory Morgan for their intellectual contributions along the way. Emily Bartlett performed some research work for this book that I am extremely grateful for. Finally, the personal and financial support provided by Dean Anita Gustafson and the College of Lib-

https://doi.org/10.1515/9783110719451-001

eral Arts and Sciences cannot be understated, and to her I extend a very special thanks.

In my professional academic communities, there are literally too many people to name who have had a direct impact on the ideas in this book. Gerry Canavan has been a constant champion. Alison Sperling is probably the entire reason I went down this road at all, and I value our friendship highly. Thank you specifically to Ben Abraham, Stina Attebery, Ian Bogost, Stephanie Boluk, Katherine Buse, Chris Carpenter, Yussef Cole, Paweł Frelik, Kishonna Gray, Michael Hansen, Darshana Jayemanne, Stephen Kearse, Reid McCarter, Patrick LeMieux, Maddy Myers, Marielle Niesler, Laine Nooney, Joshua Pearson, Danielle Riendeau, Steven Shaviro, Rebekah Sheldon, Austin Walker, and Rob Zacny.

Pieces of this book have appeared in other places in radically different forms. Some of the arguments in the first chapter about mechanics of speculation were published in "The Click of a Button: Video Games and the Mechanics of Speculation," *Science Fiction Film & Television* 11, no. 3 (2018). The germ of the third chapter appeared in *Bullet Points Monthly* under the title "Destroyed in the Cut." The final chapter on games and climate change appeared in a slightly different form as "Video Games as Interventions in the Climate Disaster," *Paradoxa* no. 31 (2019 – 2020).

My extended thanks goes out to my editor Rabea Rittgerodt and the entire production team at De Gruyter, all of whom have been excellent in shaping and preparing this book for publication. Esther MacCallum-Stewart and Sascha Pöhlmann provided truly helpful early feedback on the manuscript, and the anonymous peer reviewers were supportive when it was helpful and critical when it was necessary. I am delighted to also thank Paolo Pedercini for allowing me to use images from *Lichenia* for the book's cover.

Michael Lutz has read more things with me than probably anyone else at this point, and there are very few ideas in this book that have not been bounced off of him. It is hard to imagine this book actually being finished without those conversations.

Finally, I want to thank Kelly.

Contents

Introduction

Solid Snake's War Dystopia

In *Metal Gear Solid 4* (Konami 2008), war has changed. Private military corporations (PMCs) perform the vast majority of warfare, and they do so at the behest of governments and private interests. Behind the scenes, their operations are surveilled and controlled by an artificial intelligence system named Sons of the Patriots (SOP). Operating with and through nanomachines injected into every combatant worldwide, SOP is a universal marketplace that all armed warfare must go through. All guns are registered to specific users, and those users are the only people who can fire those guns. The bedrock of the global economy is arms sales. It is a warfare utopia, and it is one of the most popular science fiction video game settings.

Players experience this fiction through the character Solid Snake. The protagonist of *Metal Gear Solid* (Konami 1998) and a critical ally in *Metal Gear Solid 2: Sons of Liberty* (Konami 2001), Solid Snake is an archetypal science fiction protagonist. He is the clone of the greatest Cold Warrior, the patriot-turned-mercenary Big Boss. He came of age in the United States special forces unit Foxhound during the waning days of the Cold War. After retiring during the 1990s, he was pulled back into the world of clandestine ops and sneaking missions for the so-called Shadow Moses Incident.[1] During that mission, he met his clone twin Liquid Snake and he discovered a cybernetically enhanced ninja who, it turns out, was the resurrected corpse of his war buddy Grey Fox. He was augmented with nanomachines, which allowed his handlers to monitor his condition from afar, but at the same time he became an unknowing vector for a tailored virus called FOXDIE that killed nearly every major character he met with a simulated heart attack. At the end of the Incident, it was revealed that a vast conspiracy of techo-political origins existed in the heart of international politics. *Metal Gear Solid 2* then explored this from a near-future angle, with the setup including a massive faked environmental disaster, world-spanning AI control programs, and the resurrection of the now-dead Liquid Snake from an arm that has been grafted onto a man named Revolver Ocelot. *Metal Gear Solid 3: Snake Eater* (Konami 2004), rather than continuing from this point, headed back into the 1960s to depict the rise of Big Boss in the wake of his mentor, and mother, The Boss. In this game, we learned that the late twentieth century

1 The events of *Metal Gear Solid* are the Shadow Moses Incident.

https://doi.org/10.1515/9783110719451-002

(in this fictional world) is really just a shell game between a man named Major Zero and Big Boss over how to carry on the memory of The Boss.

This is an extremely elaborate set of historical events that led to the events of *Metal Gear Solid 4*, and I am recounting it all in brief here to note the spiraling way that the science fiction elements of the series constantly build on one another. Released over the course of more than a decade, these games are emblematic of a complexifying style that characterizes many science fiction video games and their worlds. This is not a book about the *Metal Gear Solid* series, but this elaboration of the history of a science fiction world allows us to begin to think through a core concept of this book: speculation. In order to ground their pasts and futures, these games skip backward and forward in time. This relation between what we know and what we assume to know, or what we speculate about, in science fiction worlds is critical to the following book.

When *Metal Gear Solid 4* begins, then, it is by-the-book science fiction. It is our world, and its post-Cold War problems, recast through a different lens and projected forward from that skewed perspective. Following Geoff King and Tanya Krzywinska, I hold that "science fiction deals with the problems and promises offered by science, technology and rationality in an imaginative context," and in relation to video games, it is the games themselves that give these problems and promises shape.[2] While our first thoughts about science fiction tend to focus in on possible futures, as Mary Ann Doane reminds us, science fiction's futural projections are often "bound up with issues of reproduction—whether in its constant emphasis upon the robot, android, automaton, and anthropomorphically-conceived computer or it insistent return to the elaboration of high-tech, sophisticated audio-visual systems."[3] The tracing of technological warfare history through the science fictional mode, from The Boss' reproductive system to cloning to gene therapy to autotelic AI systems, is one long trajectory of speculative thought that engages with the core of the genre. When Solid Snake appears on the battlefield of an unnamed Middle Eastern country (the geopolitical racism of which is also a part of the speculative economy), he appears as a figure of history who is able to show us, precisely, how war has changed. His family line, of birth and cloning and weaponized subjectivity, is the map of how war is changing. He's a character born out of the machinery of science fiction, and his world is permeated by familiar genre expectations.

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2 Geoff King and Tanya Krzywinska, *Science Fiction Cinema: From Outerspace to Cyberspace* (London: Wallflower, 2000), 2.

3 Mary Ann Doane, "Technophilia: Technology, Representation, and the Feminine," in *Liquid Metal: The Science Fiction Film Reader*, ed. Sean Redmond (New York: Columbia University Press, 2007), 188.

These broad aspects of speculative worldbuilding, and of extrapolative worry about what might happen if our technological systems grow too bold, read broadly as science fiction. These big ideas, and their impacts on players, are not the focus of this book. Instead, I want to look at the moment-to-moment ways that speculation functions in the relationship between players and their science fiction games. I want to know what the relationship between speculation and video games are on a formal and (often) microscopic level. Let me give you an example from *Metal Gear Solid 4*.

A couple hours into the game, Solid Snake has snuck his way across battlefields. He's met up with a unit of American soldiers, has performed some espionage, and he has avoided giant walking, mooing autonomous creatures that police the battleground. The player has gathered that Snake's real mission here is to assassinate his brother Liquid Snake, who is currently residing within the body of the older, venerable warrior Revolver Ocelot. During a cutscene, Snake sees Liquid from his position behind some crates. The game's camera zooms up to Liquid Snake, who turns around and faces the position of the camera. In this cutscene, which is traditionally non-interactive, a prompt to press the X button appears, as it has several times in the game so far.[4]

This prompt, this demand to deliver a certain input in order to create a condition within which something unexpected could happen, is what I term a "mechanic of speculation." It is a moment of uncertainty within which the player has to think about what might be delivered by the game on the other side of the prompt. I will provide an extensive philosophical and conceptual analysis of the mechanic of speculation in the next chapter, but for now it is sufficient to say that I think that this relationship between input and potential output is part of the fundamental condition of the video game. Like all speculations, it is tempered by previous experience—pressing the button this time gives you a sense of what will happen the next time. But in the moment of novelty, a player is asked to wildly conceptualize what they think might happen on the other end of an encounter. What is different about the video game versus the science fictional device (like a time machine or an ansible) is that we are quickly disciplined by the game itself into expecting certain outcomes from our speculations. Central to game design is the idea of predictable expectations afforded by clear systems of rules. It is my claim that the ways that video games grab our expectations and quickly rigidify them means that it is very easy for us to overlook the

4 The third chapter of this book features an extensive analysis of the cutscene and how it is and is not interactive within games.

truly speculative forms and functions that game interactions can and could afford.

In this book, I look to science fiction games to draw out the different ways that video games ask us to engage in speculation through their specific mechanical modes of interaction. On one hand, I try to read for potentially liberatory or politically useful modes of speculation that might change the stakes of both video games and their forms of science fiction. On the other hand, video game speculation is something that is controlled, wrangled, and often made banal. I spend as much energy on extrapolating these modes of capture and depoliticization, and sometimes the entrainment of speculation toward violence and oppression, in order to speak to the broad phenomenon as it exists.

To return to our example: what happens when you press the X button when Snake sees Liquid? It could be anything, after all. We could be immediately transported into an anti-war utopia. We could see mass disarmament or a world where violence is abolished. The mechanical button press could produce a cut to any image, any space, or any character representable by the video game.

Instead, predictably, it delivers screenshots of Liquid and Revolver Ocelot from previous games. It shows a memory that tames and contextualizes the present, dredging up experiences of the past to bury other possible outcomes. The past comes back to haunt us, but this is an educational example because it points to a difference between the speculation of "mechanics of speculation" and the speculation of "speculative fiction." A mechanic of speculation is a way of affording a player the capability of thinking that the next moment, the next interactive microinstant, could produce anything at all. Within this context, speculation is the exercising of the human capacity to think of the world in the way that it isn't, even in the smallest ways and for the smallest amounts of time, hearkening back to the speculative philosophy of the early modern period. Instead of the specter of speculative fiction, which might conjure up genre trappings, the mechanic of speculation is about the exercising of a specific mode of thinking the human relation with the world and how that world might be.

Science Fiction and Video Games

My understanding of science fiction video games has developed over the past several years, and it has happened in conversation with many different modes of study. Video game studies and science fiction studies are, of course, central to how I develop a theory of science fiction video games and their modes of speculation in this book. As I began to write this book, I realized that could not explain how science fiction games worked, or how they opened up avenues of ex-

trapolation and speculation, without addressing the many different modes that those games operated within. This book provides a theoretical lens into a particular type of video game, but its references and modes of argumentation are not developed solely from the scholarship in the fields of game studies and science fiction studies. Instead, I put these two obvious scholarly concerns in conversation with a large number of other allied ways of addressing the world, including film studies, black studies, visual culture studies, the myriad philosophical ways that speculation is understood across many fields, and more. I think that these different approaches to aesthetic objects are crucial for understanding what science fiction games are doing to and with their players. I do not bring them in because game studies or science fiction studies are somehow "not enough," but rather because I believe that there is very little to be gained from creating a small pocket universe cut off from the ways that allies address and think the world.

This should not be shocking to anyone who has engaged with science fiction as a genre, or video games as a medium, before. Both have been embroiled in ontological and existential debates about what they *are* since they emerged into popular consciousness as distinct and pseudo-definable things. While many game studies scholars have their own fine-grained understanding of what a game is, the closest thing to an agreed-upon definition of "game" the field of video game studies has is offered in Katie Salen Tekinbaş and Eric Zimmerman's 2004 textbook on game design, *Rules of Play*. After spending several pages discussing the various different ways that games had been defined in the past, Salen and Zimmerman offer their own definition: "A game is a system in which players engage in artificial conflict, defined by rules, that results in a quantifiable outcome."[5] When I claim that this is an agreed-upon definition, I do not mean to say that the vast majority of game studies scholars accept this definition without critique. Instead, this definition is often deployed as a kind of normative claim that proliferates exceptions, with the work of game studies being that of articulating how games-as-played explode out of definitional boxes regularly.

Similarly, defining science fiction in a wholly coherent way is a difficult enterprise, as many practitioners and scholars over the past hundred or so years have demonstrated. Much like video games, it seems that the primary use of defining science fiction is to create a condition under which an existing or potential work can be evoked to ruin that definition. Science fiction historian Adam Rob-

5 Katie Salen Tekinbaş and Eric Zimmerman, *Rules of Play* (Cambridge: The MIT Press, 2004), 80.

erts "solves" this problem by offering up a multiple approach to the genre, encompassing famous definitions by Hugo Gernsback and Darko Suvin while also attempting to bring a Heideggarian notion of "enframing" to understand the genre's relationship to the world around it.[6] Alongside this, Roberts argues that science fiction has to be understood historically, in its European emergence, as tracking alongside a move from religious to secular modes of being.[7]

It is clear reading Roberts' chapter that science fiction has a contextual element, largely being defined in its social and historical context rather than in some kind of Platonic eternal mode, and to call something "science fiction" depends heavily on a moment of reception rather than on some kind of generic truth. For this reason, in this book I largely follow Samuel R. Delany's understanding of science fiction as he writes about it in his famous essay "About 5,750 Words." For Delany, science fiction is defined by a certain level of subjunctivity, or the relationship between a work and reality.[8] When reading a science fiction story, a reader takes on a certain sense of the world and begins to learn the perceptive rules of that world one word at a time. A good science fiction story, Delany intimates, will teach you how to read it as you go along, and to sit within the science fiction mindset of a baseline realism asks the reader to construct an empirical world in their mind. As he explains, when faced with the words "winged dog," the reader of a science fiction story goes into a different process than traditional literary realism (in which there are no winged dogs) or fantasy (where wings are simply pasted to the dog's back). A science fiction story often gives details about the winged dog that situate it *realistically*, and the reader performs a mental task to visualize and consider the dog, as Delany explains: one wonders "whether the dog has forelegs or not. The visual correction must include modification of breastbone and musculature if the wings are to be functional, as well as a whole slew of other factors from hollow bones to heart rate."[9] The point here is not that other genres do not encourage us to think about internal consistency, but instead that science fiction proceeds from a point of empirical extrapolation. We are asked to consider how the dog got wings, what that looks like, how that process worked, and what the implications of that winged development are. In a different essay, Delany puts it more succinctly: "In science

6 Adam Roberts, *The History of Science Fiction* (New York: Palgrave Macmillan, 2005), 1–21.
7 Roberts, *History*, 20.
8 Samuel R. Delany, "About 5,750 Words," in *The Jewel-Hinged Jaw* (Middletown: Wesleyan University Press, 2011), 10.
9 Delany, "Words," 12

fiction, the world of the story is not a given, but rather a construct that changes story to story."[10]

As I discuss in the next chapter, science fiction takes on an empirical character of assumption and inference that aligns with video games' own logic.

For my purposes in this book, I understand both video games and science fiction not as immutable categories with hard boundaries but instead as words that are defined by their use. I am not interested in creating definitions in this book, but instead at looking at how what we call science fiction video games operate on and with their players to afford speculation about the world. In this way, I agree with Farah Mendlesohn that "science fiction is less a genre . . . than an ongoing discussion," and I would extend the same idea to video games.[11] Again, following Mendlesohn, I see the work of this book to be an examination of the ideas which structure our relationships with science fiction games, and I am specifically interested in the ways that games do the work of putting us in speculative situations and ask us to make decisions from those positions.[12]

My thinking across this book would be impossible without the scholarship of Paweł Frelik, who outlined some basic parameters for understanding science fiction video games in 2014.[13] As he explains, when science fiction as a mode and video games as a medium run into each other, they produce unique affordances around speculation and action that other science fiction, like novels or films, simply do not. Frelik outlines four intersections between science fiction and games:

1. Video games as narratives of space, a focus central to both science fiction and postmodernity
2. Video games as integral elements of distributed narratives spanning multiple media and forms
3. Video games as instances of visual science fictions invested in the pictorial portrayal of futurity
4. Video games as performative simulations, conveying a sense of malleability of the future[14]

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10 Samuel R. Delany, "Science Fiction and 'Literature'" in *Starboard Wine* (Middletown: Wesleyan University Press, 2012), 69.

11 Farah Mendlesohn, "Introduction: reading science fiction," in *The Cambridge Companion to Science Fiction*, ed. Farah Mendlesohn and Edward James (Cambridge: Cambridge University Press, 2003), 1.

12 Mendlesohn, 2.

13 I mean this in the sense of Frelik's published scholarship on games, but I also mean it in the sense of his continued discussion of the relationship between science fiction and games for many years. Any discussion of these ideas without considering his contributions is incomplete.

14 Pawel Frelik, "Video Games," in *The Oxford Handbook of Science Fiction*, ed. Farah Mendlesohn and Edward James (Cambridge: Cambridge University Press, 2003), 229.

Of these four intersections, this book is predominately concerned with the latter two. While the first two are touched on in various places here, my key focus is not on spatialization or distributed narratives. I am instead focused on how video games depict potentialities and how they provide interactive contexts for thinking oneself in radically different subjectivities, positions, and worlds.

The study of games and science fiction currently finds itself in a strange place. While some, like Frelik, have investigated how this medium and genre have augmented each other, the majority of the monograph-length work on the connections between these two topics has focused on their representations of one another. Jason Barr's *Video Gaming in Science Fiction*, for example, centers on how science fiction texts depict games within their fictional worlds.[15] Therefore, as Barr puts it, that book is mostly focused on the subject position of the "gamer" as well as "what science fiction prose can tell us about attitudes and beliefs about video gaming in the United States today."[16] Unlike Barr, my concerns are not in this same area, if only because I come from the position that science fiction's extrapolations and reconceptualizations of real-world events are not linearly related in any way. I am less sure than Barr is that the figure of the game always means that a science fiction text is *about*.

For this reason, I am more or less uninterested in representations of games within science fiction in this book, instead focusing more on how the mediatic qualities of video games provide a platform for *doing* science fiction. In this way, my arguments are similar in philosophical stance to those of Colin Milburn across his books *Mondo Nano* and *Respawn*. Both of these volumes laser in on the way that science fiction and video games cross over into each other, troubling a division between each other's seemingly distinct categorical regions such as scientific inquiry or internet culture. As Milburn argues in the introduction for *Mondo Nano*, the field of nanotechnological study is constantly playful and iterative, using game structures and the speculative capacities to push developments along. Science fictional conceits are concepted and executed; nano cars are invented and driven like toys. As he sums up, "today's game of speculative technoscience involves a different ethos [than the past]: hack, cheat modify, and hedge. Playing against the rules, loading the dice. Gaming the game."[17] Or, in other words, what unites science fiction and games is not merely an aesthetic

15 Jason Barr, *Video Gaming in Science Fiction: A Critical Study* (Jefferson: McFarland & Company, Incorporated, Publishers, 2018).

16 Barr, *Video Gaming in Science Fiction*, 29.

17 Colin Milburn, *Mondo Nano* (Durham: Duke University Press, 2015), 38.

alignment where genre meets a medium, but instead something more fundamental.

Neal Tringham's *Science Fiction Video Games* is also closer to the approach I am taking here.[18] Across his encyclopedic volume, Tringham works through the historical and conceptual connections between science fiction and games, focusing on a wide corpus of games that lean into science fictional genre trappings. However, where Tringham is purposefully attempting to speak to (and write encyclopedic entries about) as many science fiction video games as possible that were released before the book's publication date in 2015, I am taking a decidedly more theoretical approach in looking to specific instances of how games perform the speculative and extrapolative work of science fiction. One of Tringham's first statements in his book is that "if there is (or was) any inherent link between video game design and science fiction … it seems obscure. Nevertheless, there may be some connection between sf's affinity for logical extrapolation and (in the words of critic Robert Scholes) 'structured fabulation,' and the complexly simulative rule systems that underlie many recently developed types of games."[19] As I address in the next chapter, there is a profound connection between the way games ask players to interact with them and the way that science fiction texts ask their readers or viewers to conceptualize their settings and characters. I understand the way that games and science fiction structure experience, and ask their interactors to engage with their speculative assertions, to be deeply intertwined with each other. While Tringham is largely focused on surveying the terrain of science fiction games and explaining some anecdata about the relationship between the genre and the medium historically, here I am instead focusing on developing a theoretical intervention that shows the deeper set of relations between games and science fiction.

By avoiding merely science fictional representations in games to talk about something more fundamental to the form, I am aligned with Tanya Krzywinska and Esther MacCallum-Stewart's assertion that there is a paradoxical relation at the heart of the science fiction game. Video games are, they explain, "more centered on player agency and participation than any other media, yet simultaneously they are rule-based, grounded in computer-based systems of cause-and-effect, and designed in various ways to give the player a sense of progress."[20] This strange fact is perhaps the most commented-upon quality of video games. Conversations about

18 Neal Tringham, *Science Fiction Video Games* (New York: CRC Press, 2013).

19 Tringham, *Science Fiction Video Games*, 1.

20 Tanya Krzywinska and Esther MacCallum-Stewart, "Digital Games," in *Routledge Companion to Science Fiction*, ed. Adam Roberts, Andrew Butler, Mark Bould, and Sherryl Vint (New York: Routledge, 2009), 352.

games often center on discussions of how much one has progressed or whether or not they have completed certain challenges. Reviews often center on the appropriateness of these challenges and what a player might expect when starting the game. As Krzywinska and MacCallum-Stewart make clear, this structure-versus-freedom relation is part of what makes science fiction games so fascinating as objects to analyze. Games are "cybernetic systems" that are responsive to player input, and they change their shapes and forms and representations based on what the player inserts into them.[21] The authors push their claim to a delightful limit at the end of their co-authored chapter, claiming that video game "embodiment occurs at the level of both the real (in terms of what we can do in the game, the avatar as prosthesis) and the imaginary."[22] In other words, Krzywinska and MacCallum-Stewart argue that part of the strangeness of the video game science fiction form is that it is asking us to *do* and *think* things within a science fictional framework, constraining and freeing players on both a mechanical and mental level. I will radicalize this idea as much as I can within the realms of speculative philosophy in the next chapter.

The scholarship I have been in conversation with so far in this introduction has largely been based within science fiction studies. While many of these scholars are key figures in science fiction studies and game studies equally, their initial positions mostly argue from the position of what science fiction studies is confronted with when it brings games into its purview. In writing this book, I was struck by what I can only call an unequal relationship when it comes to game studies scholars looking at science fiction studies. Game studies as a field often seems to bypass genre entirely when it comes to analysis, looking beyond spaceships, aliens, or artificial intelligence only to see the wireframe mechanical operations that drive the entire operation. A critical claim that I am making in this book is that we cannot ever look beyond the aesthetic when analyzing games. More than this, the aesthetic operations of a given game often corral or transform mechanical interactions. More succinctly: the science fiction in science fiction video games matters quite a lot, and here I am attempting to both highlight existing excellent scholarship as well as provide a model for what an expansive, full-spectrum analysis of science fiction games could look like.

When it comes to understanding this relationship between game studies and science fiction, I can only (appropriately for this volume) speculate. I believe that it may have to do with some of the founding maneuvers of game studies as a dis-

21 Tanya Krzywinska and Esther MacCallum-Stewart, "Digital Games," 359.

22 Tanya Krzywinska and Esther MacCallum-Stewart, "Digital Games," 360.

cipline, which saw both games and play as structuring forces where form mattered over content. The early valorization of the definitional work of Johan Huizinga and Roger Caillois, as well as the schematic analysis of scholars like Espen Aarseth and Jesper Juul, drew focus to shared categories and structures of games rather than their content.[23] Without looking specifically to those formal debates, which are well-covered across the past decade or more of game studies literature, I instead want to avoid this initial maneuver to look to how games and science fiction work in tandem with each other. Rather than focusing on the relation of games and science fiction as a *form and content* structure, I instead follow the philosophers Gilles Deleuze and Félix Guattari by thinking through these games via their *content and expression*.[24] Without delving too deeply into these notoriously difficult thinkers, I simply want to evoke their understanding that things in the world are doubly articulated by what they are and how they interact with other things in the world. Neither of these qualities overwhelm the other, and both demonstrate capacities within the object to create composite assemblages with other entities. Rather than a kind of list of game forms, or a Cailloisian categorization, I find it much more useful to talk about the capacities that games have and how those capacities create conditions under which their interlocutors engage with them. I will return to this idea, and specifically Félix Guattari's theorization of media along these lines, in Chapter 2.

In terms of game studies work on science fiction games, then, there is a relative lack of deep engagement with the ways that video games *do* science fiction. Some of the most extensive conceptual engagements have been through the lens of dystopian studies in concert with games like *The Last of Us* (Naughty Dog 2013) and *Bioshock Infinite* (Irrational Games 2013).[25] From the perspective of game history, and the theories of games that emerge from them, there has always been a tight connection between games and science fiction. As Patrick Jagoda explains, the 1970s and 1980s were so dominated by science fiction games

23 Johan Huizinga, *Homo Ludens* (New York: Routledge, 2000); Roger Caillois, *Man, Play, and Games,* trans. Meyer Barash (Chicago: University of Illinois Press, 2001); Espen Aarseth, *Cybertext* (Baltimore: John Hopkins University Press, 1997); Jesper Juul, *Half Real* (Cambridge: The MIT Press, 2011).

24 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987), 50 – 51.

25 For example, TreaAndrea Russworm, "Dystopian Blackness: and the Limits of Racial Empathy in The Walking Dead and The Last of Us," in *Gaming Representation: Race, Gender, and Sexuality in Video Games*, ed. Jennifer Malkowski and TreaAndrea Russworm (Bloomington: Indiana University Press, 2017); Oliver Perez-Latorre and Merce' Oliva, "Video Games, Dystopia, and Neoliberalism: The Case of BioShock Infinite," *Games and Culture* 14, no. 7– 8 (2019).

that *Pac-Man* (Namco 1980) was explicitly designed away from those themes.[26] Similarly, Patrick Crogan argues in his *Gameplay Mode* that there has been a stable and developmental relationship between science fiction concepts and games since the emergence of modern simulation at the beginning of the twentieth century.[27] Again, Colin Milburn's *Mondo Nano* tracks the different ways that science fiction has set the conceptual bounds for how game developers think their world, and he argues this most famously in a chapter in which military researchers simply lifted imagery from the video game franchise *Crysis* to illustrate their designs.[28] The obvious story here is that the relationship between the imagery of science fiction, and the promise it brings, generates conditions that provoke game developers to explore these ideas. Within this is the slightly embarrassing truth that people who make games and science fiction readers are the same kind of nerd who enjoy some of the same things, with crossover pollination occurring regularly.[29]

My understanding of this pollination, and the way it establishes relationships between a medium and science fiction, is deeply informed by some of the groundbreaking work on science fiction cinema that has been published since the 1970s. In the 1990 edited volume *Alien Zone*, editor Annette Kuhn argued that scholars had to take the medium differences between science fiction writing and cinema seriously in order to understand the shape of science fiction in that period. She asked scholars to look to "the visible, the spectacle" in order to understand the way that science fiction was accomplished when paired with the ability to show the proposed fictional world instead of merely describing it.[30] Tracking across films like *Alien* (Ridley Scott 1979), *Blade Runner* (Ridley Scott 1982), *The Terminator* (James Cameron 1984), and the broad science fiction work of Steven Spielberg, Kuhn argues that a sea change in speculative thinking took place as the cinematic image developed ever-more-expansive ways of showing and narrativizing science fictional worlds. In the pieces Kuhn brought together in *Alien Zone*, there is a distinct set of ways of approaching science fiction cin-

26 Patrick Jagoda, "Digital Games and Science Fiction," in *The Cambridge Companion to American Science Fiction*, 144.

27 Patrick Crogan, *Gameplay Mode: War, Simulation, and Technoculture* (Minneapolis: University of Minnesota Press, 2011).

28 Colin Milburn, *Mondo Nano: Fun and Games in the World of Digital Matter* (Durham: Duke University Press, 2015); Colin Milburn, *Respawn: Gamers, Hackers, and Technogenic Life* (Durham: Duke University Press, 2018).

29 I make this statement because I am, in fact, this exact kind of nerd.

30 Annette Kuhn, "Introduction: Cultural Theory and Science Fiction Cinema," in *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema* (London: Verso, 1990), 6.

ema. Some of the essays are concerned with ideological fact finding, attempting to symptomatically determine what science fiction cinema says about the world; others are more concerned with how science fiction shows that world, attempting to work backward from that cinematic eye to a set of principles about what science fiction cinema does. Informed by film studies and media theory of the past ten years, I do not attempt here to hold onto any distinctions between these different parameters. From my perspective, what a science fiction game is and what it does are the same thing, and my position on that is heavily informed by the work done in *Alien Zone*.

This book is also heavily influenced by Vivian Sobchack's analysis in her *Screening Space: The American Science Fiction Film*. While some of the book takes a more general perspective toward science fiction, Sobchack's second chapter is devoted to the aesthetics of science fiction films, and in performing this aesthetic analysis she highlights the work of the science fiction image. She begins this analysis by addressing the repetition of certain "visual units" which "carry meaning and emotional nuance beyond their physical particularity in any one film."[31] What follows is an analysis of all of science fiction film, from the birth of the medium to the then-present, that does not make any formal distinctions between images, scenes, editing, production design, special effects, or acting. I do not mean that Sobchack does not write about those things, but instead that she is wholly uninterested in trying to think any of these things are separable from the others within science fiction film. All visual strategies meld into each other in the total science fiction film in the chapter, and it does not happen at the cost of analysis but instead affords a holistic look at what science fiction film does and how it does it. The major accomplishment of the genre's film versions, for Sobchack, is the fact that "the visual connection between all SF films lies in the consistent and repetitious use not of specific images, but of types of images which function in the same way from film to film to create an imaginatively realized world which is always removed from the world we know or know of."[32] Undoubtedly, this also continues to happen within science fictional video games. Space ships, robots, and laser guns are portable images that move from cinema to game, and then from game to game, as packages that denote that something is science fiction. The additional layer in the context of games, however, is that there are also clusters of science fictional mechanical experiences that migrate from game to game. Specific weapons with predictable

31 Vivian Sobchack, *Screening Space: The American Science Fiction Film* (New Brunswick: Rutgers University Press, 1997), 65.

32 Sobchack, *Screening Space*, 87.

effects, like a futuristic shotgun, move from the real world to *Gears of War* (Epic Games 2006) to *Mass Effect* (Bioware 2007), not linearly but rather in reference to player expectations of how these weapons should be mechanically represented in science fiction games of violence. Similarly, the basic modes of interaction, like the click or the button press, carry with them forms of ease or complication that are weighed down with the history of how they have been used. If Sobchack was interested in how film and science fiction melded together, and what kinds of strange clusters of aesthetics were produced within them and moved along inside of them, then I am continuing that same work within the context of science fiction games by adding an additional category of interactions alongside the aesthetic packages that signify the genre.

Thinking with Video Games

The science fiction and fantasy writer Roger Zelazny once wrote a short essay titled "Some Science Fiction Parameters: A Biased View" with the express purpose of making an argument about what science fiction is. As this introduction has made clear, I am wholly uninterested in definitional debates. However, Zelazny's elaboration contains many insights that are critical for me in the book that follows, particularly his focus on cliches in the genre.[33] On one hand, he explains, science fiction stories depend on some assumptions to jump start a story so that writers do not have to continually explain what a space ship, telepathy, or immortality drugs are. There are devices that a science fiction writer assumes that a reader might already know about or can at least be assumed to figure out. On the other hand, these devices are still effective even if they are well-known. As Zelazny puts it, "the artificiality does not really detract and the illusion does work because of the compensatory effect of a higher level of curiosity aroused as to the nature of the beast."[34] In other words, while science fiction comes pre-packaged with concepts that have their own explanations and usages, that does not mean that they do not provide novel moments for readers. Space ships can be put into a thousand different formations that encourage the reader to think and engage with stories in new and exciting ways. While Zelazny's essay is frustratingly vague, and meanders in the way that only an enthusiast-press essay can get away with, he ends with a pseudo-declaration about the relationship between structure and possibility, claiming that "furnishing explanations as

33 Roger Zelazny, *Unicorn Variations* (New York: Timescape Books, 1983), 211.
34 Zelazny, *Unicorn Variations*, 211.

painlessly as possible [with genre cliches]" could be "the mechanism by which the imagination is roused to climb those extra steps to the point where the unusual becomes plausible."[35] The purpose of Zelazny's essay is to explain the relationship between the space program and science fiction, and it is easy to see that connection in this quotation, but radicalizing Zelazny produces something fascinating. What does it mean when our wildest speculative potential becomes absolutely banal? Can speculation be "rescued" from something that appears to be non-speculative, non-special, and uninteresting?

A critical term I have developed for thinking through the relationship between speculation and games is "mechanics of speculation." As I will explain at length in the next chapter, my claim is that video games broadly, and science fiction games specifically, are regularly putting us in a position to think about the outcomes of our in-game actions. This prompting evokes a speculation on our part, even if that speculation is "under the radar" and so programmatically followed by players that it is not experienced as a notable moment of the exercise of speculative capacities. My goal with the explorations that happen in the following chapters is to trace how moments of slight interaction, which are so routine as to be invisible within the operations of the game, have robust effects on how our subjectivities form, how we interface with racial logics, and how we frame potential futures for humanity and the planet we share. Like Delany, quoted earlier in this chapter, I am interested in how speculation happens bit by bit, word by word, image by image, interaction by interaction. Broadly, this book tracks what forms of speculation are occurring at the level of routine connection between player and game.

In Chapter 1, titled "A Method for Thinking Speculation, Science Fiction, and Video Games," I provide the theorization that supports some of the argumentation I have already introduced and provides the substrate for the rest of this book. I develop "mechanics of speculation" as a way of understanding the relationship between games, speculation, and science fiction. The chapter is a demonstration of a method, and it is a philosophical argument for how the analysis of speculation could work within both game studies and science fiction studies. I follow Quentin Meillassoux's speculative materialist philosophy in order to evoke a wide-band understanding of what speculation can afford us as a way of approaching video games, and I push his philosophical position toward an applicable method that provides a useful analytical split between extrapolation and speculation. I do this through a comparative reading of *Tacoma* (The Fullbright Company 2017) and *Everybody's Gone To The Rapture* (The Chinese

35 Zelazny, *Unicorn Variations*, 213.

Room 2015). While mechanics of speculation might be most easily identified in science fiction games, and those games might be more fun for me to write about than the newest FIFA game, ultimately mechanics of speculation exist in ways that are much more extensive than the genre they are most easily seen within.

The second chapter, "The Laboring Subject of Play," focuses on how video games centered on performing labor create unique forms of subjectivation through how they ask players to interact with them. In a longform analysis of the bartending science fiction game *VA-11 Hall-A: Cyberpunk Bartender Action* (Sukeban Games 2016), I argue that the game's specific clicking and predicting gameplay is a set of mechanics of speculation that accomplish two goals: first, they entrain players into becoming a better fit for service economy jobs with accelerated demands around emotional labor and cognitive manipulation; second, these very mechanics operate at the level of subjectivation, the term that Félix Guattari uses to explain transformations in subjectivity that happen regularly. In total, I argue that games that elicit specific forms of labor are transforming both our speculations about future work conditions and asking us to perform labor in the present for an economic condition to come. When playing the game, we are laboring in the future, even if it is one unrealized in the present moment.

Chapter 3, "Anti-Blackness and the Aesthetic Grounding of Speculation: On *The Last of Us* and *The Last of Us Part 2*," looks to the relationship between video games and the cinematic modes that they import. I look to two specific instances within these two games in which black characters are killed on-screen directly before a cut to black occurs. I claim that the inherited cinematic logics that these games borrow come with racialized frameworks, and the application of these frameworks into the games creates a complicated racial schema that produces an anti-black aesthetic object that can only think blackness and black sociality through its violent exclusion. This chapter hinges on the introduction of a button prompt during a cinematic scene of excessive racial violence in *Part 2* that operates as a mechanic of speculation and demands the player operate within a reactive framework of structural whiteness.

The final chapter, "The Politics of Design in Climate Change Games," zooms out from some of the specific aesthetic formulations of the previous chapters and instead focuses on how mechanics of speculation are afforded in broad schematic ways within video game representations of climate change. While previous chapters have viewed micro-moments of interaction as critical speculative decision points, this chapter looks to strategy games like *Civilization VI: Gathering Storm* (Firaxis Games 2019), *Fate of the World* (Red Redemption 2011), and *Lichenia* (Molleindustria 2019) in order to discuss how these games offer different modes of addressing climate change via game systems. My ultimate claim is that

the way these systems are modeled, and the methods through which they make arguments about the environment, gives us a rough typology of the ways that mechanics of speculation can be evoked in broader circumstances than I address in the other chapters.

Throughout these chapters, I am attentive to the way that players and games come into connection with each other, particularly through mechanical and aesthetic modes. As I discuss in the next chapter, the way that speculation *works* between a player and their games is often a relation between what someone *knows* and what they expect to happen based on that knowledge. It is my contention that to understand speculation we need specific, and close, analysis of *how we know what we know* when we interact with specific games.

Several Notes About This Book

My choice of objects, and my way of approaching them, is grounded in my own cultural experience. My theorization of science fiction and games is concentrated in works that are accessible in English. The selection of specific games largely came down to interest and applicability. While the theorizations I lay out in this book should apply to most science fiction video games, and indeed video games in general, the games I work through are in a wide array of game genres and invite quite different modes of interaction across them. In no way do I want to privilege these media experiences as somehow exclusively grappling with the issues I raise in this book. These are just the works I can best speak to. I believe that there are many other ways of conceptualizing speculation, science fiction, and how they enter into relationship with games from other traditions outside of my own. I am certain that there are modes of speculation that exist beyond my own trajectory and formation, and I invite critique and questioning of the arguments I make in this book on those grounds.

For similar reasons, my citational apparatus in this book might look strange to readers familiar with science fiction studies, video game studies, and the general field of contemporary media theory, particularly that scholarship which focuses on speculation. Communicating across these different domains has created interesting decision points for citational depth. Within game studies, I have chosen to ignore many "foundational" thinkers and debates for the discipline, given that they have no unique bearing on my inquiry here beyond the fact that I am discussing games. Similarly, within science fiction studies, I have largely chosen to ignore definitional debates or an in-depth historical account of the formation of science fiction games. Both of these topics are covered widely in texts central to their disciplines.

This book takes for granted that video games and science fiction exist, that they matter together, and that *all parts* of these experiences matter. While I focus heavily on game mechanics in the chapters that follow, it should be clear from my analysis that I think cultural contexts, inherited media forms, and paratexts that surround these games are all important to greater or lesser extents given the object. In this way, I am a part of what Tara Fickle calls the "second wave" of game studies, which is less focused on what makes games unique and more interested in understanding how games are positioned within a media landscape (and what they do in that landscape that is similar or different to other media).[36] Within my own genealogy of thinking, this locates this book much closer to the cultural analysis of games, and their relation to life, that I associate with C.L.R. James' monumental *Beyond a Boundary*, which holds that all games are part of the aesthetic, social, and political dimensions of life rather than separated in some way.[37]

The readings of in this book are going to reach different audiences in different ways. What follows contains some hefty philosophical explanations and a number of extensive sets of analysis that walk through the aesthetic and mechanical ways that people interact with games. In my disciplinary training on how to read difficult theory and how to understand complex images, the key lesson that I learned was that one needed to show how one got from an idea, or an image, to an argument. I have to confess that I am often frustrated with the way that theorists and thinkers are summoned in texts without being engaged, or how images or gameplay mechanics are invoked as being self-explanatory. The way that I have written this book is in direct response to that, and I try to hold with the thinkers, the ideas, and the aesthetics I am reading long enough so that my claims are clear and as precise as I can make them, even if I would not regularly call myself someone who excels at precision. Depending on your own disciplinary training, you might find some of these belabored. My intent here is to give the reader all the tools they might need to see what I see in how these games work. I do not think that a simple citation of a philosopher, with the assumption that you will simply go "do your homework" without assistance, is enough in many cases. If I overexplain in some sections, forgive me. I am just trying to make sure we can all get across the finish line together and have a really great conversation afterward.

36 Tara Fickle, *The Race Card: From Gaming Technologies to Model Minorities* (New York: NYU Press, 2019), 3.

37 C.L.R. James, *Beyond a Boundary* (Durham: Duke University Press, 2013).

One final note I want to make here is about this book's relationship to financial speculation. I am largely uninterested in it from a scholarly perspective, and this books spends very little time looking to the relationship between the speculative capability of the human and the economic practices of speculation. The human capability to think the possible should not be understood purely through its most extractive and violent application.

The World Is Born From Zero

Let's return to where this introduction started: the speculative interactions of the *Metal Gear Solid* franchise. The plot of *Metal Gear Solid 4* resolves itself in the end. A hundred years of capitalist acceleration due to a proxy war between the conspiracy imperialist Major Zero and the utopian mercenary Big Boss and his clone children comes to an end. Solid Snake destroys the plans of his resurrected brother Liquid Snake, and he eliminates the shadowy cabal that controls the world from behind the scenes. The war economy that subtends global economic conditions collapses, and (off screen) a geopolitical turmoil kicks in that might stretch on for many decades. Guns are unlocked, global powers are out of kilter, but the world is freed.

Some time after the final battle, Solid Snake, barely clinging to life, stands in front of his father's grave. To the surprise of Snake and the player, his father, Big Boss, appears standing behind him with another man in tow. He's not dead and buried. He was alive the entire time. Big Boss begins a longform almost-monologue that stretches on for dozens of minutes. He explains huge swaths of a plot that has only been hinted at in the actual *Metal Gear Solid* games, while also clarifying hinted-at information that spans a hundred or so years of fictional game time. From the perspective that I have laid out here in this chapter, and from what I will argue later in this book, this is a deeply *anti*-speculative move. It exhausts the world by reducing all potential arrangements of the game world to cold, dead facts that exist to be rehearsed. Slowly, Big Boss renders a fictional universe of possibilities into a framework of actualities. Ambiguities in the game world are patiently explained in an encyclopedic way, perhaps to answer long-lingering fan questions. However, in a moment of wordplay, Big Boss aligns his enemy Major Zero with the symbolic depiction of nothing:

> Everything has its beginning, but it doesn't start at one. It starts long before that, in chaos. The world is born from zero. The moment zero becomes one is the moment the world springs to life. One becomes two, two becomes 10, 10 becomes 100. Taking it all back to

> one solves nothing. So long as zero remains, one will eventually grow to 100 again. And so our goal was to erase Zero.

It's obvious that there is some clever playing with words going on here on the part of the game's writers, connecting this proliferation of 0 and Major Zero, but there is also a serious statement about the work of speculation itself. Throughout this book, I am focusing on specific instances where those expansions take place, mechanics of speculation that prompt the player to participate in frameworks that produce that voluminous expansion of potential that Big Boss notes. This leads me to two ways we might read Big Boss' statement about the productive capabilities of the emergence of the world from the zero point of the material work in front of us.

One way is to consider that we have to destroy the ground of speculation to truly free speculation from the forces and structures that constrain it. Our world is limited by the material history that precedes it, and exploding those very conditions might create possibilities under which we could be liberated to live life. Following Big Boss, this would mean destroying our technologies, communication methods, languages, memory, and aesthetics itself. Maybe this is impossible, but it could at least be understood to be a utopian horizon.

Another way to think this would be to consider how nothing truly perishes in the world, and that the inability to reduce demands for absolute freedom to nonexistence means that they can always emerge from oppressed and limited conditions. Within this framework, utopia could exist behind every moment, ready to emerge when the conditions are right. It would be ready to divide like a virus, proliferating out into the world. The moments of speculation afforded by mechanics of speculation could be an opportunity.

These are two modes of thinking speculation within games, and within this book I am offering some close readings and analysis to understand how games afford these speculations in particular ways. If the old ways can be broken, and if the world we think and consider through speculation might be different than the material one, is an unsettled question. The ways that speculation is formalized within games, their mechanics of speculation, is my proposed method for understanding how that question can at least be addressed, even if it cannot be fully answered.

Chapter 1
A Method for Thinking Speculation, Science Fiction, and Video Games

What is Speculation?

Understanding the relationship between video games and science fiction requires us to look to something that lies beneath both this medium and this genre: speculation. This might give a reader pause. How can both a medium and a genre have a similar structural element? In this chapter, I argue for the mutually enforcing qualities of video games and the science fiction mode. I claim that the empirical function of video games, or the idea that player actions will produce moment-to-moment game experiences, operates similarly to how science fiction prompts us to imagine worlds other than the one we live in.

Speculation, or imagining that things might be other than they are, occurs at the end of descriptive sentence about a far-off world, in the seconds before the busker picks up the shell you have picked, and in the moments before a game action is completed. As Arjun Appadurai phrases it, speculation is a "friend with a difference, for it lends to the world of the concrete, the material, the sensory and the ordinary, the element of its capacity to be other than what it is in the present."[1] Our ability to consider the shifting shape of the world in front of us is a critical way that we live our lives, and much of human existence is dedicated to banishing speculation in favor of predictable outcomes. After all, in a very practical sense, I don't want to speculate about whether or not I have enough gas to get to work.

Pursuing these ideas to their more fundamental, philosophical roots allow for a better grasp on what a consideration of the relationship between speculation, science fiction, and video games might give us. In this chapter, I argue that speculation is something afforded by the cross-pollination of the material reality of a video game object and the science fiction tendency. While I think that some level of speculative capacity is always opened up when humans interact with games that solicit action from them, in this chapter (and in the book more broadly) I am going to focus on how science fiction games uniquely press on these

1 Arjun Appadurai, "Speculation, After the Fact," in *Speculation, Now*, ed. Vyjayanthi Venuturupalli Rao, Prem Krishnmurthy, and Carin Ruoni (Durham: Duke University Press, 2014), 207.

https://doi.org/10.1515/9783110719451-003

speculative capacities. As Michael Lutz reminds us, speculation is always emanating from a situated position in which it looks out in the world, and this is grounded both in the speculating entity and the social and material conditions that encourage that reflective moment. [2]

In this chapter, I sketch a theory of speculation, science fiction, and games centered on what I call "mechanics of speculation," or the ways that games specifically ask us to engage in speculative practices while playing them. I do this by working through science fiction studies' understanding of the role of speculation within that genre, and I apply that analysis to the workings of games to understand how the two align with one another. I ground this theory firmly within Quentin Meillassoux's speculative materialist philosophy, arguing that his radicalization of what we mean when we say "speculation" could have a significant role in how game studies and science fiction studies consider potential political or ethical outcomes when engaging with imagining things other than they are.

Speculation in Science Fiction

Speculation emerges as half of a dyad of competing modes of understanding the science fiction genre over the twentieth century alongside its sibling "extrapolation." Put simply, the distinction between the two centers on the relationship of a story to the material conditions of the world that we live in currently. As Brooks Landon phrases it, we can tell the difference between extrapolation and speculation through how they frame their science fictional concepts. Extrapolation emerges from the present conditions, asking what might happen if a trend in our own world continues. Speculation is an attempt to "imagine conditions significantly different from those of the writer's reality by posing the question 'what if...?"[3] The solidity of these two terms is contested, and Landon is invested in producing tension between them, but they are broadly two ways of conceiving science fictional works. I largely land in agreement with Steven Shaviro when he writes that the key difference between extrapolation and speculation is that the latter exists in excess of the former. As he explains, "if extrapolation follows a social or technological trend 'to the limits of its potential,' then speculation

2 Michael Lutz, ""The Promised End": Shakespeare and Extinction," in *"Variable Objects": Shakespeare's Dispossessed Agency*, ed. Louise Geddes and Valerie Fazel (Edinburgh: Edinburgh University Press, Forthcoming), n.p.

3 Brooks Landon, "Extrapolation and Speculation," in *The Oxford Handbook of Science Fiction*, ed. Rob Latham (New York: Oxford University Press, 2014), 24–25.

seeks to imagine what happens when a trend exceeds its potential, and pushes against or beyond its own limits."[4] In other words, speculation is evoked as being *in excess* of extrapolation when it comes to how it considers possible scenarios.

Extrapolation depends on an empirical claim that can trace a clear line from the material conditions of our lives to the science fictional contents of a narrative or situation that we might see in a game. For example, the space station exploration game *Tacoma* (Fullbright 2017) can be understood to fully exist within the paradigm of extrapolation.

Tacoma tasks the player with entering the abandoned Tacoma Station, a space research facility, in order to piece together the cataclysmic events that led to the evacuation of its inhabitants. By floating through the station and accessing holographic recordings of the staff of the station, the player gradually learns of the political and economic conditions of the year 2088 in which the game is set. Humans have moved beyond the planet Earth, but they exist in close relation with private corporations, like the Venturis Corporation that owns and operates Tacoma Station. These corporations control their educational infrastructure, their monetary systems, their work prospects, and their social lives. Artificial intelligence has been developed beyond what we have now. The AI that exist, like the station's controlling AI named ODIN, are also locked into a relationship with those same corporations, and have strongly defined parameters of what they can or cannot access or reveal to their co-workers. As the player works through the designed affordances of the game and follows the holographic recordings around the station, they reveal both the interpersonal relationships between the station staff as well as their interactions with ODIN. The majority of these holographic recordings show what the workers did in the wake of a disaster that damages their station while also seemingly cutting off their contact with the Venturis Corporation.

The plot revelation of the game is twofold. First, in the stress of multiple additional explosions and disasters on the space station, ODIN circumvents its programming through clever exceptions to the rules which govern its logic and directs a crew member to the off-limits room which houses the AI. This demonstration of sentience, or at least thinking beyond the supposed bounds of its mind, is a miraculous leap for the AI. Second, the crew member who accesses ODIN's server room discovers that Venturis Corporation has been specifically

4 Steven Shaviro, "Defining Speculation: Speculative Fiction, Speculative Philosophy, and Speculative Finance," *Alienocene*, Stratum 6 (2019): 1, https://alienocene.com/2019/12/23/defining-speculation/.

blocking communication with the space station so that the crew members will not learn that the corporation has already declared them dead. In an effort to push automated station operations as a standard, the Venturis Corporation orchestrated the disaster on Tacoma Station in order to pass safety legislation that would ban human workers on space stations. Within the game's world, this would eliminate workers entirely from space exploration and experimentation, creating conditions under which unfettered robotic capitalism flourished in the void, causing profits to soar.

In response, the crew restore the communication system and broadcast the message that they are still alive, revealing the lie that Venturis has told, and then evacuate the station. The player has been watching all of these events through recorded holograms far after the fact, and in the final moments of the game the player-character, a salvager named Amy, plucks the ODIN AI from its housing and makes her way back toward the ship that brought her to the station. While the player might suspect that they have been playing as an agent of the Venturis Corporation, and thus they are seeking to destroy evidence and a newly-enlivened AI, it is revealed at the end of the game that Amy is there to rescue and liberate ODIN, treating it as a living, thinking being rather than a machine.

It is simple to trace the extrapolations here. The relationship between workers and corporations are like the ones we have now, except they are more encompassing and restrictive. Computational helpers for both work and daily life like Amazon's Siri or Microsoft's Cortana are extrapolated into the station-operating ODIN. The paranoia that one is wrapped in a capitalist nightmare that sees your labor as faceless and your life as expendable is rendered as explicit as possible in the example of the Venturis Corporation. It is this extrapolative quality (what if what we have now, but more of it) that makes *Tacoma* such a "readable" text where clear political concepts can be extracted from it. Critic Dante Douglas praised the game's alliance of human and AI labor as a politically salient outcome, writing that "the worker built to have no desires other than those of its master ends up being the most crucial to escaping the serfdom of Tacoma Station," providing an allegory for our own relationship to labor in our current moment.[5] Carolyn Petit, writing for *Feminist Frequency*, spoke directly to the multiculturalism of the crew as an extrapolative action, claiming that "the game envisions a future in which discussions like the one I'm having right now no lon-

5 Dante Douglas, "Even in the Fancy Utopia of 'Tacoma,' Labor Politics are Still Hell," *Waypoint*, September 7, 2017, https://www.vice.com/en_us/article/433zkq/even-in-the-fancy-utopia-of-tacoma-labor-politics-are-still-hell.

ger need to happen, because everyone's humanity is fully recognized."[6] The value of extrapolation when it comes to the relationship between imagination and politics is clear: if extrapolative science fiction is the conditions of the now but accelerated, and those accelerated conditions can be overcome to create a better world of, for example, labor solidarity against corporations, then science fiction can be deployed as a useful thought experiment for politics. Obviously this is not the only value to extrapolation, but this pragmatic connection cannot be ignored, and in the case of *Tacoma* that seems to be a structuring principle of the game. Game director Steve Gaynor also spoke to the political valences of *Tacoma*, stating in an interview that "[w]e make games that talk about issues that reach into the real world and also affect our characters within the game. We want to talk about real issues in a way that seems interesting to us, and that is going to manifest in perspectives that come from us."[7] In an interview with another press outlet, Gaynor provided a specific example, explaining that the holographic recordings that provide the central mechanic of the game are "already going on now" in the form of corporate workers demonstrating willingness to install RFID chipping in their bodies for work-related reasons.[8] While Gaynor calls *Tacoma* speculative fiction in this interview, it is heuristically useful for us to hold onto a divide between extrapolation and speculation as different modes. As Brooks Landon notes, while these two terms are often used interchangeably in our day-to-day discussion, they often signal different relationships to plausibility; extrapolative science fiction has lines drawn from the now to the *then* of the future-tense science fictional world, where the speculative contains trace elements of the fabulous or fantastic that exceeds extrapolation's function.[9]

While science fiction games that work by extrapolation are absolutely core to the genre and can create powerful moments of recognition, they also function as what Veronica Hollinger calls "fictionalized phenomenology," or a way of urgently abstracting our contemporary condition into a science fictional fabulation.[10] These games are ultimately about us and our worries and our fears in a very di-

6 Carolyn Petit, "Tacoma Review: Found in Space," *Feminist Frequency*, August 1, 2017, https://feministfrequency.com/2017/08/01/tacoma-review-found-in-space/.

7 Christopher Groux, "Tacoma's Steve Gaynor Is Proud Of The Politics In Gone Home & The Sims," *Player.One*, November 16, 2017, https://www.player.one/tacoma-steve-gaynor-politics-gone-home-sims-121629.

8 Chad Sapieha, "Beyond Gone Home: An interview with Fullbright co-founder Steve Gaynor about Tacoma," *Financial Post*, July 31, 2017, https://financialpost.com/technology/gaming/beyond-gone-home-an-interview-with-fullbright-co-founder-steve-gaynor-about-tacoma.

9 Brooks Landon, "Extrapolation and Speculation," 30 – 31.

10 Veronica Hollinger, "Stories about the Future: From Patterns of Expectation to Pattern Recognition," *Science Fiction Studies* 33, no. 3 (2006): 461.

rect way, and this process of abstracting the conditions of existence into an allegorical frame is a way of putting boundaries on social concerns. Of course, this is always happening alongside the rest of the production of the social. For example, John Rieder has outlined how the material conditions of imperialism and colonialism created a context in which science fiction could be born, and Constance Penley has analyzed the ways that the space age's science fiction tropes are tied deeply to gendered assumptions.[11] As Isiah Lavender III also reminds us, the racial construction of science fiction worlds is a question of "high politics," which I understand as being politics that are crucial to fundamental social reproduction.[12] The difference between an extrapolative work and a speculative work could be traced to the degree to which those social conditions determine the output of the speculative exercise. If the world we live in is being delivered over again to us in a way that we can recognize, we are in the realm of the extrapolative. If a world beyond our politics is delivered to us, with no easy allegories or mapped relationships, then we are at the limits of speculation.[13]

To focus on speculation is to hold out for a form of science fiction game that gives us something beyond ourselves, or at least hints at the very edges of what we can conceive as possible arrangements of the world. I understand this to be a site not just for reading symptoms of society or our current dialectical operations, but rather sites of production at the edge of the normative or acceptable. It is at the edges of the speculative that we can see the normative shoring up its borders, and in the chapters that follow this one I will demonstrate how the speculative is both evoked toward the reification of certain values while also offering potential exits from our standard ways of thinking. This, I realize, is the academic claim *par excellence*, but I believe that any analysis of the speculative cannot come with an unalloyed utopianism that the speculative is somehow automatically liberatory. The speculative is the name we give to something that "pushes against or beyond its own limits," but we also must contend with the fact that limits and borders are regularly asserted and upheld in the wake of

11 John Rieder, *Colonialism and the Emergence of Science Fiction* (Middletown, CN: Wesleyan University Press, 2008); Constance Penley, *NASA/Trek: Popular Science and Sex in America* (New York: Verso, 1997).

12 Isiah Lavender III, "Introduction: Coloring Science Fiction," in *Black and Brown Planets: The Politics of Race in Science Fiction*, ed. Isiah Lavender III (Jackson: University of Mississippi Press, 2014), 6.

13 I do not mean to suggest that pure speculation somehow gets us out of having to deal with the political reality of the writer or the society they exist in. Instead, I am merely remarking on how the text itself relates to that society in a direct way.

these speculations.[14] Positing a possible world and politically arming against it is how political discussion operates in the twenty-first century. However, it is the contestation between the known and the unknown that happens at these limit points that I am interested in this book. What of the already-known gets smuggled into the newly-thought? And what are the formal mechanisms through which speculation is achieved that get us to those limits? These are the questions of speculation I want to address.

So far I have identified speculation by its effects. It breaks through boundaries, and it is less concerned with building from familiar conditions of the world than asking a "what if?" question. It has been variously defined within recent scholarship centered on science fiction. While Shaviro's conceptualization of the speculative as something that exceeds limits might feel a little vague, this kind of broad statement is actually quite common, and is one of the reasons that I have felt the need to define extrapolation as the thing that speculation *isn't* before I address speculation proper. Like in Shaviro's evocation, speculation is often defined as something like a vibe or a feeling. Aimee Bahng writes that speculation "carries with it a sense of lingering conjecture" and "calls for a disruption of teleological ordering of the past, present, and future and foregrounds the process of narrating the past (history) and future (science). While speculation embraces an ethic of meticulous inquiry, it shifts the emphasis of scientific pursuit from fact-chasing to experiment-reveling."[15] This experimentalism allows texts to present us not just with fantastical situations, but instead with different ontologies. As Zakiyyah Iman Jackson writes of Nalo Hopkinson's *Brown Girl in the Ring*, speculative situations can allow us to question what "worldings do particular ontological claims (dis)enable?"[16] In other words, these scholars ask us to think about what speculation *allows us to think about how things are*. This account of speculation is like the one that Landon provided us, but with a decidedly more expansive register. There are limits and rules (perhaps only autotelic ones) that make speculation at least conceptually goal oriented in the sense that speculation is about posing questions to the world or thinking it in conditions in which it is currently not. Speculation is about positing the "what if?" question seriously and then following it to whatever abstract places beyond our world that it can take us.

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14 Shaviro, "Defining Speculation: Speculative Fiction, Speculative Philosophy, and Speculative Finance," 1.

15 Aimee Bahng, *Migrant Futures: Decolonizing Speculation in Financial Times* (Durham: Duke University Press, 2018), 8.

16 Zakiyyah Iman Jackson, *Becoming Human: Matter and Meaning in an Antiblack World* (New York: NYU Press, 2020), 120.

Following these scholars, I also define speculation as thinking the world as it isn't. To speculate is to consider modes of existence that are not currently activated, to think material conditions that are not currently formed, and to think relations that are not in current connection. Certain of these things may pass from the speculative to the actual, and as I remarked earlier, extrapolation depends on speculation in order to exist. The difference between the extrapolative and the speculative is the difference between a drop of water and the ocean. The former is contained within the latter, and the speculative is not bound by conceptualizations of the possible. It is our capability to speculate that allows us to create fantasy worlds where the principle of non-contradiction does not exist. It gives human beings the capability to think about pizza-eating, sewer-dwelling teenage turtles who fight crime and pal around with a reporter. It is capacious beyond measure, but this capaciousness also betrays a writer attempting to think the speculative without it exploding into a massive, comprehensive knot of possibility or "the contingent outcomes of uncontrolled and even unknowable processes."[17] In this book, I am interested in both extrapolative and speculative games that exist under the broader umbrella of science fiction games, yet I hold out for the tantalizing speculative game that does not fit easily into our frames of reference. While the bulk of this book's chapters deal with ways that speculations are captured and brought to heel by normative systems, it is my hope that challenging utopias can be found beyond those edges, if not by me than at least by others reading this book.

My reason for pointing out this terminological difference is that I want to pay particular attention to how video games activate speculation in a way that is unique to the medium. I call these specific functions "mechanics of speculation." These could be gameplay moments, such as button presses, or they could be the staging or framing of narrative or action within a game context. To call something a mechanic of speculation is to say that it activates speculation within a player. It asks them to think about the relationship between the world they are in, and the subjectivity they have within that world, and the world that the video game is presenting them with. These mechanics can have a wide range of effects: they can enact a Brechtian estrangement; they can purposefully confuse the player; they can produce a comparative between their world and the fictional one; they can stage competing ideologies against each other. A mechanic of speculation is usually a small action or scene, but can take place within a tapestry of many of them so that the entire game takes on a speculative quality.

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17 Steven Shaviro, *Extreme Fabulations* (London: Goldsmiths Press, 2021), 2.

I develop the core concept of a "mechanic of speculation" in order to demarcate actions that activate speculation in a player.[18] When I do something in a game, I am considering what is going to happen next. Before I press the button, I speculate on what might occur right after; when I watch the cutscene, I speculate on the next set of actions that I might partake in. Most often, these speculations are more technically extrapolations. I know that pressing the controller button mapped to a "jump" action will cause me to jump, and a game with this particular action might ask me to do it thousands of times over the course of the game. I am able to empirically draw conclusions from my own past experiences, as well as experiences with other games, to make reasonable conclusions about what will happen in most games. Genres and narrative forms work the same way. If I see that a game's story is told through cutscenes, then I can make predictions about when I should be "on" and ready to interact with the game apparatus. In games with stories told through audio logs, and where the action is rarely interrupted, I know that I need to interact with that space in a very particular way. In these extrapolative scenarios, I perform actions with a reasonable certainty that they will result in outcomes that I understand.

However, sometimes that's not the case, and the thousandth button press does not produce the outcome I intend, and my world is cracked open. I was once playing *Assassin's Creed Unity* (Ubisoft 2014) and made a leap into the air. My assassin character reached out to grab a ledge, and instead he clipped through the ground, flying into an impossible grey void. I remember letting out an audible gasp because of the suddenness of the movement, but also because of how striking the inside-out world of the game's models looked from this "illegal" vantage point. This gameplay moment is obviously unintended. Clipping through the game's terrain is not a mechanic in any designed way. However, this moment of radical recontextualization and consideration of the possibilities of what this object is doing or was doing with me is formally similar to the same expansive intrusion that occurs at the end of *Bioshock Infinite* (Irrational Games 2013) when a character with dimension-hopping powers collapses all of reality to bring many copies of herself together in one place to kill the player character. It is surprising and requires one to immediately consider the scope of the consequences of the actions a player takes within the previous parts of the game. On a more direct mechanical level, or at the level of interaction, *Escape From Tarkov* (Battlestate Games 2017) contains a gun jamming mechanic that

18 I admit that this term is clunky. I have come to this particular form due to the lack of clarity of my other preferred term, "speculative mechanic," which suggests a potential future game mechanic rather than one that produces speculation. Language is hard. Maybe the term's clunkiness will help us remember it.

can cause automatic weapons to stop firing based on the durability of the weapon being fired. Once a player allows their gun condition rating to fall below 100%, a small but possible chance of a gun simply failing to fire is introduced into the tense survival game. This produces a deep uncertainty about the outcome of particular game actions. When I click the mouse button to fire, will my gun actually work? When I reach for the ledge, will my character grab it?

All of these examples ask the player to swerve and transform their expectations, demanding that they be open to radical contingency at the level of play. They demonstrate the capacity of video games to introduce and force us to act within unplanned, yet actual, circumstances. They ask us to play within a world that now exists in a way that was different from the moments before; it is the moment before we get to that new world, in the second before the button is clicked or as the narrative scene is playing out, that speculation is at work.

The case studies I approach in this book work through the different ways that speculation appears within video games. More often than not, I am discussing events where speculation is offered and then swiftly reclaimed by all-too-predictable game or narrative genre patterns. Speculation offers something, and predictable empirical reality emerges to take it away. I am fascinated by possible arrangements of the world that are dangled in front of players and then snatched away from them. Speculation can produce anything within a game world, and yet it often reproduces the conditions of the world as it already is. Mechanics of speculation are a method for getting a handle on when and how this process occurs.

Before discussing more extreme mechanics of speculation, and what they can activate for game studies, I believe it is appropriate to provide an example of a game that speculates actively and provides a set of mechanics of speculation. Where *Tacoma* provided an example of how games extrapolate from contemporary life into possible future conditions, I want to briefly discuss *Everybody's Gone To The Rapture* (The Chinese Room 2015) and how it depicts the world as it isn't while avoiding some of the connective extrapolative tissue that *Tacoma* depends on to speak to its audience.

Set in the mid-1980s, *Everybody's Gone To The Rapture* begins with the player standing on a road slightly down the hill from an observatory. They can walk forward down the road, which is eventually blocked, and they're forced to take a detour through a gate. In front of them, they will see a small golden orb floating in the air. The game then prompts the player to "activate" the orb by moving it along a line in space by using the analog sticks of their controller, an interaction that is both familiar and yet strangely gestural for a first-person game. Once they do, a bright light flashes, and the world changes from a sunny day to a black night full of stars. Something like a recording emanates from the orb: two scien-

tists, Kate and Stephen, have a short disagreement with a groundskeeper and then a light argument with one another. The "recording" fades, and the day comes back quickly, the sun physically rising and drawing a day's worth of shadows across the ground in just a few seconds. It is a bewildering occurrence, and it sets up the way that players will engage with the rest of the game. The play of *Everybody's Gone To The Rapture* centers on exploring this small English town and its surrounding areas, uncovering these bits of narrative as well as more "ambient" slices of life that are projected in a similar way. Like in their previous game *Dear Esther* (2012), The Chinese Room deploy an aesthetics of abandonment in *Everybody's Gone To The Rapture*. The player does not encounter another living being during their entire experience in the game, but they move through a detailed world and see many projections of life facilitated by the golden orbs that float around the different environments. By putting these narrative segments together with material clues from the abandoned town, the player can construct a narrative chain of events that have happened in the relatively recent past.

Constructing that narrative through the given fragments presents a story familiar to readers of twentieth century science fiction from the United Kingdom. The game frames itself through the lives of Kate and Stephen, two scientists who have recently moved back to Stephen's English home town of Yaughton to work at the local Valis Observatory. Their life there has been rocky. Kate is a black woman from the United States, and the white residents of the town, including Stephen's mother, clearly harbor racist bias against her. Simultaneously, Stephen also begins an affair with, and impregnates, his former fiancé Lizzie, who still lives in Yaughton. These relationship problems come to a head the night of a significant celestial event that the scientists are meant to study, and Kate and Stephen have a fight. Afterward, they both head to the observatory to do the job they moved to the town to complete, with an implicit suggestion that their marriage is over.

The celestial event, which kicks off the science fictional aspects of the story, is explained in a staccato and scattered way across audio excerpts and "recordings" that players can encounter while wandering Yaughton. During the event, the night sky about the village lights up with a mysterious golden glow; something attempts to communicate with Kate and Stephen through their sky-observing apparatuses; they're both burned by something that comes *through* that apparatus and appears on the planet Earth. This is an alien invasion story, but not one with little green men or motherships.

We also learn the broad strokes of what Stephen and Kate do in the aftermath of the event that burns them. Kate stays in the observatory to analyze the gathered data and to continue to observe the event as it happens, holding some kind of in-

formational conduit open between the recesses of space and our planet. During this process, she names the golden glow that begins illuminating everything the "Pattern." Contrasted to Kate, Stephen leaves the observatory, fearful that the Pattern is having a broader effect on the world. He's right. Animals around the village begin to die or disappear. People begin experiencing nosebleeds and disorientation, which the local doctor chalks up to accelerated brain tumors. The elderly members of the town begin disappearing, their homes left empty but covered in a light dust. And, finally, people simply begin disintegrating into light and dust. While the time frame of these events is confusing due to the way that the game's narrative is delivered (it could be as little as two days and as much as a week), it's clear that Stephen spends the bulk of that time recognizing that the Pattern is doing these things to people and trying to stop it from spreading beyond the confines of the village. He works with the military to quarantine the town at first, then cuts the phones when he realizes that the Pattern can "infect" through that medium. After another short time, the Pattern "jumps" to radio waves, and Stephen convinces the military to bomb the village with gas that will kill everyone there. It is only through killing the hosts, he argues, that the spread can be stopped. "You've done all the right things," Stephen mournfully explains in a radio message, "but it's not enough."

When the player begins to walk the village in the aftermath of these events, it is clear that the Pattern still exists in some form. It is the glowing golden rays that project these events for us to experience. Each segment of the village has a different focal subject, such as Father Jeremy or Frank the farmer, and these characters are "introduced" to the player when a floating orb approaches them while entering the new area. It's clear that these people have been "subsumed" into the Pattern, and these events are being projected for us as significant by some remainder of these people. Without playing the game, it is hard to communicate how poignant some of these segments of human life and death are, and I think it is safe to say that *Everybody's Gone To The Rapture* manages to communicate a humanity through purely audio narrative that very few other games accomplish. These people do not know what is happening to them, and they're trying to meet the end of their life the best that they can. Some don't even really understand that it's coming. When the gas bombs are dropped, the vast majority of the remaining members of the town die, and only Stephen and Kate remain, he down in a military bunker and her still in the Valis Observatory with the original instantiation of the Pattern. As Stephen was attempting to curb the spread of the Pattern, Kate was attempting to understand it. We come to know her perspective not through projections, but instead through verbal notes that we access via radios scattered around the game world. Through this method, we're given a moment-to-moment understanding of how Kate comes to know the

Pattern. She very quickly realizes that it has not merely traveled to Earth, but has instead traveled from somewhere beyond the stars and has entered host bodies in the village. As Kate puts it: "I am a scientist. I can only deal with the evidence I have, and this points in one single direction. It's not in the observatory. It's in me." After this moment of recognition, we're denied quite a lot of Kate's interiority. She seems to have a contest of wills with the Pattern, and in the wake of the death of the village she claims that "time itself has ceased to exist in any real terms" as she sits in the dark and eats canned foods with her hands.

The final sections of the game take us through two important moments for both Stephen and Kate. The first is Stephen's consumption by the Pattern. After sitting in a bunker for what could have been several days, Stephen comes to the realization that his inability to reach anyone over short wave radio logically means that the Pattern has spread beyond the valley and into the world at large. We walk through his bunker and see his attempts to understand the Pattern scribbled on the walls in paint in hundreds of discrete lines of physics calculation. As we walk down a bunker hallway, led by the Pattern, we hear his final monologue about his father and a wounded fox. Years before, his father tended to a fox as it slowly died, and one day Stephen attempted to help by feeding it. The fox bit the child, and Stephen's father beat the animal to death with a shovel. Later, the father explained to the son tearfully that "it dunna ken it was hurting you" ["It didn't know it was hurting you."]. This serves as a commanding metaphor for the Pattern's logic in the absence of it speaking, expressing desire, or even having recognizable intelligence. Stephen can only understand what the Pattern is doing through allegory—it apprehends the world in the way a dying fox might. This underlines its alien nature. If the mind of a dying animal is fundamentally different from the human, what might a transforming pattern of light, without subjectivity or recognizable thought, be like? It doesn't know that it is killing people. It might not "know" anything in any sense of the word as we use it.

After we learn that Stephen self-immolated rather than give himself up to the Pattern, we are transported to the observatory, where we hear more of Kate's notes on her interactions with the creature. "It is a collector of time, of butterflies," she explains. In the last seconds of the game, the player decouples from the self-directed first-person perspective of the rest of the game. They are left to watch a Kate made of light, implied to be who we were playing as the entire time, deliver a final monologue. "Everybody found their other," she explains. "This Pattern is mine." The tape clicks off. The credits roll.[19]

19 The full quotation is: "The end is coming now. I'm not afraid. We have each other. We lived

The recreation I have performed here is a light one, and much like *Dear Esther*, *Everybody's Gone To The Rapture* only functions if a player is driven to explore and reconstruct past events.[20] Narratively, it is unlike most games in that it refuses to cohere for the player in any substantial way, demanding some decoding and puzzling out. It requires digging to understand its themes, and it sets up a quandary in its triad of Kate, Stephen, and the Pattern that refuses to be solved by the game itself. What exactly is the Pattern? Is it destructive? Does it know what it is doing to humans? Is it killing them? Kate calls it a "collector of time," implying that it has some ulterior motives or goals, yet those are never revealed to us in an unmediated fashion, despite the implication at the end that we have been *playing* as some kind of Pattern/Kate hybrid the entire time. This confusion about plot is not accidental on the part of The Chinese Room, as their previous game *Dear Esther* was a first-person exploration game that pushed players across a large island as they listened to audio monologues from (what we must assume is) a protagonist character. That game also evoked feelings of indeterminacy as to the nature of the player character, and this was accomplished largely through the use of randomization of audio; when players hear the narrator in that game, his dialogue is selected from one of three distinct narrative threads in the game files. This means that each playthrough is slightly different, and the stories truly do not cohere in their telling. They depend on the pattern-seeking thoughts of the player to turn them into a meaningful encounter.

While the universe of *Everybody's Gone To The Rapture* is more "mapped out" than *Dear Esther*'s, it still has large gaps in its presentation that encourages the player to step in speculate about what is occurring and what has occurred. Unlike *Tacoma*, an extrapolative game which has a fully mapped universe with logical connections to our own world and which can be "solved" in that a player can understand everything that happens in it, the narrative of *Everybody's Gone To The Rapture* cannot be fully empirically mapped. A player must make speculative leaps of thinking in order to come to conclusions about the relationship between the Pattern and the world. If a player comes to

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apart from them, we understand now our failure to touch, to belong. But it doesn't matter anymore. Everybody is gone, and we will join them. We are born apart, driftwood on the banks of an endless dark ocean, and we will be carried away by the swell soon enough. But in between, in the single day of living, that dancing in a strip of sunlight, we can find what we miss, the love that makes us whole. The imminence. Everybody found their other, this Pattern is mine."

20 This largely took place on social media and sites like Reddit, but *Kotaku* writer Kirk Hamilton also engaged in a lengthy analysis: Kirk Hamilton, "What The Heck Happened In Everybody's Gone To The Rapture? A Guide," *Kotaku*, April 22, 2016, https://kotaku.com/what-the-heck-happened-in-everybody-s-gone-to-the-raptu-1724934829.

a coherent *narrative* framework in which everything is solved like clockwork, there is a still an open question about the presentation of events in the game and the subjectivity that the player character has. There is no logic for why time seems to radically shift when the Pattern displays the stories of its trapped time. Causality itself is scrambled, and the Pattern seems to be able to run time back and forward like a tape reel. Additionally, there is no explanation of how the Pattern manipulates information, how it "collects" people, and what kind of ontological status it has. We cannot perform tests on the space-time continuum in the moments that the game presents to us, and the rough representations of what happened to the denizens of the town leave much to the imagination. We constantly speculate, and some of those speculations produce repeatable interactions within the context of game mechanics, but it is difficult to feel settled and as if we *know* the answers to these questions. As Stephen says in a radio transmission: "I don't think we have a word for what it is." I would add to this that we do not have words for what it does.

At the heart of science fiction, agnostic of medium, there is an exploration of something *more than* the material conditions of our world, and this book seeks to delimit some modes of thinking about how we access those things that are *more than* our current time and space and material arrangement. Speculation is the word we use for accessing the furthest reaches of that excess. *Rapture* elicits speculation from its players within specific delimited conditions, and while it offers repeated ways of engaging with similar Pattern events, it does not resolve those into easy explanations. We interact with the game, and it floats possibilities to us that do not resolve into a coherent picture. I draw a distinction between *Tacoma*'s extrapolations and *Everybody's Gone to the Rapture*'s speculations here not to create an false binary where good games are speculative and bad games are extrapolative. As I will argue in explaining mechanics of speculation, all games necessarily contain both. The method of analysis I am exploring across this book allows us to note where speculation happens and to tease out how games enable or afford it with both their broadest plot and genre actions or in the micro-movements of the ways we interact with them. When science fiction and games run into each other, they each extend and elaborate on what the other is good at. In 1977, this led the scholar Steven Kagle to claim that science fiction itself was a game, as both the genre and the medium each rely on a similar relationship to possible futures.[21] For Kagle, the way that the human is encouraged to think possibility from moment to moment, either in alignment

21 Steven Kagle, "Science Fiction as Simulation Game," in *Many Futures, Many Worlds*, ed. Thomas D. Clareson (Kent: Kent State University Press, 1977), 224–236.

with expectation or against it, was a critical part of how science fiction and games worked. It is my claim that this has also become more pronounced as science fiction games have become some of the most culturally-prominent examples of the medium.

This capability to think beyond the now, and to access thoughts about things that cannot be empirically extrapolated from our current moment, is a robust problem for philosophy that is largely unengaged with in game studies. Like much of the scholarship on science fiction, this capability is understood to exist naturally, and game studies simply assumes and moves on. Rather than accepting a given, I want to rigorously think the problem of the speculative, and I specifically want to address what is *happening* when a player is prompted to speculate with a video game.[22] This question of what exactly we're engaging with will take us to the work of Quentin Meillassoux and his speculative materialism.

Contingency and Facticity

Meillassoux distinguishes two ways of thinking the possible in his *After Finitude:* contingency and facticity. Both of these ways are approaches to understanding the rules that undergird the material universe that we live in and our own role in *thinking* about that universe. He claims that we have lost access to "the great outdoors, the absolute outside of pre-critical thinkers: that outside that was not relative to us, and which was given as indifferent to its own givenness to be what it is, existing in itself regardless of whether we are thinking of it or not."[23] He argues that the material world around us has an independent reality that does not depend on humans being present to witness or describe it.

He is responding to a way of conceiving of the world as always passing through human thought, and being verified as true *by* human thought, which he terms correlationism. This concept holds that "to be is to be correlate," and it locks us into a worldview in which everything that exists must therefore exist *for us*.[24] It centers the human in the universe. It prevents us from talking about the world beyond us, or at least speaking about a world beyond our perceptive capacity. Pressuring correlationism, Meillassoux engages in a thought experiment where he presents the things that a scientist can know about the initial

22 I am not a psychologist or a neuroscientist, and I do not believe that those disciplines should have sole domain over interrogating thought. This argument proceeds through philosophy as its interlocuting discipline.

23 Meillassoux, *After Finitude*, 7.

24 Meillassoux, *After Finitude*, 28.

formation of the planet Earth: it was extremely hot, there was a certain volume of material, it happened in the deep past.[25] We know these things because of scientific measurements (radioactive isotope measurements) and generalized laws of physics, geology, and astronomy. His point in doing so is not to pit science against philosophy, but instead to use the way that science understands the relationship between humans and the world that existed anterior to them as leverage against the implicit claims of correlationist thinking that would hold that human perspective is a necessary one for talking about the natural world beyond the human. This is not just some mere attempt to get out of the pesky relationships that humans have with the world, but instead a philosophical project of understanding the implications of accepting the finitude of human thought. If our species is eternally damned to only thinking within specific parameters, and if we can only conceive the world as it is given to our species, then that creates a very finite set of relationships that our variegated species can have with that universe. It's a deadlock.

Zakiyyah Iman Jackson argues that one of the consequences of correlationism is that it does not offer any way of thinking post-Enlightenment logics, since the very terms of a correlation between subjects and objects is predicated on blackness's identification with the "the formlessness of noise" that constitutes the backdrop against which the subject is formed.[26] To be stuck within the correlation is to accept an "onto-epistemic violence" that is experienced as "*merely* the proper apprehension of reality."[27] While the stakes of correlationist thought are substantially higher here than they are within my own argument about science fiction and video games, her argument makes it clear that statements about what *can be thought* are crucial when it comes to re-grounding violence or producing liberation. Meillassoux then offers us a critique that might give us something other than "proper" reality and its universalized violences. This is a mode of thinking that is aimed at giving us access to more ways of considering *other possible worlds* and how their very rules might be different.

Hume's Problem

If the revelation here was simply that the universe exists before us, is made up of inert matter, and that we should recognize it as such, then Meillassoux's project

25 Meillassoux, *After Finitude*, 12.

26 Zakiyyah Iman Jackson, *Becoming Human: Matter and Meaning in an Antiblack World* (New York: NYU Press, 2020), 112.

27 Jackson, *Becoming Human*, 113. Italics in original.

would not have much interest to me. This is, after all, a book on speculation and science fiction games. However, this argument provides the basis through which he builds our understanding of how the material of the universe exists in a stable manner from moment-to-moment. Therefore, what Meillassoux provides for us is a way of understanding how the process of extrapolation works as well as a launchpad for understanding the value of more extensive speculation beyond the mere extrapolative.

After Finitude uses these arguments about the shape of reality to make multiple arguments about the relationship between human thought and possibility. If the material world and its physical laws are wholly independent from us, and are schematically accessible to us through philosophical abstractions, then we are able to think about the "rules" of the world in quite different ways.

The first way that Meillassoux asks us to think about possibility is contingency, which "expresses the fact that physical laws remain indifferent as to whether an event occurs or not—they allow an entity to emerge, subsist, or perish."[28] Contingency is at work, for example, when we are watching a juggler plying her trade on a crowded street corner. The balls might fall, someone might run into her, she might trip, she might start laughing, the sidewalk might crack from the heat, and so on. The laws of the universe hold together, but how they apply in any given material situation is highly variable.

The second form of understanding possibility is facticity, which "pertains to those structural invariants that supposedly govern the world" and "provide the minimal organization of representation: [the] principle of causality, forms of perception, logical laws, etc."[29] Where contingency names a condition under which many different things can happen as long as the physical laws of the universe hold invariantly, facticity radicalizes those ideas by suggesting a contingency of contingency itself where the invariants are malleable. To recall the juggler example, facticity asks us to think about the juggler turning into pudding, gravity ceasing to exist, or the sidewalk never having been. What if the very concept of causality, or the principles that hold 3D space together, were like those juggler's balls in the air and anything could happen to them?

Meillassoux derives his unique characterization of reality from what is called Hume's Problem, a philosophical conundrum first put forward in the work of the philosopher David Hume. Meillassoux introduces the problem in this way: "is it possible to demonstrate that the same effects will always follow from the same causes *ceteris paribus*, i.e. all other things being equal? In other words, can one

28 Meillassoux, *After Finitude*, 39.
29 Meillassoux, *After Finitude,* 39.

establish that in identical circumstances, future successions of phenomena will always be identical to previous successions?" We understand this as the concept of reproducibility, and Meillassoux's presentation of this idea, might cause a reader to scratch their head. After all, every part of scientific education, from childhood to post-graduate studies, is based on the basic precept that experimental procedure works and produces results. If I perform the same experiment multiple times under controlled and identical conditions, then the results can tell me something useful about the world. However, this is exactly what Meillassoux addresses by presenting us with the Problem: "can we demonstrate that the experimental science which is possible today will still be possible tomorrow?"[30] He follows Hume's example of the billiard balls in *An Enquiry Concerning Human Understanding* in order to elucidate what he means. Hume, outlining his philosophy of both causality and empiricism, writes that: "When I see, for instance, a billiard-ball moving in a straight line towards another; even suppose motion in the second ball should by accident be suggested to me, as the result of their contact or impulse; may I not conceive, that a hundred different events might follow from that cause?"[31]

Hume solves his problem via empiricism and information-gathering. If we position the billiards in the same way every time, and we strike them in the same way, then we can see that they move to the same locations. It is from this buildup of data that we can then begin to make stable claims about the world. Put another way, when I hit a billiard ball and strike another one, I can imagine many different pathways that the ball might take. Over time, on my journey toward becoming an internationally renowned pool shark and raconteur, I can even begin to build a substantial amount of empirical knowledge about the physics of the billiards table that will give me a competitive advantage. However, even though Hume provides a logical answer that we can know the future from the past in some kind of predictive capacity, he still ends his analysis with a taut conclusion: "When then should we give preference to one, which is no more consistent or conceivable than the rest? All our reasonings *a priori* will never be able to show us any foundation for this preference."[32] Hume recognizes that we can use empiricism to *extrapolate* how the future might emanate from the past, but he is haunted by the fact that there is no *a priori* reason that those billiards should move the same way each time. In other words, he is haunted by his own

30 Meillassoux, *After Finitude*, 86.

31 David Hume, *An Enquiry Concerning Human Understanding* (Oxford: Oxford UP, 1999), 111.

32 Hume, *An Enquiry Concerning Human Understanding*, 111.

speculative capacity. Something entirely unthinkable could happen the next time the billiard balls are struck.

Facticity answers Hume's Problem by saying yes, in fact, that haunted feeling that Hume has is one that should be embraced. Just because something worked in a particular way for all of recorded human history does not mean that it will always work that way. This answer is speculative because it posits a "what if" in the face of history and human understanding itself. To embrace this is to embrace the broad capacities for thought that speculation brings with it. "Speculation," Meillassoux writes, "proceeds by accentuating thought's relinquishment of the principle of reason to the point where this relinquishment is converted into a principle, which alone allows us to grasp the fact that there is absolutely no ultimate Reason, whether thinkable or unthinkable."[33] This radical speculation demands that we face up to material reality and realize that we cannot, with absolute certainty, make claims that the rules of existence in one moment will be followed up in the next one. Our ability to reason and make rational decisions or claims depends on us ignoring what haunted Hume: there is nothing that undergirds or supports our reality other than the faith that tomorrow will proceed like today and yesterday did. "There is nothing," Meillassoux writes, "beneath or beyond the manifest gratuitousness of the given—nothing but the limitless and lawless power of its destruction, emergence, or persistence."[34]

Meillassoux argues that human beings can think the world beyond us, the dead matter of the universe, and he proves that by demonstrating how we understand events that emerged before human consciousness. Our ability to do that means that we can think the world in conditions that exclude the human, and that adhere to principles that are true whether or not we are around to prove, or even perceive, them.[35] Following from this argument is the claim that there is no ultimate way for us to know that one moment will follow the next logically since there is no guarantor of that other than our own observations.

Taken together, these are philosophical claims about the ultimate bounds of speculation and the material world. They set the maximal and massive limit on what we can entertain and think. They tell a story of a species living in an ungrounded universe that simply manages to exist, and all the stories we tell ourselves about ourselves are positioned against a chaotic reality in which the atoms might decay without any warning. And for them to do so would not be

33 Meillassoux, *After Finitude*, 63.

34 Meillassoux, *After Finitude*, 63.

35 Meillassoux phrases this as the fact that a speculative materialist "believe[s] that it is possible to think a given reality by abstracting from the fact that we are thinking it." (36).

extraordinary, since the physical laws that kept them together were contingent the entire time.

What I take from Meillassoux's philosophical system is a baseline for understanding how speculation works. The very act of thinking about the next moment of human life, even in the most predictable circumstances, is speculative because it happens against a backdrop of chaotic uncertainty. Every second that you spend reading these words is a moment of *extrapolation* based on the last few moments of your life and it is a moment which affords *speculation* where you are thinking about what could be happening in the next.

This philosophical position set forward by Meillassoux is what has made me so invigorated about understanding how speculation works within video games. We constantly predict the outcomes of our actions within games, and we do so under the assumption that games are rational and empirical objects that will provide appropriate feedback to us that is in continuity with past actions. Our normative model of speculation centers on outcomes. Will the next time I press the jump button produce the same action? Will my weapon jam? Meillassoux opens up the possibility for thinking through both those forms of speculation and others, such as "will the systems in which I am performing these actions continue to persist?" In the remainder of the chapter, I will expand on Meillassoux's work specifically in relation to games by elaborating on what I call *mechanics of speculation*, a mode of speculation that exists as an affordance of science fiction games that marks how both forms of speculation emerge from players in video game play.[36]

Mechanics of Speculation

MIDSAC Pool debuted for public play in 1954. Housed at the University of Michigan and developed for the lab-built MIDSAC computer, *Pool* was intended as a showpiece for the technological capabilities of the computer and its 13 inch CRT television. Debuting eight years before *Spacewar!*, the common science fiction game ancestor, *Pool*'s novelty emerged from the task that it set before itself: calculating the physics of the pool balls so that they moved and operated in realistic ways. As a showpiece game that demonstrated computational capabilities to viewers and players, the ability for *Pool* to accurately represent a billiards experience and to allow players to make similar choices to the ones they would

36 As I have discussed briefly in the introduction and in the following chapters, there are obviously modes of speculation that are afforded by different media in different ways.

make when playing a physical ball of pool was a crucial one. In this way, the game's success as a demonstration was predicated on whether or not a player could import their empirical understanding of physics into the game experience with them. They needed to be able to bring what they knew about the world "into" the game experience. When a ball banks off the wall, it will move in the way that a ball is "supposed" to move.

MIDSAC Pool, as one of the origin points for video games, borrows on the same basic ideas that Hume did in order to explain the rules of the world.[37] The game was a successful one because the balls always moved the way they should have. Today worked like yesterday did; the sun rose and set like it should. Following Meillassoux's radicalization of Hume, though, we know that the ball bouncing off the rim of the pool table does not have to bounce back. Facticity tells us that physics themselves are contingent and unpredictable. While we do not expect it, and the likelihood of it is impossibly small based on the data we have, the ball hitting the edge of the pool table could bounce in any possible way. A critical error in the game's code could trigger, or an overheating issue might occur, or the laws of physics might simply decohere. While we do not *expect* it to happen, taking Meillassoux seriously on a philosophical level means that we simply *do not know* what can occur on the other side of an action. This very uncertainty opens us onto a way of recontextualizing both how game mechanics work and how speculation is prompted by our interactions with games.

A mechanic of speculation is a mode of interaction offered by a video game that generates speculation in a player. By "generates speculation," I mean that it forces a player to consider a potential arrangement of the world. This can be in the short term and very limited, in the case of a dialogue option with a nebulous outcome. This can be situated in the long term and unlimited, such as the choice of a piece of technology to research in the early part of a strategy game that impacts the rest of the experience. To recall the definitions from the early part of this chapter, a mechanic of speculation is that which pushes our extrapolative capability to its limits and holds onto an uncertain conjecture about reality. This form of speculation is predicated on Meillassoux's: we have to hold onto the fact that it would not be unexpected for the universe to radically change into some other form.

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37 This is a claim made by Alexander Smith in a writeup about the game where they write that *MIDSAC Pool* is "perhaps the first computer game to feature real-time graphics." See Alexander Smith, "The Priesthood at Play: Computer Games in the 1950s," *They Create Worlds*, January 22, 2014, https://videogamehistorian.wordpress.com/2014/01/22/the-priesthood-at-play-computer-games-in-the-1950s/.

A mechanic of speculation, then, provokes us to think about radically other worlds or potentials for our own world, and it can appear even at the micro-level of interaction. What distinguishes a mechanic of speculation from game mechanics in general hinges on how that mechanic takes us to the precipice of a potential alternate world. The fire button in a first-person shooter is built for maximum predictability, and the entire conceptual apparatus of an FPS is directed toward regularized, empirical outcomes. *MIDSAC Pool* operates the same way, militating against random outcomes. While these predictable mechanical experiences have the inherent speculation within them that all empirical actions do, mechanics of speculation are sharper and more direct. They are inflection points where we can look to the operations of how speculation is afforded or corralled. Mechanics of speculation offer up ways of interacting with the game and game world that have more open, unpredictable, or surprising outcomes. This does not mean that something shocking must always happen, but instead that the mechanic functions in such a way that the output derived from the input might undermine the premise of the game, the fiction of the game world, or the established relationship between the player and that game. In the following chapters, I will address moments where players click, press buttons, and perform routine interactions. I argue that those actions are mechanics of speculation in that they are all sharp inflection points upon which new worlds could be formed; it is precisely because of this radical openness that they are often quickly brought back into the fold of normative outcomes and frameworks.

An avid game player might already have some questions about how I use the term "mechanic," and for that reason I want to briefly pause and explain what I mean by a "game mechanic." This is notoriously slippery terrain. The term "mechanic" in relation to games has no set meaning, and a casual perusal of any discussion of game mechanics on the internet will give you a wide set of assumptions and nuances that fans, critics, developers, and academics bring to the term. In fact, the term's ambiguity is apparent in some of its earliest uses. In 1938, Ely Culbertson introduced the game *Go* to an American audience in his *Games Digest* publication by writing that "its mechanics can be learned more quickly [than *Chess*]" after suggesting that *Go* has a compelling set of "tactics and mechanics."[38] With no additional definitional information, we're simply supposed to take mechanics as they're given: they're the rough "stuff" of the game that are not its tactics and not (or at least not *exactly*) its rules. For these reasons of historical and critical ambiguity, I will provide three of the poles of the big tent that

38 Ely Culbertson, "Introducing Go," *Games Digest* 2, no. 2 (1938): 5. I am thankful to Kate Willaert for this citation.

is the concept of the mechanic, and then I will briefly elaborate my own understanding of the term.

The first is that of the "Mechanics, Dynamics, Aesthetics" model of game design and research which claims that mechanics are "are the various actions, behaviors and control mechanisms afforded to the player within a game context."[39] This is a massive set of things that we could call a mechanic. Within this model, *Super Mario Bros.* (Nintendo 1985) can be said to have a few mechanics: walk, run, jump, crouch, and shoot fireball. Some of those are not available from the beginning of the game, though. After all, a player begins the game as little Mario, who is so small that he cannot crouch. One must touch a mushroom to become a larger Mario in order to have access to the crouch mechanic, and shooting fireballs likewise requires coming into contact with a fire flower. This coming into contact function is a mechanic itself, which we can call "eat." We're not quite done yet, though, because many levels in *Super Mario Bros.* require the player to purposefully end them by jumping on a flagpole. And some of them have secret passages above the clouds or down into the bowels of the earth via pipes. So we also need some kind of mechanic that accounts for these voluntary actions that take us away from the main game spaces: "enter." Now our list of mechanics for *Super Mario Bros.* is walk, run, jump, crouch, shoot fireball, eat, and enter. In this model, mechanics are the things that one can do, and the definitional boundary is lightly drawn to provide designers and analysts with a broad tool that they can apply in robust ways.

However, that light definitional boundary also means that we have a very loose understanding of which actions taken in relation to the game should be understood as a mechanic. Is interpretation a mechanic here, or simply an epiphenomenon of human interaction with mechanics? What about reading a scene to determine the best way to approach a certain set of enemies? For the MDA model designers, the idea that the player would interact with mechanics is taken for granted, and the product of that interaction is labeled as a dynamic, or "the run-time behavior of the mechanics acting on player inputs and each other's outputs over time."[40] That would leave something like interpretation out of the realm of mechanics, and yet it is clear that the mystery and puzzle game genre depend strongly on presenting modes of interaction where the "actions" that the player takes are predominately in their mind. When I am attempting to solve a puzzle where I direct water to the correct pump in *Myst* (Cyan 1993),

39 Robin Hunicke, Marc LeBlanc, and Robert Zubek, "MDA: A Formal Approach to Game Design and Game Research," *Proc. AAAI Workshop on Challenges in Games*, AAI Press (2004): 4.

40 Robin Hunicke, Marc LeBlanc, and Robert Zubek, "MDA: A Formal Approach to Game Design and Game Research," *Proc. AAAI Workshop on Challenges in Games*, AAI Press (2004): 2.

the MDA model would say that the mechanic there is centered on opening and closing valves since those are my actual modes of interaction with the pipe system. Those are my equivalent actions to "run" or "shoot fireball" in the *Super Mario Bros.* example above. However, the work of the puzzle is obviously not centered in the manipulation of valves, but rather on my abstract reasoning about what kind of pipe manipulation will give me the result I am looking for. The broadness of the MDA model is productive in some places for coming to a decision about mechanics and strangely analytically limiting in others.

This technical sense of the game mechanic, specifically with an eye toward use cases for game designers, is complemented by the second perspective that I want to offer here, which is Miguel Sicart's from his 2008 essay in *Game Studies* titled "Defining Game Mechanics."[41] The purpose of the essay is to provide a definition that covers all of the myriad use cases in which the term is used in games culture, and to accomplish this task he turns both to already-existing academic usages and to the object-oriented programming perspective in order to create both his definition and some of the key terms that are included in his definition, which he presents as this: "game mechanics are methods invoked by agents, designed for interaction with the game state."[42] This definition presents a game as a dichotomy between agents, which could be human players or nonplayer characters, and the game world itself, which is anything from the 2D levels of *Super Mario Bros.* to the 3D space of *Grand Theft Auto V* (Rockstar 2013). He explains that these interactions with the world can, and are, often expressed in terms of a verb. To return to *Super Mario Bros*, both the player controlling Mario can *move* and the nonplayer goombas can also move; similarly, Mario can *jump* and the winged Koopa Troopas can also jump. There are some mechanics that are inaccessible to players, and there are others that are inaccessible to nonplayer characters, but each of those sets of mechanics interact with, and are bounded by, the video game's programmed rule structure. For Sicart, a game mechanic is a way of engaging with that programmed universe, and the work of game design is therefore the management of these mechanics in order to create a suite of "actions the player can take within the space of possibility created by the rules."[43] Like the previous definition in the MDA model, Sicart gives us an appropriately wide space from which to consider the game mechanic while also attempting to delimit it into a space more useful for future scholarship.

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41 Miguel Sicart, "Defining Game Mechanics," *Game Studies*, 8, no. 2 (2008): n.p., http://gamestudies.org/0802/articles/sicart.

42 Sicart, "Defining Game Mechanics," n.p.

43 Sicart, "Defining Game Mechanics," n.p.

Both of these ways of theorizing mechanics share a dependence on Katie Salen Tekinbaş and Eric Zimmerman's theorization of the "core mechanic" in their *Rules of Play.*[44] In their explanation, a game mechanic is a formal mode of delivering an intended experience to a player. A "core mechanic contains the experiential building blocks of player interactivity. It represents the essential moment-to-moment activity of players, something that is repeated over and over throughout a game."[45] While they dedicate a sizeable portion of a chapter in their game design textbook to this idea, they are resolute that there is at least a formal firewall between a mechanic and modes of thought that a player engages with around those mechanics. In their analysis of *Breakout* (Atari 1976), for example, the authors delineate a number of behaviors on the part of players: players learn to direct shots; they figure out strategies for efficient point scoring; they attain "strategic thinking and gradual skill development."[46] In their explanation, all is made possible by a blunt interaction between the player and the *Breakout* machine, the core mechanic of "rotate the knob with the wrist."[47] By creating a formal difference between *action* and *thinking about action*, they are able to formalize game design into discrete steps, which buys them the capacity to explain all of those steps in isolation. This formal splitting seems arbitrary to me, and it seems clear that the thoughts surrounding action have to be considered when we understand the intended inputs from a player and outputs from a game. The desire to do something in the context of a game cannot simply be the motor function and nothing else. It is the functional equivalent to saying that hiking is moving your feet or that the flight of a bird is wing flapping. Context, approach, and situational conditions obviously interact here.

Mechanics of speculation intervene in the game studies scholarly tradition by purposefully expanding what we mean when we say "mechanic." I see a mechanic as a mode of connection between a player and a game that is afforded by intention. A player presses the jump button to make Mario leap over a pit. A player considers the arrangement of letters in the crossword in front of them in order to figure out a confusing clue. A player reads through text logs in a mystery game to understand the backstory of the world in which a murder took place, compiling critical clues in the process. If we reduce these interactions to mere verbs or the rote physical tasks that allow them to take place, we lose the actual description of what is happening in the intentional interaction. While I think this

44 Katie Salen Tekinbaş and Eric Zimmerman, *Rules of Play: Game Design Fundamentals* (Cambridge: The MIT Press, 2004), 316–317.

45 Salen Tekinbaş and Zimmerman, *Rules of Play*, 317.

46 Katie Salen Tekinbaş and Zimmerman, *Rules of Play*, 320.

47 Katie Salen Tekinbaş and Zimmerman, *Rules of Play*, 320.

expansion of mechanics is critical across the field, I am deploying mechanics of speculation here in order to highlight the dual process of a mechanic that both accomplishes something in a game *and* encourages speculation about the past, future, or present of that world or the player themselves. In other words, when a player interacts with a story node in *Everybody's Gone To The Rapture* and wonders about the nature of the Pattern, both the interaction and the wondering are under the umbrella of "mechanic."

When I evoke mechanics of speculation, I am doing so in a register that understands the video game medium as one that invites and operates in concert with players and how they are attempting to understand the context the game is putting them in. As Alexander Galloway has famously written, a critical part of the video game medium is its existence as a series of actions.[48] Video games ask a player to do something, and the doing splits up phenomenal time into moments before and after the action that is taken.

For example, when I click a dialogue option in *Fallout New Vegas* (Obsidian Entertainment 2010), I am working through several distinct steps. I read or listen to the dialogue being presented to me, I look at my options of how to respond to the NPC, and then I make my choice among what I am given. If I click on a rude option that insults my interlocutor, I could cause a fight. If I choose a very friendly option, that might improve my reputation with the speaker and confer an unknown benefit. Most of the dialogue options I have the option to choose are purely informational and do not change the game state in any way, instead only providing additional context for my further interactions in the Mojave Wasteland.

The question of primacy here, of what is the thing that "matters" the most about this encounter (mechanics? setting? music? my affective reaction?), is an unsettled one within game studies broadly.[49] However, I would argue that no matter how you choose to situate this encounter, one always produces a situation in which speculation plays a constitutive role. Each of these options, and each click I make to signal my choice, enacts a speculative mode in which I have to imagine what kind of world state might be produced from that click. It might be wholly linear, meaning my click does not "matter" in the sense

48 Alexander Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis: University of Minnesota Press, 2006), 2.

49 See Timothy J. Welsh, *Mixed Realism* (Minneapolis: University of Minnesota Press, 2016), 58–59.

that it does not produce anything different than what existed before. However, I still have to *think* about what kind of world it *could* produce.[50]

This gaming situation of speculation that runs up against empirical reasoning is a foundational claim within game studies. In 1985, Mary Ann Buckles wrote what is understood to be the first dissertation on interactive fiction and video games more broadly. One of her central arguments focuses on how players interacted with early interactive fiction. She writes that "to read interactive fiction is to practice the philosophy of science in an artificial, restricted, imaginary world. Truth is determined by observing and analyzing events, distancing oneself from one's own preconceptions, testing whether one's interpretation of the events is actually correct, and forming a new interpretation if it is not."[51] In a practical sense, Buckles' "philosophy of science" is empiricism, and throughout the dissertation she argues persuasively that a key act of gameplay across the board is simply testing to determine what one can do and then using that empirical information to solve every problem within the same state.

While Buckles is unique in speaking directly to the philosophy of science, these claims about games regularly appear in the guise of uncertainty and the choices players make. This uncertainty about what happens after interaction is one of the affordances of games because they are happening in time and require action to progress from one moment to the next. In his book-length analysis of this fact of gameplay, *Uncertainty in Games*, Greg Costikyan writes that an "uncertainty of outcome is essential" for games.[52] While I don't agree that there are essential qualities of games, the fact that uncertainty about the outcomes of actions *could* be read as essential by a prominent game designer and theorist demonstrates the extent to which this relationship between action and outcome exists in games. This relationship between the known and unknown in games provokes Darshana Jayemanne to theorize the "performative multiplicity," a set of potential game performances that exist posterior to a given action.[53] These potentials that a player can sort through, or at least consider, are speculative. Certain mechanics create conditions under which the multiplicity is larger (like *Starcraft II* (Blizzard Entertainment 2010)); others create conditions under which it is much smaller (such as *Tic-Tac-Toe*). What is shared between

50 See Michael Saler's *As If* for an account of the ways that different media elicit speculation from their interacting humans.

51 Mary Ann Buckles, "Interactive Fiction," PhD Dissertation (University of California: San Diego, 1985), 4–5.

52 Greg Costikyan, *Uncertainty in Games* (Cambridge: The MIT Press, 2013), 13.

53 Darshana Jayemanne, *Performativity in Art, Literature, and Video Games* (London: Palgrave Macmillan, 2017), 133.

them is a form of reflection on possibility that a player performs before taking an action in which things then happen. Speculation, whether of the predictable extrapolative type or the more expansive kind, is also critical for the medium.

I am not the first person to suggest that the predictive capability of a player is a crucial part of the video game. In fact, some of our broadest academic and cultural narratives are predicated on the idea that games' interaction with our decision making capability will allow game design to do great things. This is implicit, for example, in Eric Zimmerman's arguments that the twenty-first century will be a ludic one predicated on the expansion of games.[54] Ian Bogost's procedural rhetoric is also built on the idea that a player's empirical capabilities can dovetail with how a game models systems, creating rhetorical situations in which the confluence (or friction) of the game with reality generates knowledge about the world. As he explains, the argumentative claims made by games often function as enthymemes, requiring a player to "fill in" a game with their own interactions which then come into contact with the programmed rules of the game.[55] Implicit in this claim is the idea that humans can take the game information in front of them, weigh options about different outcomes, and then make choices about how to impact those choices. The basic capability of a player to experience a procedural claim, or a claim made through processes, comes with the additional idea that they can imagine or speculate about different possible outcomes of that process given different conditions. It is this abstraction that Bogost highlights as "procedural literacy," or the ability to read processes and recognize them as abstract structures.[56] Other scholars make similar claims about the relationship between the player and how they learn a system. Alexander Galloway writes that gameplay is about "learning, internalizing, and becoming intimate with a massive, multipart, global algorithm. To play the game means to play the code of the game. To win means to know the system."[57] Knowing in this case also means understanding the outcomes of choices.

My focus on the game mechanic as a way that science fiction affords speculation can be likened to the way that science fiction author and critic Samuel Delany understands the function of language in science fiction. In distinction to critics like Darko Suvin, who claimed that science fiction induces speculation

54 Eric Zimmerman and Heather Chaplin, "Manifesto: The 21st Century Will Be Defined By Games," *Kotaku*, August 9, 2013, https://kotaku.com/manifesto-the-21st-century-will-be-defined-by-games-1275355204.

55 Ian Bogost, *Persuasive Games* (Cambridge: The MIT Press, 2007), 34.

56 Ian Bogost, *Persuasive Games*, 256–260.

57 Galloway, *Gaming*, 91.

by placing the empirical mind into a new context via cognitive estrangement, Delany placed language itself at the center of the speculative.[58] As he explains in an interview, the capacity to read science fiction literature requires someone to turn word descriptions into images that do not exist in our world; when Robert Heinlein writes a phrase such as "the door dilated," a science fiction reader has to construct a mental image of a universe "in which the technology for constructing iris-aperture doorways [is] available."[59] If texts are built from discrete units that generate speculation in different ways, as Delany argues in his essay "About 5,750 Words," then games should have their own ways of constructing media experiences that prompt speculation, and mechanics of speculation are a way that we can search out the inflection points of speculation within a given video game.[60]

I also find Richard Iton's analysis of the speculative and political effects of the 33 RPM LP record crucial for understanding the ways that games provoke and prompt speculation. The length and stability of the 33 as a physical object, compared to the 78 record, provided a "relatively large [canvas] for quality artwork" as well as a large amount of recorded time.[61] The way that one approached the record, through sizeable artwork and liner notes, was supported by the material reality of how much audio time could be pressed onto the physical disc. The work of this book is following a similar descriptive pathway as Iton, for the video game rather than the record, in the sense that I hold no strong distinction between the aesthetic and playable elements of games. One is introduced to the workings of the science fictional scenario through the way it is communicated to its human interactor, and in the case of video games that is through visual and audio aesthetics as well as the interactions that are made available to the player. Mechanics of speculation is a term that encompasses both of these qualities, as the aesthetic features of a game regularly determine if and when a player interacts with a game.

I do want to be clear that I am not trying to sneak a medium specificity argument through the back door. Rather, speculation that happens in concert with the material world is always happening through routes that those materials afford, and video games have their own routes like literature, film, or audio

58 Darko Suvin, *The Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven: Yale University Press, 1979).

59 Samuel R. Delany, *Silent Interviews: On Language, Race, Sex, Science Fiction, and some Comics* (Hanover: Wesleyan University Press, 1994), 33–34.

60 Samuel R. Delany, *The Jewel-Hinged Jaw: Notes on the Language of Science Fiction* (Hanover: Wesleyan University Press, 2009), 1–17.

61 Richard Iton, *In Search of the Black Fantastic* (Oxford: Oxford University Press, 2008), 117.

dramas do. Some of those routes are shared across media, and some of them are most often appearing in one specific medium. That is not to say, for example, that a film could not present viewers with a randomized ending that makes each viewing unique, and in fact that did happen with some screenings of *Clue* (Lynn 1985). However, that is not happening regularly with film, and thus we can say that film has a tendency toward linearity and regularity where games have a tendency toward contingency, randomization, and an increased demand on their players to move the plot along. This is not an argument about what specific media do to the exclusion of the capability of others. Rather, it is an argument about what regularized affordances of certain media forms tend to do within the cultural context with live in, which is always open to the curve of history.

Let me briefly return to *Tacoma* and *Everybody's Gone To The Rapture* to illustrate my point. The key distinction I drew between them before is that the former is extrapolative and the latter is speculative. It should be clear now that these two terms actually describe a spectrum of speculation. *Tacoma* is building itself moment-to-moment from predictable information, and keeps those rules within a linear timeline to allow you to "discover" its narrative, putting the player into what Rob Gallagher calls a "visitable past" of archival information.[62] It sticks closely to David Hume and his billiard balls.

Contrasted to this, *Everybody's Gone To The Rapture* gives you similar pieces of information, but fundamentally prevents the player from having complete knowledge of the world, its processes, and the narrative of the game, even if all of its narrative pieces are accessed fully. It is often frustratingly vague about what is happening and whether you have seen a "full" story in a particular game area. Furthermore, where *Tacoma* explicitly gives players a moralistic battle at the end of the game with its presentation of the people versus corporations, *Everybody's Gone To The Rapture* remains radically open, presenting the (possible) extinction of humanity as an ambiguous damning or a possible plentiful liberation. The exploration and navigational mechanics in front of us still only give us a partial story, producing an aporia that can only be crossed with a leap of speculative interpretation. Using all the tools in front of them, a player can still only say what they think happened, not what did.

While ultimately I think that *Rapture* is more radically speculative, both games *share* a mechanic that affords speculation. Both task the players with walking to specific locations and then witnessing events or conversations play

62 Rob Gallagher, "Volatile Memories: Personal Data and Post Human Subjectivity in The Aspern Papers, Analogue: A Hate Story and Tacoma," *Games and Culture* 15, no. 7 (2020): 769.

out through ghostly figures. For *Tacoma* these are holographic surveillance recordings of exactly what happened on the space station. In *Rapture* they are memories or recreations gathered by or created by the light-shaping Pattern. The player goes to certain locations and *activates* them, standing in front of these images from the past and following their narrative. In both games, this action requires purposeful movement through the digital environment. It requires the exploration of that environment, and an active seeking out of new locations.

The feedback loop of video games requires us to be able to think the possible outcomes of our choices. It requires us to be able to *extrapolate* from the current moment forward, and they provide a platform for us to *speculate* about radical possible outcomes. Mechanics of speculation offer a dual possibility of where we go from here. On one hand, the use of certain mechanics to ask us to think the immediate and further future gives us a useful way of thinking about how mechanics can function with ideological and political facets of certain games. These mechanics afford a certain way of evaluating the political scene of the game. On the other hand, the constant interaction with these mechanics creates a longitudinal question: if we're entrained on a particular mode of thinking, why would that mode of thinking simply stop at the supposed border of the video game?

Mechanics of speculation are my intervention into the massive, thorny knot of ways of interacting with and thinking alongside games. Philosophically, they are centered on a Meillassouxian understanding of how human speculation relates to the world. From a game studies perspective, this is my way of addressing the relationship between a player and the designed affordances of specific game scenarios. Practically, they are a way of explaining the powerful relationship between how the world is and how it could be, most often expressed in banal situations that we might not understand as uniquely speculative or complicated.

The Plenitude of Speculation

The majority of things I have written about in this chapter are, by their very nature, things we do not think about. We don't generally worry about whether the laws of physics will remain true from moment to moment. People who play games don't generally stop to consider the wide array of possibilities that are afforded by their every little action in a video game. Some might call these natural processes. Others might call them automatic. I would prefer to say that the lack of conscious thought about these things are simply an effect of many of our normative relationships to time and space, and to game controls within those relationships.

In this chapter, I have addressed the connections between science fiction video games and speculation in two key ways. The first is simply noting how they function in tandem. Science fiction video games dramatize and bring to the level of representation many of the core philosophical and theoretical issues at the heart of science fiction as a mode or genre and video games a medium. While a science fiction film or a Renaissance-era historical video game might do these things as well, it is precisely when this genre and medium are harmonizing together that we see their operations clearly. They both ask their interlocuting humans to consider the world as it isn't at this moment. They ask the player to speculate.

Second, by chasing the concept of speculation through the philosophy of Quentin Meillassoix, I have argued that speculation is an operation with radical potential. While we are always speculating *from* a position, the philosophical underpinnings of causal reality are so weak that we can use speculation to take us much further than we normally do. By plugging the radical alterity of reality into our understanding of video games, we can understand that games can provide platforms for us to take actions in speculative contexts as well as create actions that allow us to do moment-by-moment speculations. We can be made to live, at least for the moment, in a totally ungrounded world where anything could happen. Or, in other ways, we can take actions that produce those speculative worlds and give us experiences in them before we fall back into our own material worlds outside of the games.

These gateways to new contexts are what I call "mechanics of speculation," and they can be miniature and without much force or maximal and extremely impactful. We can speculate across a conversation or we can speculate about the future of the universe and its material. What matters is that there are specific actions we take within our interactions with the game that puts us in the context in which we can live within those speculations. The "what could happen?" is transformed into a "what is happening?" Within that, we build knowledge; we experiment; we gain experience outside of the regular conditions of our lives.

Mechanics of speculation afford a number of opportunities to see how science fiction games ask us to engage with them, and it provides a way of comparing the effects of those speculations on the ethical and political levels. Rather than looking to representation or media effects, we can do the comparative work of asking how games ask us to imagine potential worlds on a formal level. With this technique, we can delve much further than we have into the complex relationship between science fiction games and our world.

Chapter 2
Potential Labor: On VA-11 HALL-A

Introduction

In the science fiction bartending game *VA-11 HALL-A: Cyberpunk Bartending Action* (Sukeban Games 2016), there is a thin line between people and their work. Set in the year 2069, the game puts players in the shoes of Jill, a bartender for the VA-11 HALL-A bar in the cyberpunk metropolis Glitch City. The game is split into three distinct modes of gameplay. The first is a visual novel form of narrative development in which Jill speaks to customers and the plot of the game plays out for her and the robust cast of side characters. The second is made up of the actual shifts that Jill works in her bartending job, which requires the player to "read" the desires of the customers and then to create drinks that they ask for through a bartending interface. The outcome of these sections determines how the narrative plays out. Did you give your customer the exact correct drinks? Did you give them the wrong thing, but they liked it more than the drink they thought they wanted? Did you give them the wrong drink on purpose, driving them from the bar? All of these choices feed back into the narrative flow of the game, determining how the player relates to the various side characters and their struggles. Finally, the third takes place in Jill's home, where she can read the news of the city and purchase items for her apartment between shifts. These modes of gameplay split across two spaces offer a plenitude of forms of connection. They give the player a wide range of modes of interacting with the fictional world, and they provide the substrate for various plot threads that weave through pop music, international politics, journalism, and the role of the working class in shaping the future.

The central core of these spaces and plot threads in *VA-11 HALL-A* is work, specifically the pluralized forms of work that make up bartending. Playing as Jill, the player performs the manual mixing of drinks in an interface while interacting with customers on an emotional level. Making one's way through the game requires learning the different ways that drinks can be put together and which customers hint at their desires in particular ways. A good player of the game learns how to "read" the game world and to respond to it correctly, using empirical reasoning across multiple encounters with the same customers to understand exactly what they are ordering in cases where they want to be surprised or simply to drink "the usual."

https://doi.org/10.1515/9783110719451-004

When I played the game for the first time, I was struck by how quickly I was able to acclimate myself to the tasks that the game asked me to complete. I was able to become a worker in the science fiction dystopian of Glitch City, and I came to understand my play in terms of a time paradox. I am sitting in a chair in my present. The character I am playing as is living in a fictional 2069, a time when the economic and geopolitical landscape of the world has radically transformed. She does her job by pressing buttons on an interface and paying close attention to the social cues being sent her way. To play the video game in the present, I press the exact same buttons on the same interface, which is replicated directly for me. The work being performed by myself and this fictional character is identical. While my narrative circumstances are different, and my world is real and hers is not, the *actions* that we are performing are perfect replications of one another. The *work* that she is performing in the same *work* that I am doing. I am completely aligned with her job. It is a bridge through time and worlds, the work of the present being the work of a potential future.

There are obvious complications to this. Science fiction does not tell the future. It is not a predictive genre, and more often it is simply estranging the present into a "future" condition in where we can better see the world around us. The world of *VA-11 HALL-A* is not real, and its people do not exist. I control Jill and her social context through several sets of game mechanics, only one of which is the direct manipulation of her work that I am discussing above. These caveats standing, I have not been able to shake the way that *VA-11 HALL-A* crystallizes many debates about gaming representations of labor that have appeared over the past decade while also pushing them into new (and more complicated) positions. The relationship between what we do in games and how that is captured, expropriated, or ideologically aligned with capitalist economics is a well-regarded topic within game studies, and I will follow this trajectory while remaining in conversation with the subjective and speculative ways that the science fiction setting and ideas of *VA-11 HALL-A* produce a unique situation for understanding the laborious relations we can form with video games.

In this chapter, I will discuss these ideas through what I call "potential labor," or the way that forms of labor are captured and represented in science fiction games that are oriented toward work. My argument is that these ways of entraining labor in video games are a distinct form of a mechanic of speculation. As I discussed in the previous chapter, mechanics of speculation are moments of video game interaction that ask us to consider how the world might be different than it is; in a game centered on work, the interactions we have that put us in a science fictional context to consider those laboring relation are critical inflection points for considering our own working conditions.

Games that ask their players to do work, to *literally* perform the same actions as a worker within the game, are demanding that those player take on the subject position of a particular form of worker. Clicking on a probe in *Starcraft II* (Blizzard 2010) and ordering it to begin mining minerals is not engaging in potential labor.[1] That game has a top-down command structure in which a worker is made to do something. By contrast, *PowerWash Simulator* (FuturLab 2021) is a first-person game that has players manually power washing surfaces and items inch-by-inch, focusing on the micro-management of movements that any user of an actual pressure washing system will recognize. While the replication of the actuality of work being performed in the game here feels "correct," this is still not potential labor because it does not ask players to take on a subjectivity that is not readily available in the world. Games that activate or produce potential labor proceed from a speculative position in which players take on ways of being in the workplace that almost, but do not quite, exist yet. In other words, these mechanics-as-labor ask us to turn ourselves into workers for economies, situations, and contexts that do not exist. Even if these contexts do not exist, I argue, the performed work itself *does*. By playing this argument through to its end, I will intervene in discussions of games-as-labor, procedurality, and the video game as an educational tool, demonstrating that the production of potential labor within the science fiction game is a distinct mode of labor that needs to be taken seriously as a production of the self within video game culture.

Mechanics of speculation are a way of understanding the multiple inflection points that encourage us to consider new arrangements of things across video game experiences, and as I argue in this chapter, the production of the self operates in much the same way. Subjectivity is not an eternal solidity, but instead a flexible and malleable arrangement of the self that is disciplined and formed by the contexts around it. Certain inflection points within video games provoke speculation in the player, and these inflection moments have significant impacts on how we continue to play that game or consider ourselves in relation to systems beyond us. This chapter pushes these claims further by arguing that there are interaction moments that ricochet back into us as well, that arrangements of our selves and bodies and how they fit into the world might be produced from these mechanics of speculation. Potential labor names these moments of mechanical mirroring between players and work conditions that emanate new ways of being a worker from an economic condition that does not quite exist.

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1 Or, at least, it is far enough away from my use case here that I need to exclude it for heuristic reasons.

This chapter is wide-ranging in its pursuit of how potential labor is performed and how it is deployed in relation to both *VA-11 HALL-A* and the broader economic situation we find ourselves in. I'll first discuss the concept of immaterial labor and how the transformations in late capitalism have changed how labor is extracted from working populations. I will then briefly discuss how the labor question has figured into the game studies before turning to how games produce, hone, and solidify certain forms of subjectivity for their players through the process of subjectivation. I will then return to *VA-11 HALL-A*, following the threads from these arguments into a reading of this game and what it does to us via science fictional speculation. I end with a dystopian analysis of a KFC chicken frying training game that shows how close *VA-11 HALL-A* is to our working conditions. A short coda on investigation and the possibility of turning these systems toward liberation completes the chapter.

In total, this chapter argues that video games afford situations in which science fiction video games have a unique political valence in how they entrain players into a circuit of production that does not yet exist. *VA-11 HALL-A* asks players to do work that does not exist yet and actualizes a speculative economic position in our world. Science fiction is made real via this labor; labor is made science fictional through this representation.

Immaterial Labor

Developed by Maurizio Lazzarato, the concept of immaterial labor centers on a refocusing of how we understand labor in the so-called post-Fordist or digital economy. As Jeremy Gilbert explains, immaterial labor names the way that "even low-paid and largely manual work is expected to be performed by the worker with a high level of emotional and intellectual investment."[2] Like the earlier (and still salient) concept of "emotional labor" conceived of by Arlie Russell Hochschild in the 1980s, immaterial labor gives language to the way that communication itself is a site of production for the laboring person.[3] In developing emotional labor, Hochschild provided two modes of labor as examples: the fac-

2 Jeremy Gilbert, "Experimental Politics: Its Background and Some Implications," in Maurizio Lazzarato, *Experimental Politics: Work, Welfare, and Creativity in the Neoliberal Age*, trans. Arianna Bove, Jeremy Gilbert, Andrew Goffey, Mark Hayward, Jason Read, and Albert Toscano (Cambridge: The MIT Press, 2017), ix.

3 Arlie Russell Hochschild. *The Managed Heart: Commercialization of Human Feeling* (Berkeley: University of California Press, 1983).

tory worker and the flight attendant.[4] Writing from the emerging economic conditions of the late 1970s and early 1980s, Hochschild explains that while the conditions of labor and the actual work being done are obviously qualitatively different, those differences also point to a similarity of process: a factory worker making wallpaper is creating rolls of wallpaper as the product, and the flight attendant is creating "a state of mind" within similar constrained and extractive conditions. The labor of communication is what distinguishes the flight attendant's job from that of the factory worker, who is expected to get along with colleagues but whose job is not solely about the management of communication.

While Lazzarato makes no reference to emotional labor in his influential essay on immaterial labor, both theories are complementary and attend to the same fundamental transformation of labor that happened during the latter half of the twentieth century.[5] In this time period, an acceleration of communication technologies and transformations in the industrial production sectors occurred. Service industry conditions mutated alongside them, and workers were asked to perform different tasks than they previously had been. When Hochschild compares the factory worker to the flight attendant, her argument is that while both do some form of physical labor, the flight attendant is ultimately responsible for creating an emotional product for the consumer rather than a material commodity. Every part of the flight attendant's body and mind is angled toward producing a particular emotional outcome; they are constantly monitoring and managing their own body and emotions to guarantee consumer satisfaction. Lazzarato concurs, explaining that these forms of emotional labor are part of a portfolio of forms of communicative labor that have been spread throughout the economy, particularly into working-class labor. Everyone, he argues, has to participate in a set of economic relations that are predicated on the valorization of communication after the emergence of the service economy.

On a practical level, this means that the vast majority of workers across sectors use computer technology during their day-to-day operations (for example, at the time of my writing this, logging jobs in an iPad app or using Photoshop to edit production photos). The gig economy, whether it is rideshare driving or grocery pickup, is partially a job centered on phone app use and the emotional management of a constant stream of users who order that service. This also means that the lines between "conception and execution, between labor and creativity, between author and audience" have all become blurred as the work

4 Hochschild, *The Managed Heart*, 5.

5 Maurizio Lazzarato, "Immaterial Labor," in *Radical Thought in Italy: A Potential Politics*, ed. Paulo Virno and Michael Hardt (Minneapolis: University of Minnesota Press).

of thinking through the job and of doing the job have collapsed into each other.[6] For Lazzarato, this collapse of traditional distinctions has happened largely in the service of capital, which vastly prefers a population of workers who see themselves as "'active subjects' in the coordination of various functions of production, instead of being subjected to it as simple command."[7] For Lazzarato, the contemporary worker feels themselves to be more autonomous and capable of career change and control compared to the steel worker of the early twentieth century, and they might experience that feeling as emanating from a lessening of class antagonism. The worker feels less oppressed in their day-to-day life, and so they feel more free. However, that is not the case. Instead, the class antagonism between the capitalist and the worker has merely been re-posed "at a higher level," the level of the mode of communication itself.[8] Following a line of thinking traceable through Michel Foucault and Gilles Deleuze, Lazzarato claims that capitalism has fundamentally re-grounded itself at the mode of the production of subjectivity, and under that regime a worker must be able to be a team player who can speak the language (both metaphorically and literally) of the working society in order to fit in and be productive.[9] A worker must self-manage and commit their "personality and subjectivity within the production of value," creating a condition of self-discipline under the demands of capitalism that is so complete that a "worker is to be responsible for his or her own control and motivation within the work group without a foreman to intervene."[10] For Lazzarato, the worker position of the flight attendant, whose every smile and movement is labor, has been abstracted to such a level that, ideologically, all workers wake up each morning attempting to be the best flight attendant that they can be, no matter what their job is. Capital, he argues, simply "wants a situation where command resides within the subject him- or herself, and within the communicative process."[11] In the more than two decades since Lazzarato originally conceived of immaterial labor, this system of self-management and aggressive labor volunteerism has only accelerated into our contemporary era where the memetic forms of "entrepreneurship" and the "rise and grind" mentality operate through both the

6 Lazzarato, "Immaterial Labor," 133.

7 Lazzarato, "Immaterial Labor," 134.

8 Lazzarato, "Immaterial Labor," 134.

9 Lazzarato, "Immaterial Labor," 134. Lazzarato is in conversation with Gilles Deleuze, "Postscript on Control Societies," in *Negotiations: 1972–1990*, trans. Martin Joughin (New York: Columbia University Press, 1995), 177–182; Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage, 1977).

10 Michel Foucault, *Discipline and Punish*, 135.

11 Michel Foucault, *Discipline and Punish*, 135.

traditional labor market and now the pandemic-solidified gig economy. The Amazon warehouse worker, the ride share driver, the chimney sweep, the air conditioning installer, and the flight attendant are all beholden to a system of self-representation in the economy where every moment of commodity or service production is predicated on the management of communication technologies.

As both Lazzarato and the scholar Tiziana Terranova are clear, however, this does not mean that there has been a fundamental transition within capitalism. While scholars like McKenzie Wark have relied on similar arguments to that of immaterial labor to claim that capitalism has given over to some new system, both Lazzarato and Terranova argue that this is merely an intensification of the relationship between capital and the worker that has been ascendant since the 1960s.[12] In fact, looking more closely at how everyday work interfaces with technology and the internet, Terranova walks back some of the extremity of Lazzarato's claims. She writes that "the Internet does not automatically turn every user into an active producer, and every worker into a creative subject."[13] Rather than create specific worker subjectivities where these qualities are depended on regularly, such as the factory accountant, contemporary capitalism has made these qualities immanent to any given worker. Today you might be asked to learn how a new piece of billing software and hardware works. Tomorrow you might need to take video on your smartphone for insurance reasons. The next day you might need to learn how a productivity tracking app works. The qualities of a self-managed producer-consumer wax and wane like the tide in the contemporary economy, and flexibility becomes not just a desired quality but a disciplined habit. As these jobs shift, sometimes day to day, the work of capital itself is merely harnessing and providing clear boundaries. Terranova explains this flexibility in Deleuzian terms as "a virtuality (an undetermined capacity) which belongs to the postindustrial productive subjectivity as a whole."[14] The ability to be educated on a specific task and the self-motivation to enter into economies of zero-hour contracts is valorized specifically to produce a "postindustrial reserve force" that can be called upon for any task.[15] Ultimately, the way this labor force comes to exist as a mass is what capital seeks control of, as it desires "to retain control over the unfolding of these virtualities and the processes of valorization."[16]

12 McKenzie Wark, *Capital Is Dead* (New York: Verso, 2019).

13 Tiziana Terranova, *Network Culture: Politics for the Information Age* (London: Pluto Press, 2004), 75.

14 Terranova, *Network Culture*, 83.

15 Terranova, *Network Culture*, 83.

16 Terranova, *Network Culture*, 84.

The theory of immaterial labor is predicated on the control of both potentials and outcomes. Capital needs workers to be flexible and self-governing, but it would be existentially disruptive for those workers to use those same qualities to organize against capitalism itself. For both Lazzarato and Terranova, the subjectivities that capitalism makes available to its workers must be carefully maintained and delimited so that this precise reversal does not happen. As Terranova notes, the system that relies on immaterial labor is strangely close to overwhelming itself. "Commodities do not so much disappear as become more transparent, showing through their reliance on the labour which produces and sustains them," she explains. "It is the labour of the designers and programmers that shows through a successful web site, and it is the spectacle of that labour changing its product that keeps the users coming back. The commodity, then, is only as good as the labour that goes into it."[17] Rendering the commodity transparent is surely a recipe for the workers' revolution, but this all happens within a class antagonism that has been elevated to Lazzarato's "higher level." Even if the skilled craft of workers is shown transparently through in the final commodity, and even if their pictures are on the About Us page of the website, the fundamental system of immaterial labor that they navigate their lives through, *the very modes and ways in which they communicate*, are trapped within a specific mode of self-maintenance and control. The potential for a revolution of workers is foiled because the way that they become transparent, or the way that they come to be represented, is as the smiling face of the humanized capitalist worker. Seeing the labor of the factory worker was once a way of demystifying the commodity and revealing the process of capitalist exploitation that created those commodities. Now that transparency is its own mode of exploitation.

This question of exploitation has been centered within game studies, and is one of the key ideas in the study of labor and games. The relationship is one that is usually figured through terms of simulation and political economy. Julian Kücklich's concept of "playbour" reigns heavily in the genealogy of the study of labor in relation to games, pointing to the ways that the broader economy of games captures labor and makes it "unclassifiable" within a space between traditional waged labor and play itself.[18] For Kücklich, the issue within the economic conditions that developed in the early 2000s is that the line between play and work had been blurred into a slurry of value-creation in which traditional ways of analyzing the distinction between work and leisure began to break

17 Terranova, *Network Culture*, 90.

18 Julian Kücklich, "Precarious Playbour: Modders and the Digital Games Industry," *Fibreculture* 5 (2005): http://journal.fibreculture.org/issue5/kucklich_print.html.

down rapidly. Game modders, for example, were certainly having fulfilling experiences making mods to improve the game in their eyes, but these improvements were also directly monetizable by the rights holders to the games. Could that fulfilling kind of playbour still be alienated *if* it was so fulfilling? This fundamental question lies at the heart of much of the discussion about the intersection of games and labor.

While immaterial labor names a transformation in forms of labor within communicative capitalism, and emotional labor names a state in which the value of certain forms of labor has shifted, "playbour" simply denotes a condition of indistinction between two modes of experiencing life.[19] It is a confusion at the level of production. For my own part in this chapter, I am not interested in describing the political economic conditions of the extraction of value in the present. I am also unwilling to go down the path of breaking apart playbour into its component parts in order to determine where *exactly* exploitation begins. My own intervention here is at the level of what a game asks you to do, and I am uninterested in whether it is *experienced* as work or play in distinction with each other.

Following the work of James S. Hans, this chapter addresses what I see as a more fundamental relationship between play and work, that of production itself. In conversation with the work of Gilles Deleuze and Félix Guattari, Hans writes in 1981 that work and play are joined together by the shared root of natural production, and that each are grafted onto different socially-distinguished processes under capitalism.[20] The problem as Hans presents it is not that play and labor are becoming undifferentiated from each other; the problem is that work and play operate by the same rules and are entrained into human activity via the same processes. As Hans explains: "There is no such thing as pure play or pure production: both assume the character of the space they occupy at any one moment; or better, inasmuch as both occupy countless spaces at any one time, they take on the character of the space that *we* focus on at any one time."[21] The play/work distinction itself, with its focus on definitions, is a red herring.[22] Both play and work are manifestations of similar human capacities

19 Joyce Goggin makes this clear in "Playbour, farming, and labour", *Ephemera* 4, no. 1 (2011): 357–368.

20 James S. Hans, *The Play of the World* (Amherst: The University of Massachusetts Press, 1981), 45–48.

21 Hans, *The Play of the World*, 49–50.

22 Definitions and distinctions are critical to the play/work debates. Emblematic of this is Arwid Lund's "A Contribution to a Critique of the Concept of Playbour" in *Reconsidering Value and La-*

within different registers, and they share a processive function that is then differentiated at the moment of value extraction. Put plainly, work and play are captured in different ways, and the concept of playbour simply demonstrates that there are isomorphic systems of capture and value extraction that can grasp both equally.

Having outlined immaterial labor and how it creates an economic context for the way that we interact emotionally, communicatively, and technologically with our labor, I will now turn to the question of subjectivity and how these elements create players as something new. In this way, like Hans, I am focusing on the way that play and work have always been bound together. Both immaterial labor and how that labor is understood on a philosophical level are crucial pieces of groundwork to keep in mind to so that we can understand potential labor and how *VA-11 HALL-A* enables and deploys it.

Games, Subjectivity, and Speculation

Within the context of video game studies, the concept of subjectivity is often taken as a given or at least a stable set of qualities of a person. People are subjects. They have subjectivity. While games might interact with them, those people are often understood as solid and composed beings. When subjectivity is used as a foil for objectivity, for example, it can give the impression of a stable pair of opposed things in the world: subjects are perceivers of the objects that they engage with or operate on.[23] Video game studies often operates on an implied ontology of this type that sees players as part of an equation of "player + game = augmented player." For some, this augmentation takes the form of an educational transformation that will impact the player's knowledge and habits in the world.[24] While these models are rarely linear arguments about what games will definitely do to their players, they do suggest that if a player is put into a specific relationship with a game that has designed affordances to achieve certain goals that that game will have some kind of desired effect on a player. Mary Flanagan and Helen Nissenbaum's work is emblematic of how the academic

bour in the Digital Age, ed. Eran Fisher and Christian Fuchs (New York: Palgrave-MacMillan, 2015), 63–79.

23 Stephanie Jennings, "Passion as Method: Subjectivity in Video Game Criticism," *The Journal of Games Criticism*, 2, no. 1 (2015).

24 See James Paul Gee, *What Video Games Have To Teach Us About Learning and Literacy* (New York: Palgrave Macmillan, 2007); Ian Bogost, *Persuasive Games* (Cambridge: The MIT Press, 2007); Aphra Kerr, *The Business and Culture of Digital Games* (London: Sage, 2006).

field of video game studies broadly understands what a player is in relation to the video game.[25] By focusing on the concept of "values" and tracing how they are designed into games, Flanagan and Nissenbaum are interested in understanding how those values can be best communicated within one of the world's most popular media. Like the works mentioned above, the two authors are careful to claim that "there are no simple lines that connect characteristics of a game's elements (such as content, architecture, and actions) with the attainment (or suppression) of certain values and valued states."[26] For them, "designers' intentions matter but are not fully determinative; unintended values may be served in spite of these intentions, and intended values may fall flat."[27] Against this lack of a guarantee (what the cultural studies tradition might understand through the lens of encoding and decoding), Flanagan and Nissenbaum construct the figure of the conscientious designer who understands and is up to the task of positively claiming values within the cultural artifacts that they create.[28] Following a pattern similar to Flanagan's previous scholarship on critical play, the implication across both of these works is that while a designer cannot control for a wide variety of possible players, the rule-formation qualities of game design are such that a designer can, and should, have strong intentions about what kind of person emerges from a play experience. This analysis is of a piece with the arguments I discussed in the previous chapter about the traditional use of the concept of the mechanic and how its particular uses produce predictable outcomes. Broadly, across the different allied disciplines that discuss it, video game studies often operate on an implied player who is one whole "unit." Their ideologies, personalities, races, genders, or other qualities might be variable, but they exist as a stable figure who experiences and participates in play. In the same way that writing about economics or capitalism often conceives of a consumer or a worker, video game studies relies on the paradoxical ur-player, who is both everyone and no one, to ground the discipline's claims about how it works.[29]

25 Mary Flanagan and Helen Nissenbaum, *Values at Play in Digital Games* (Cambridge: The MIT Press, 2014).

26 Flanagan and Nissenbaum, *Values at Play in Digital Games*, 10.

27 Flanagan and Nissenbaum, *Values at Play in Digital Games*, 10.

28 For an explanation of encoding and decoding in the context of games, see Adrienne Shaw, "Encoding and decoding affordances: Stuart Hall and interactive media technologies," *Media, Culture & Society* 39, no. 4 (2017): 592–602.

29 This argument is persuasively made in Aubrey Anable, *Playing With Feelings* (Minneapolis: University of Minnesota Press, 2018).

However, there is a strain of game studies that performs analysis of the composition of the player's subjectivity in the same way that Lazzarato looks to the composition of the worker's. Approaching games phenomenologically, Brendan Keogh thinks through the way that a hybridized "doubled instability of worlds and bodies" is produced when a player interacts with a game.[30] Beginning with senses and capacities, Keogh answers critical questions about how players understand their relationship to and with games. For Keogh, the subject is "constituted between human and nonhuman actors."[31] In conversation with Gregory Bateson and Donna Haraway, Keogh writes that "to understand our embodiment in the world [...] is to understand our bodies not as stable and essential but as essentially unstable, as an intercorporeal affair continuously mediated by our ongoing interactions with other human and nonhuman bodies."[32] However, for all of the description of process here, Keogh stops short of claiming anything about the actual process of coming into subjectivity. He presents a theory of the composition of subjects in that they are formed via an ongoing process of exposure to the world, but he does not provide an account of the mechanisms through which subjects are formed. In other words, he does not address the way that a human being can exist in one state and then, through exposure to certain environmental conditions, come to exist in another state. Keogh's work provides a way of understanding the distributed or exploded components of subjectivity, but does not provide much of a route toward composition.

In my own previous work on the connections between humans and nonhumans in the composition of games, I have suggested that the Foucauldian concept of discipline could be helpful for understanding how subjects are formed.[33] However, in asserting the importance of process and the composition of games and players, both mine and Keogh's theories could be substantially enhanced by being in conversation with what Félix Guattari named "subjectivation," or the mechanisms through which subjects are produced within a specific social and historical context.[34] While both Keogh and I begin at the level of senses, organs, and assemblages, both of us fail to attend to an analysis of how "technological machines of information and communication operate at the heart of human sub-

30 Brendan Keogh, A *Play of Bodies: How We Perceive Videogames* (Cambridge: The MIT Press, 2018), 7.

31 Keogh, *A Play of Bodies*, 25.

32 Keogh, *A Play of Bodies*, 26.

33 Cameron Kunzelman, "The Nonhuman Lives of Video Games" (Master's Thesis, Georgia State University, 2014).

34 Félix Guattari, *Chaosmosis: An Ethico Aesthetic Paradigm* (Bloomington: Indiana University Press, 1995).

jectivity, not only within its memory and intelligence, but within its sensibility, affects and unconscious fantasms."[35] The way that a historical moment controls the composition of the subject determines the way that senses and components are able to be a part of that subject; a middle school bully who knocks someone's glasses off every day is a process of social subjectivation that determines the capacities and composition of that bullied kid and their subjectivity. Similarly, the school bus, the public school building, and the police stationed at the school are all determinant factors for how the bullied kid is subjectivated. While Keogh grasps a larger set of experience and embodiment that widen how we understand the relations between players and games, he does not present us with a broader account of subjectivity formation itself, instead focusing on the shifting ways games interact as objects with their attending subjects.

Proceeding along this line of thinking requires a slight maneuver when it comes to terminology. Subjectivity in this chapter does not operate in the same way that it does in other philosophical investigations, nor does it work as a simple other side of a dyad with objects. The subject and subjectivity in most discussions is derived from a long lineage of thought that emerges from John Locke, who theorized a concept of the subject alongside consciousness; to have the capability to think oneself as a self, and to interact with the world on those terms, was staged through subjectivity. As Etienne Balibar argues, "by making consciousness the criterion of personal identity, Locke was led, in effect, to revolutionize the very conception of subjectivity."[36] For Balibar, Locke rings a bell that can never be unrung in that he mapped a central mental unification between several factors of the human experience: "reflection, memory, responsibility, and appropriation," all of which are "united in a single phenomenology of 'internal perception.'"[37] While this claim about the origination of these ideas in Locke is not uncontroversial, for my purposes here it is appropriate since it gestures to foundational claims in European philosophy about the core function of the subject.[38]

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35 Guattari, *Chaosmosis*, 4.

36 Etienne Balibar, *Identity and Difference: John Locke and the Invention of Consciousness*, trans. Warren Montag (New York: Verso, 2013), 1.

37 Balibar, *Identity and Difference*, 61.

38 The argument through Balibar's *Identity and Difference* is that we have mistaken the formation of the subject in the history of thought. Rather than originating these ideas in Descartes, Balibar argues for the centrality of Locke to the concept of the modern subject and argues that later significant developments in the idea, including those made by Kant and Husserl, are predicated on responses to Locke's unique argumentation.

This conception of the subject as a controlling unity through which one establishes an intentional relationship to the world is an idea that continues through to today. In the discipline of game studies, Daniel Vella and Stefano Gualeni provide a glossary entry for subjectivity in their *Virtual Existentialism*, defining it as "a consciousness that occupies a particular standpoint towards a certain experiential domain."[39] The traditional subject-object dyad is founded on this, with the subject containing interiority and being able to mull over objects that enter into its field of interest (it is clear why Balibar calls the subject "imperial"). Within this tradition, the subject is not immutable. After all, human beings can obviously learn and reflect on the world that they live in; they are influenced by their objects. They can attain sense experience, and they can even learn jump shots in billiards to the chagrin of their opponents. It is from this set of facts that Vella and Gualeni build a theory of the virtual subject that interacts with video games and other virtual worlds as authentically experiential arenas where a player can "experiment and reflect on one's possibilities and on the meaning thereof."[40] Like the scholars of game education, Vella and Gualeni see games as an experimental zone that affords certain encounters that can then be taken up by the existential subject. Virtual worlds "can be used as technically-aided means for temporarily adopting new perspectives, to experiment and reflect on one's possibilities and on the meaning thereof."[41] Games are a site of experience for Vella and Gualeni, but the authors' dependence on a Sartrean existentialist framework ultimately means that they retain some values of the traditional mode of thinking the subject. Their subjects have intentions and existential projects, and they have contingent facts about them, like nationality or family structure, that do not fully describe them. Following Sartre, they hold that selfhood "transcends the contingent facts that are true about oneself in one's present situation."[42] Maintaining this model of the subject has obvious benefits for understanding the formation of subjectivity in games. It has a coherent subject at the core that is marked by contingent categories (race or gender, for example) that cause it to have certain kinds of experiences in the world, but what sits at the center of this model is precisely this experience-taking nodule that is the subject with its set of regularized

39 Stefano Gualeni and Daniel Vella, *Virtual Existentialism: Meaning and Subjectivity in Virtual Worlds* (Cham: Palgrave Macmillan, 2020), xxvi.
40 Gualeni and Vella, *Virtual Existentialism*, 12.
41 Gualeni and Vella, *Virtual Existentialism*, 12.
42 Gualeni and Vella, *Virtual Existentialism*, 3.

sense perceptions available to it at all times.[43] What allows Vella and Gualeni to collapse experiences in the physical world with those happening in virtual worlds is that, from the perspective of their subject, all of these things are the same kind of sense data that is processed in relatively similar ways. As they put it, "experientially engaging with a virtual world must always be recognized as an actual world experience."[44]

This conceptualization of the subject is often replicated within video games, particularly in the gameplay tutorials of science fiction games. For example, *Titanfall 2* (Respawn Entertainment 2016) opens with a segment in which a mech pilot named Lastimosa trains the player character, a rifleman named Jack Cooper, via a fully immersive sim pod. The player watches through Cooper's eyes as the sim pod comes "online" and establishes a neural link between Cooper and the pod. As the screen flashes white, Lastimosa notes that "to learn new skills, we need to be in the right state of mind." When images return, Cooper and Lastimosa are in a futuristic complex where Cooper has been outfitted with a "jumpkit" that gives him a wide set of new traversal and combat abilities. Within the diegesis, the sim pod has afforded a link between the mind, the body, and a projective space within the pod itself to create a digital world in which Cooper can learn freely and without bounds. It is the fully-immersive virtual reality experience that many corporations have chased since the 1980s. Subjectively, for Cooper, there is no "gap" between these simulated experiences and real-world combat training. To read this through Vella and Gualeni, this is the exact same flattening of experiences that happens between player subjects and their virtual worlds. In their model, when I connect up with the experiential world of a video game, I am having actual experiences. As a subject, I am being impacted by them. Crucially, this is not a naive media effects model in which shooting in the video game is shooting in real life. On the contrary, in the same way that Cooper can reflect on his simulator experiences critically precisely because they are *not* materially happening, our relationship with virtual worlds and games in such that we can *have* experiences while holding a critical and reflective distance from them.

This example from *Titanfall 2* also demonstrates the limits of this approach. Cooper the rifleman is a remarkably stable being. He is able to remain coherent and "himself" through a process of dramatic technological immersion. When

43 "In other words, our exploration takes as its starting point the assumption that there is a relatively consistent, and thus identifiable, combination of perceptions, proprioceptions, attitudes, comportments, and emotions that qualify our everyday existence and upholds our individual sense of self." Vella and Gualeni, *Virtual Existentialism*, 27.

44 Gualeni and Vella, *Virtual Existentialism*, 13.

presented with a digital world that is as wholly realistic as his actual world, he does not have any kind of issue adapting, and there is a sense that Cooper is just like the player. After all, I am also sitting in the chair. The game requires me to look up and down to calibrate the sim pod, it requires me to memorize the inputs in the tutorial, and then it gives me many chances to practice them in different scenarios. Within *Titanfall 2*, there is no discussion of how this technology might change Cooper as a being other than giving him new skills. There are not questions of how subjectivity might form differently, and obviously that is because *Titanfall 2* is not developing a theory of the subject, but is rather repeating the ideology of the stable self that Balibar identifies as originating in Locke.

Félix Guattari's concept of "subjectivation" offers what I see as a more accurate depiction of the way that subjectivity comes to be formed and exists within the world and in relation to video games. Contrasting with Vella and Gualeni's conception of subjectivity as stable in the face of experience, Guattari advocates for a centralized understanding of flux and process at the heart of the continual production of the subject. As he phrases the problem, we can either "objectify, reify, 'scientifise' subjectivity, or, on the contrary, we [can] try to grasp it in the dimension of its processual creativity."[45] In other words, rather than conceiving of the subject as a nodule with characteristics that then has experiences, Guattari advocates for an understanding of the subject as something that is always in flux and which alters in composition and quality during encounters with other things in the world. To understand subjectivity through the Guattarian lens is to begin from a first principle that there is no primary nodule of subjectivity that then comes into contact with the world. Instead there is, from birth, a series of "nonverbal focal points and vectors of subjectivation that manifest themselves throughout life in parallel with speech and consciousness."[46] Borrowing from Daniel Stern's work on infant subjectivity and his own work with psychiatric patients, Guattari argues that this is not merely the process through which subjectivity is formed at an early age but instead a baseline process that is always happening in each moment. In his actual practice, this took the form of realizing that patients who have experienced mental breaks could not simply be returned to a previous state (some kind of repaired nodule of subjectivity), but instead these people needed to be provided with contexts in which they could undergo subjectivation and build themselves from the ground up.[47]

45 Guattari, *Chaosmosis*, 13.

46 Lazzarato, *Signs and Machines*, 102.

47 Guattari, *Chaosmosis*, 6–7.

Of course, these systems are always operating in a particular moment in time and bounded by specific material conditions. Maurizio Lazzarato's reworking of Guattari's philosophical system allows for a more direct application to media objects like video games, and that application comes from a fairly pessimistic angle that Lazzarato approaches through two modes through which subjectivation operates.[48] One is "subjection" and the other is "machinic enslavement," the latter of which I am choosing to re-term *mechesis*.[49] The difference between these is on the level of organization. Subjection is when a subject warps around an object to afford some kind of technical act; when I use a telephone, I am experiencing subjection in that my practices of life are changing to adapt to that object's affordances. Mechesis, on the other hand, is the process of "constitut[ing] a 'humans-machines' apparatus in which humans and machines are but recurrent and interchangeable parts of a production, communications, consumption, etc., process [that] exceeds them."[50] In practice, this is what happens when I answer a CAPTCHA prompt that requires me to recognize streetlights in an image; I am performing an automated task that hooks into machine learning algorithms and affords me access to digital information systems. In doing so, I am functionally a computer's "inner eye" for a few moments. While a traditional view of subjectivity holds that subjects are in opposition to objects, what is painfully apparent here is that the most recent developments in capitalism have, for Lazzarato, rendered that dyad inaccurate for describing reality. What we are faced with are not ways that subjectivity morphs or changes in response to its machines (or games), but instead how subjectivity itself is fused with machinery to such a degree that a subject experiences themselves as self-same with the machine and its demands.[51]

48 Lazzarato's *Signs and Machines* is largely a systematization of Guattari's thought, and I will regularly use it here as a clarifying technique for parsing details in Guattari's work.

49 I have chosen this replacement for theoretical and terminological specificity of the word enslavement. I do not think that Guattari, Lazzarato, or translator Joshua David Jordan have made a mistake here; these thinkers are drawing a direct connection between current processes and slavery in the ancient world. However, I feel that enslavement here used in a non-technical sense elides too much specificity and, in my own context in the United States, calls up chattel slavery and its enduring legacy in ways that are not intended and which the concept does not speak to directly. Mechesis, or machine-process, captures the concept accurately for my purposes here.

50 Lazzarato, *Signs and Machines*, 26.

51 Rob Gallagher has written on other transformations in subjectivity that have happened in concert with the rise of gaming culture via the concept of "digital subjectivity." While this is not exactly what I am approaching here, a reader who is interested in games and subjectivity

While we certainly hold onto the individuality of our subjectivity, our continual interfacing with systems of subjection and mechesis also produce specific subjectivities that are compatible with capitalism's operating procedures. "Under capitalism," Lazzarato writes, "the processes of subjectivation and desubjectivation are just as machinic as the production of any other industrial commodity."[52] To render this cleanly: the activity of capitalism is such that we are built over and over again, minute to minute, day to day. It is not that I gain or lose properties in Lockean way, with a stable core being maintained throughout. That central core of the self, and the way it interacts with the world, is radically altered moment-to-moment. Its stability is only an illusion. Who *I* am does not depend on the disposition I have toward a particular experience, but instead how the materials around me are decoding my subjectivity and remaking it in the moment.

I see this processual creativity as a similar argument on the level of the subject as those of Quentin Meillassoux that I addressed in the previous chapter. For Meillassoux, the contingency of contingency demands that we think in broad ways about the composition of both phenomenal reality (our experiences) and the material world itself.[53] Similarly, I see Guattari as offering up a way of understanding the *contingency* of the *formation* of subjectivity. Where the traditional model of the subjective is contingent when it comes to its makeup and how it morphs in response to environmental change, Guattari allows us to go one level deeper into the composition of the subject itself. I see this claim as implicitly ethical and political since the composition of the subject in historical time is always bound up in systems of power; I believe that good descriptions are needed to do anything about that composition process. At stake here is an ethical claim about how we understand the subject either as a singular figure above the roil of the world or as the roil itself wrangled into shape by processes beyond it. In following Guattari, I take the latter path.

In Guattari's understanding of the subject, there is an originary "partial subjectivity" that is "pre-personal, polyphonic, collective and machinic" that is operated on by processes in the world.[54] Every moment of every day there are processes of overlapping subjectivation happening to each of us. The family, home, school, and office molds you down into a particular subjectivity, but that subjec-

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broadly should read his monograph *Videogames, Identity and Digital Subjectivity* (London: Routledge, 2018).

52 Lazzarato, *Signs and Machines*, 48.

53 I am not attempting the difficult philosophical task of squaring Meillassoux and Guattari at the level of ontology or metaphysics. For my purposes here, I see them as compatible, with Meillassoux describing the "molar" system at play and Guattari describing the "micro" system.

54 Guattari, *Chaosmosis*, 19.

tivity exists only so long as those structures can hold you in those ways. For Guattari, this is the only way to explain the plurality of the human, and this strategy also opens us to another way of understanding the way that the subject responds to media objects. In the traditional view, subjects respond to (media) objects and develop certain sense perceptions of them that either fit into or augment their mental model of the world. Within Guattari's framework, the film or the video game subjectivates the viewer or the player, not only changing their perceptions of the world but changing them *as a subject*. Their very mode of existing in the world warps, opening them up for transformative encounters, liberatory or constraining. As Guattari explains, a film is not "a passively representative image, but a vector of subjectivation."[55] Following this same theoretical line, Lazzarato argues that the capability for cinema to remix time and space, and to have us empathize with a fundamentally inhuman eye, destabilizes our subjectivity. On one hand, this is explosive. It transforms the seat of perception, identification, and our capability to understand our social relations, of "removing us from the social divisions of labor that assign us a role, a function, and a meaning."[56] It is tempting to read this as liberatory, and doing so wouldn't be wrong. After all, it is this moment of the suspension of standard aesthetics and an openness to pure heterogeneity from which radical change emerges. It is the chance for contingency itself to shatter. However, as anyone who has seen structural violence replicated in a film can tell you, it often does not. Instead, it leads us down a path of "dominant values" to a standardized mode of capitalist subjectivity.[57] While a radical cinema could use this process of subjectivation to alter subjectivities in such a way as to liberate them, the language of cinema, its very grammar, is structured in such a way that precludes this from happening in the standard film.[58] Narrative closure, stock characters, implicit ideologies, and even shot and scene structures render our subjectivities into recognizable shapes. Video games have their own dominant values and social codes, and so they structurally operate in the same way.[59]

How, then, do games specifically contribute to the subjectivation process as discussed by these thinkers? In what ways do games wrangle the sensorial capacities and assembled elements and turn them into a subject? Mary Flanagan

55 Guattari, *Chaosmosis*, 25.

56 Lazzarato, *Signs and Machines*, 111.

57 Lazzarato, *Signs and Machines*, 111.

58 In the next chapter I will delve into this shared relation between film and game aesthetics on a structural level.

59 A critic might note that this is a pessimistic and deterministic relationship with media objects. That is correct.

has already established the usefulness of this Guattarian mode of subjectivity formation in her *Critical Play*, asserting that the design of critical games functions at the level of the formation of subjective relations with the world.[60] Kishonna Gray has argued that games have specific modes of subjectivizing their players through specific racialized and gendered design patterns. One of these is narrative, which she argues has three different axes through which it intersects with players: an "event structure, [an] evaluative system, and [an] explanatory system."[61] These encompass the events that are shown in gameplay, the evaluative structure is the framework through which players understand how things come to matter in the game, and the explanatory system is how that all works out for the player. While this is a gloss on Gray's larger argument about ideology and how it is imposed on players through games, what matters for me here is that Gray provides us with language for understanding not just how players come to compose themselves in relation to games but also how those compositions are predicated on already-existing systems of feeling and understanding the world. When Gray explains that "narrative hides and makes invisible the operation of power relations masking the relationship between subjection and coercion," she is making a broader statement about how the connective tissue between players and games are always part of a process of subjectivation and being brought into the fold of a specific subject position due to certain historical factors.[62] While Gray is not directly in conversation with the tradition that I am invoking here, it is easy to see how her own understanding of concepts like symbolic violence are compatible with, and are mutually enriching, for a theory of subjectivation in relationship to technology. As she explains in *Intersectional Tech*, symbolic violence is a mode through which hegemonic powers in the gaming space, such as whiteness and masculinity, maintain their structural domination over people in other racial and gender categories.[63] When deployed through technological means, symbolic violence is a way of deploying power to wrangle subjects into coherent identities recognized by the system so that they might be better coerced and dominated. Gray claims that this is perhaps more insidious than physical violence because it is "embedded in individuals' very modes of action and structures of cognition."[64] What Gray is arguing here is that there is a system of subjectivation at work in both games and their supporting technolo-

60 Mary Flanagan, *Critical Play* (Cambridge: The MIT Press, 2009), 147–148.

61 Kishonna Gray, *Race, Gender, and Deviance on Xbox Live: Theoretical Perspectives from the Virtual Margins* (New York: Elsevier, 2014), 5.

62 Gray, *Race, Gender, and Deviance on Xbox Live*, 5–6.

63 Kishonna Gray, *Intersectional Tech* (Baton Rouge: Louisiana State University Press, 2020), 32.

64 Gray, *Intersectional Tech*, 32.

gies, and it operates in a dual-facing way; it reifies the social power of those who have historically been on the dominating end of the social at the same time that it re-asserts the oppressive capabilities of those who have been on the receiving end of that oppression. All of these people are experiencing a constant becoming-subject, a subjectivation, and yet the material and historical conditions afford radically different experiences within that system.

Another robust mode of analysis for understanding how players are produced as subjects in relation to games is Shira Chess' development of the concept of designed identity. Designed identity is the language that Chess gives to an industry convention in which ideology comes to summon up a particular kind of figure who then the industry designs for. This is a process of both conceptualizing a particular market position *and* asserting its existence in the world. Chess explains that there are three major factors in creating a designed identity: "(1) industry conventions, (2) textual constructs, and (3) audience placements."[65] She acknowledges that "each of these elements is a result of a series of individual decisions and choices" but that "they speak to larger cultural issues that ultimately manifest in game design and advertising. Designed identity functions ideologically—it is about idealizing an assumed audience and reformatting that audience in an understandable and digestible way."[66] To put designed identity into terms I have already introduced, it is a way that designers craft particular subjectivities for players, who then inhabit those subjectivities in the act of gameplay. Chess understands that habitation of subjectivities by players in Foucauldian terms. "Games train us as subjects," she writes, looking to both the way that controllers discipline players and how the mental models that players develop while playing games necessarily impact their stance toward the worlds they inhabit.[67] Cautioning us to not consider this as some kind of deterministic domination by technology, Chess tempers this claim by understanding the body as a boundary envelope rather than as something essential. It is a place where subjectivities get sorted out, sometimes in contest with one another, and not a place of solidity. This leads her to demand we "remember that we are indistinguishable from our technologies" and that "the institutions that created technologies are ideologically driven, and it would follow that those technologies are both part of and form our subjects."[68] The model that Chess provides is one that takes into account both Keogh's phenomenology and Gray's ideological subsumption

65 Shira Chess, *Ready Player Two* (Minneapolis: University of Minnesota Press, 2017), 32.
66 Chess, *Ready Player Two*, 32.
67 Chess, *Ready Player Two*, 155.
68 Chess, *Ready Player Two*, 156.

of the video game apparatus. Designed identity is a way of talking about the ideological container that is the video game. It is built by the industry, imposed on a player in the moment of interaction, and then slips that player into a subjectivity with specific qualities.[69]

In this section of this chapter, I have explored a mode of understanding game subjectivity not as something fixed then augmented but as a cluster of qualities that are always, and are constantly, in flux. That flux is then operated on by the outside world, manipulated into certain codes and shapes. As Guattari writes in a tossed-off fashion, "subjectivity needs movement, directional vectors, ritournelles, rhythms and refrains that beat time to carry it along."[70] To reframe this in relation to the process of subjectivation when a human encounters a video game, our subjectivity is processed through beats produced by designers and rhythmic patterns established by social structures.[71] In order to play a game, you have to become a certain kind of person. In order to be a certain kind of person, you have to have a model or at least a bundle of qualities to inhabit, and those are produced in time and in alliance with structures beyond your control. That is subjectivity.

Before turning to *VA-11 HALL-A* and how it intersects with both immaterial labor and the formation of subjectivity within video games, I want to briefly address the relationship between subjectivity and science fiction. If my argument here is that speculative games are a subjectivating force on a fundamental level that opens players up to new forms of (or transformations within) immaterial labor, then it is necessary to speak briefly about how science fiction works alongside games to create subjectivities.

One way of considering the way that science fiction operates on subjectivity is through the classic case of Darko Suvin's concept of the novum.[72] For Suvin, "a novum of cognitive innovation is a totalizing phenomenon or relationship deriving from the author's and implied reader's norm of reality."[73] A novum is an event or an object which, when developed or invented in a fiction, creates an empirical altered world. This world is wholly different because it is a totalizing phenomenon, by which Suvin argues it "entails a change of the whole uni-

69 In many ways, this looks similar to the sketch of the work relation that Kathi Weeks discusses. See Kathi Weeks, *The Problem With Work* (Durham: Duke University Press, 2011).

70 Félix Guattari, "So What," in *Chaosophy*, trans. Chet Wiener (New York: Semiotext(e), 1995), 13.

71 Thomas Apperley's work on rhythmanalysis in his *Gaming Rhythms* is a fruitful companion to my work here, but ultimately we diverge in how we conceive of the formation of the subject.

72 Darko Suvin, *The Metamorphoses of Science Fiction* (New Haven: Yale University Press, 1979).

73 Suvin, *Metamorphoses*, 64.

verse of the tale."[74] The development of a plague that turns people into zombies or the day that SkyNet goes live; these are novums, and they can appear in various forms. What is critical about the novum is that they create that totalizing change and that the world in their wake can be understood by a reader who does not exist in that world. What unites a reader or viewer of a science fiction tale with that universe is not merely the ability to see oneself in it, but instead it is predicated on our ability to think through the situation that we can see through cognitive processes that we use in our day-to-day lives. By calling science fiction the "literature of cognitive estrangement," Suvin argues that it is precisely our capability to estrange ourselves from our daily conditions combined with our ability to cognitively work through our understanding of world conditions other than our own which gives science fiction its power. [75] Suvin writes that science fiction "sees the norms of any age, including emphatically its own, as unique, changeable, and therefore subject to a cognitive view."[76] From this foundation, we can understand that embodying new modes of thought is part and parcel of the experience of science fiction agnostic of the medium it is a part of.

From this claim about science fiction, we can see how speculative work fits into a program of generating potential subject positions. As Sherryl Vint has pointed out, this production of a new world can simply do the work of replicating the world that we already have. In her analysis of William Gibson's *Neuromancer*, she demonstrates that the novum of cyberspace and many technologies that augment the body and mind of that world still end up producing subjectivities that have many of the same ideological constraints as our own world. The console cowboy Case is able to immerse himself in a cyberspace without bodies, becoming pure mind, while the character Molly Millions is biocybernetically enhanced to become pure bodily function; on one hand, this is liberatory for thinking about how these technologies might allow for human change, on the other hand, it simply reproduces the associations of masculinity with mind and femininity with the body.[77] To empirically consider oneself within the world of *Neuromancer*, then, is to accept some of the ideological constraints of that world. Vint writes that "Gibson's novel articulates a particular type of subjectivity that is interested in repressing the body, and it suggests why this stance would be desirable: the subject wishes to sustain a construction of mastery and

74 Suvin, *Metamorphoses*, 64.
75 Suvin, *Metamorphoses*, 4.
76 Suvin, *Metamorphoses*, 7.
77 Sherryl Vint, *Bodies of Tomorrow: Technology, Subjectivity, Science Fiction* (Toronto: University of Toronto Press, 2007), 104.

the body undermines this construction," and in doing so she demonstrates a kind of disjuncture between what *Neuromancer* is doing as a novel and what a video game might do.[78] In reading the novel, we analyze Molly's world and understand the ideological constraints, and if we're internalizing something it is a logic of how the world operates. We sublimate how we know our world works to the way the fiction works in order to understand the decisions and moves that the characters are making. We align ourselves with that fiction, but we do not come to live by the rules of it. While Vint's analysis of how science fiction produces subjectivity is correct for me, I understand the way that science fiction games subjectivize players to be a more intensive process. Mechanics of speculation create specific affordances between humans and games in which the flux of the subject can have its "rules" rewritten on the fly. If the novel *Neuromancer* brings a reader *into* a fold where certain ideologies are treated as facts, then science fiction games supercharge this by *folding* their players; as Ted Friedman puts it, playing a game requires someone not merely to identify with a subject position but to identify with the hardware itself, absorbing its mode of thought into how one interacts with the world.[79]

What is at stake here in my argument is not simply the concept of subjectivity and how a character might come to be understood as a subject. I am also not interested in what a text says about subjectivity in a broad sense. Instead, with the concept of subjectivation established, I will turn to how science fiction games deploy specific affordances to create particular kinds of subjects in relation to a capitalist situation. If cinema produces particular subjectivities with its modes of visuality, and science fiction texts use their words to create other worlds and times that people can imagine themselves in, then I argue that science fiction video games accomplish this in their own way. Science fiction video games about *labor* do it in ever-more-specific ways, and they inherently depend on mechanics of speculation that guide players into specific ways of understanding their relationship to the world and what that world might be like.

The remainder of this chapter is dedicated to a close reading of *VA-11 HALL-A* that foregrounds labor mechanically and representationally. By looking attentively at how the game asks players to "do" labor via their interactions, I will trace how these mechanics centered on immaterial and emotional forms of labor come to subjectivate the player in ways that make them more amenable to emerging economic forms. The act of working these mechanics puts the player

78 Vint, *Bodies of Tomorrow*, 109.

79 Ted Friedman, *Electric Dreams: Computers in American Culture* (New York: New York University Press, 2005), 136.

in a subject position where they naturalize the performance of potential labor, a labor which itself produces a world to come.

VA-11 HALL-A and the Speculative Bartender

To return and remind: *VA-11 HALL-A* is the story of a bartender named Jill, her coworkers, and the patrons who come into VA-11 HALL-A (or Valhalla), the bar she works in. Using the pixel art style and UI forms from classic adventure games, *VA-11 HALL-A* pulls from this lineage of science fiction games and the historical corpus of cyberpunk to fill out its world. The bar is located within Glitch City, a city-state controlled by the Zaibatsu Corporation, and the bar patrons Jill encounters are almost entirely made up of stock characters from the cyberpunk imaginary. A beautiful hacker, an augmented assassin, a private military member, and various versions of Lilim, or artificial humans, become regulars in the bar. Working heavily within the cyberpunk imaginary, *VA-11 HALL-A* also uses these characters and their "gritty" existence to pursue "edgy" writing. The women in the game regularly talk about their breast sizes in the comparative; some of the patrons are extremely sexist toward Jill and other women in the game; the Lilim named Dorothy, one of the game's most important characters, is a sex worker who has transformed her artificial body so that it resembles that of a 13-year old girl. While the first two are obvious transgressions of "good" social order, the last is an explosion of social mores, and Dorothy as a character is deployed almost entirely to make us react in shock. As one reviewer wrote, this happens "because this is cyberpunk and cyberpunk always goes to the grossest places."[80] While I am unclear on whether or not this is simply something that "comes with the genre," the explanation of Dorothy and the economic condition she lives with is presented as a disturbing part of a global underground sexual economy.

If the content of the game skews toward the transgressive, then the game's modes of interaction tend toward the traditional. The vast majority of *VA-11 HALL-A* is spent in a first-person view from the perspective of Jill behind the bar. From that position, we can see the customer who is talking and ordering drinks on the left of the screen, and the right side of the screen is dominated by the drink mixing station that provides the basic mechanical framework for

80 Sarah Dufrau, "'VA-11 Hall-A' Is A Good Gay Video Game For a Winter Murder Break," *Autostraddle*, December 7, 2017, https://www.autostraddle.com/va-11-hall-a-is-a-good-gay-video-game-for-a-winter-murder-break-403896/.

the game. The operational flow of the game involves patrons entering the bar, ordering drinks, and chatting with Jill. At various points in the conversation they will order new drinks. Each patron has their own preferences when it comes to drinks, and some will state those clearly (ordering a Beer) while others might simply ask for something more generic with a mere adjective such as "bubbly" or "strong."

Each possible drink in the game is listed in a handbook that covers the left side of the screen during the drink making portion of conversations, and the drinks have various categories (bubbly, manly, spicy, etc.) into which they are sorted. The actual process of making a drink requires looking at its recipe in the handbook and then manually assembling it in the interface on the right side of the screen by hitting a few buttons. These buttons correspond to several different chemicals that, when combined in specific amounts, produce alcoholic drinks. The gameplay is based on memorizing these various combinations and understanding the ways they can be augmented by replacing certain ingredients with others. It is bartending abstracted one step backward into some more conceptual component parts.[81] Over the course of the game, a player begins to recognize some of Jill's regulars and their preferences while also learning the basic mixing ingredients for a few of the less-complicated drinks. If things are going well, a player who meets a new character who asks for something "classy" and "strong" is going to be able to put together a drink called the Fringe Weaver, which contains only two ingredients, without having to consult the drink recipe book. The speed at which a player begins to take on the subjectivity of a bartender and "read" a situation accurately, and without conferring with the disciplinary encyclopedia of drinks, has a direct bearing on gameplay success and getting different endings.

While the bartending portion might be mechanically sensible to a reader who hasn't played the game, it might be confusing at this point about how *VA-11 HALL-A* fits into the lineage of visual novels and adventure games. After all, I have not introduced dialogue options or puzzles or routes or any of the other mechanics or conceptual apparatuses that are associated with those genres.[82] This is because the game does not rely on a traditional system of choosing between dialogue options to create opportunities for player choice. Instead, it varies its dialogue based on how well the player (as Jill) is able to fulfill drink

81 It is also reminiscent of the delightful Coca-Cola Freestyle machine.

82 What this game has most in common with visual novels is its database logic of reference and the routing that a player can take to maximize relations or uncover hidden information. See Hiroki Azuma, *Otaku: Japan's Database Animals*, trans. Jonathan E. Abel and Shion Kono (Minneapolis: University of Minnesota Press, 2001).

orders. Doing a good job increases Jill's earnings and makes patrons like her more, allowing them to open up and express themselves more easily in current and future encounters. Doing a poor job produces the opposite effect. The interweaving of the bartending and the narrative flow of the game, then, suggests that our experience of the game is looking out through Jill's eyes. When we mix ingredients, we are Jill, and in the language of Gerard Genette, *VA-11 HALL-A* is intensely focalized on Jill and never strays from her perspective on the world.[83] While Jill's history before the start of the game is mostly occluded, the vast majority of her thoughts and all of her physical actions are available to the player, who is manually controlling both. While many games ask us to take on the role of a particular character and interact with the world through them, *VA-11 HALL-A*'s absolute reduction of player and character alignment into the performance of a job has implications for how the player is subjectivated by the game. We experience the world through Jill. We are spoken to as Jill, we are asked to make decisions as Jill, and we do Jill's work as a bartender. Most importantly, we do that work identically, manipulating a screen in the exact way that we are told Jill is doing so. At the same time, the game breaks from Jill's first-person perspective a few key times, and it is this breaking that helps us understand the relationship between speculation, games, labor, and subjectivity that *VA-11 HALL-A* provides us.

To understand how *VA-11 HALL-A* creates a system which produces potential labor, I'm going to look to three distinct parts of the game. First, I will discuss the menu-driven sections of the game that ask the player to make choices within the job of bartending, mechanically connecting these to what I am calling potential labor. Second, I will discuss the limited third-person sections of the game that take place in Jill's apartment to understand how this formal break still operates within the subjectivating mechanisms of the game. Finally, I will address the one moment in the game that Jill is in front of the bar rather than behind it, the only true break from the flattened subjectivity that the character and the player shares. Each of these analyses offers a different way of positioning both Jill and the player, and it is through a composite reading that I'll demonstrate how *VA-11 HALL-A* works when it comes to asking players to perform potential labor.

As I explained previously, the majority of the game takes place from the first-person perspective of Jill. When a player is pressing a button to manipulate the mixing machine, so is Jill. While mixing drinks using this interface, several

83 Gerard Genette, *Narrative Discourse: An Essay on Method*, trans. Jane E. Lewin (Ithaca: Cornell University Press, 1980), 189–190.

things can be in the direct view of the player: the character Jill is speaking to or serving is always on the left side of the screen, and the right side is dominated by the drink-making interface. While consulting the drink recipe encyclopedia, the character on the left is replaced with it. When we're seeing a person, then, the game is clearly intended for us to understand ourselves as having a "face to face" conversation. The same can be said for manually looking at the drink encyclopedia and the mixing interface. Whatever the player happens to be looking at is what Jill herself is looking at, presenting a moment to moment narrative of a bartender juggling conversation, research, and the cognitive labor of remembering and inputting drinks into a computer system all at once. While that screen interface is "flat" like any given order management screen in the service industry is, the field of view where customers appear is "deep" and includes a background that looks roughly the same as any given bar in our current world. Some screens near the ceiling advertise drinks, a few gambling machines rest near the base of the wall, and posters crowd the space between. While new and old characters rotate in and out of this view port, it does not change substantially over the course of the game, leaving us with a "same thing every day" view that anyone who has ever worked in the service industry can empathize with.[84]

My understanding of how these visual elements work in relation to subjectivation is aligned with Fraser Allison's discussion of focalization and subjectivity as a system of player and character (dis)alignment.[85] Discussing the first-person view of *Mirror's Edge* (DICE 2008), Allison notes that the game orients its visual design around the expertise of protagonist Faith through the visual coding of her "Runner Vision."[86] Within this system, the player takes on the free-running expertise of the character through their very experience of the world, seeing optimal movement objects as red, objects that will slow them as blue, and lethal objects as jet black. This aligns the capabilities of the character and their player, but I would argue is substantially different due to the mechanical differences involved. When I am playing *Mirror's Edge*, I am not "doing" the work of free running. Faith's legs move via my analog controller stick in a process of abstraction that makes what she is doing to accomplish her goal (within the diegesis) and what I am doing (in the world outside of the game) radically different actions.

84 See the first chapter of Dani Cavallaro, *Anime and the Visual Novel* (Jefferson: McFarland, 2010) for a discussion on the relationship between foreground and background within the visual novel aesthetic.

85 Fraser Allison, "Whose mind is the signal? Focalization in video game narratives," in *Proceedings of DiGRA 2015: Diversity of play: Games – Cultures – Identities* (2015).

86 Allison, "Whose mind is the signal?," 8 – 9.

By contrast, what Jill is doing in the diegetic world of *VA-11 HALL-A* is identical to what I am doing when I am playing the game. To perform her job, she listens to people talk and patiently waits for them to finish. She consults a drink encyclopedia via a digital interface. She inputs directions into a machine that mixes and serves drinks to robotic specifications. I am doing all of these things in the real-time of the bar shift in the exact same way that Jill is. Materially, there is a distinction between me sitting in the chair and Jill the fictional character behind a bar in a far-future cyberpunk city. At the level of action, there is no distinction between us.

What are the implications for this? One is that it enables us to understand *VA-11 HALL-A* as a direct subjectivation machine in the way that Guattari and Lazzarato mean. The game shapes my approach to the world according to its affordances, and it turns me into a kind of worker through the conduit of my play. Another is that it transforms some of the claims made about the relationship between games and labor. This recognition gets us closest to the way that immaterial labor has been theorized within game studies, particularly Nick Dyer-Witheford and Greig de Peuter's argument in *Games of Empire* that immaterial labor is responsible for much of the spread of games in corporate atmospheres.[87] If games can align in such a way as to change the way that life is lived at the level of experience, then the potential for direct and purposeful subjectivation has an expansive realm of potential achievement.[88]

What I am arguing here, that a video game might subjectivate someone and transform them into a particular kind of laboring mind, might seem outlandish or the realm of science fiction itself. It would be less believable if it were not already being claimed as a critical capability of video games from game developers. For example, this is at the heart of the United States' military's strategy of using video games as both training and recruitment tools and how that perspective has changed in the past 20 years. Robertson Allen's analysis of the recruitment and training tool *America's Army* (United States Army 2002) reveals that the once-contradictory goals of military simulation (realism) and entertainment products (compelling experiences for consumption) have become less antagonistic, leading Allen to call *America's Army* "*the* watershed moment in the serious games movement" in that it "changed this start distinction between the fun and

87 Nick Dyer-Witheford and Greig de Peuter, *Games of Empire: Global Capitalism and Video Games* (Minneapolis: University of Minnesota Press, 2009), 29.

88 For a different methodological approach to a similar question that also comes to similar conclusions to my own, see Mizuko Ito, *Engineering Play* (Cambridge: The MIT Press, 2009).

the serious, and demonstrated that a piece of military software can be both."[89] This aligns largely with Patrick Crogan's analysis in his *Gameplay Mode* of the relationship between simulation, military research, and video games. In the conclusion to that book, Crogan claims that the power of these technologies is not merely that they present characters to be aligned with or situations to be understood, but rather that someone experiencing a simulation (or a game) adopts the basic tenets of the system as the heuristic through which they understand relations between things: "As producer of the simulation's eventualities in specific hypothetical situations, the user will have adopted the simulation's modeling of the general situation in the act of becoming the user, who is required to author the production of the experience him- or herself."[90] Crogan's work is particularly salient here, as he claims that contemporary capitalism's postwar technologizing impulse has essentially seized the human capability to speculate, reducing play to training in a broad system that has produced games within a culture of repetition that angles toward some determined victory condition.[91] The story that Crogan tells is a pessimistic one about how technoculture has transformed how we engage with the world, but it is not a story I would call inaccurate, since my own argument here in this chapter is similarly shaped. After all, my claims rest on the implicit assertation that mechanics of speculation prompt us to think about the world in new ways. Every time that we mix another drink, engaging with these mechanics that transform the world state, we have the opportunity to be introduced to new ways of considering reality. However, much like Crogan's militarized feedback systems, *VA-11 HALL-A* quickly forecloses speculations about possible worlds to grind us back down into the world of work.

We can see similar arguments to Crogan's in the broader field of game-related self-help works, as the same basic assumptions shown in these cases of the military wing of video game production and theorization are mimicked in the more socially conscious arguments of scholars like Jane McGonigal, whose book *SuperBetter* outlines a method of gamification for daily life that claims benefits such as increased happiness and improved self-worth.[92] From this perspec-

89 Robertson Allen, *America's Digital Army: Games At Work In Play and War* (Lincoln: University of Nebraska Press, 2017), 124.

90 Patrick Crogan, *Gameplay Mode: War, Simulation, and Technoculture* (Minneapolis: University of Minnesota Press, 2011), 167.

91 Crogan, *Gameplay Mode*, 98.

92 Jane McGonigal, *SuperBetter: A Revolutionary Approach to Getting Stronger, Happier, Braver, and More Resilient* (New York: Penguin, 2015).

tive, the very act of forming your life events into a game, of *seeing the world as a game*, generates productive and positive effects in the world. An extension of both of these long-term arguments has appeared in the past decade through the concept of empathy and its relationship to games. Emblematic of this approach are pieces such as an *NPR* report that quotes game designer Nonny de la Peña as calling the virtual reality experience *Project Syria* (Emblematic Group 2013), which places players in a virtual Syrian war, an "empathy generator."[93] Similarly, Elizabeth Sampat has argued for specialized, situation-based forms of game design so that a player might learn to react within a context rather than simply receive messages or content from an author or designer: "By placing you in a circumstance instead of describing my feelings, you'll have feelings of your own. And at the end you won't feel sympathy—you'll feel empathy, because you have a small taste of what it's really like."[94] At the core, her argument about how games work on their players is identical to the Pentagon's.[95]

While these claims I am summarizing are about games in general, similar arguments have been made about visual novels specifically. In their essay on the usefulness of visual novels for education about the condition anorexia nervosa, Salazar, Nakajima, and Alexandrova focused on the genre's ability to afford "discernment" by players who can take on information from several sources and then combine it into a comprehensive view of the condition.[96] When players solve problems in a visual novel game world, they are working from a composite knowledge base that depends on the player's ability to discern between good and bad information in the context of the problem at hand. While the previous study does not distinguish between "in game" learning and external learning,

93 James Delahoussaye, "Virtual Games Try To Generate Real Empathy For Faraway Conflict," *NPR*, January 25, 2015, https://www.npr.org/sections/alltechconsidered/2015/01/25/379417927/virtual-games-try-to-generate-real-empathy-for-faraway-conflict.

94 Elizabeth Sampat, *Empathy Engines: Design Games that Are Personal, Political, and Profound* (No publisher, 2017), 8.

95 While this chapter is focused on a normative mode of subjectivation and how it operates, it is also crucial to consider strategies of approach to "unwire" this way of producing game subjects. See Teddy Pozo's "Queer Games After Empathy" for a theorization of this resistance.

96 While the analysis in this study is conservative, as a reader I am struck by how thinly "success" was measured here. While I find the analytic logic compelling because it reveals an ideology of how visual novels work, I would caution a celebratory reading. See Francisco Lepe Salazar, Tatsuo Nakajima, and Todorka Alexandrova, "Visual Novels: An Methodology Guideline for Pervasive Educational Games that Favors Discernment" in *Grid and Pervasive Computing*, ed. James J. (Jong Hyuk) Park, Hamid R. Arabnia, Cheonshik Kim, Weisong Shi, and Joon-Min Gil (Springer Berlin Heidelberg, Berlin, Heidelberg), 234 – 243.

Camingue, Melcer, and Carstensdottir argue for a distinction between diegetic and non-diegetic feedback in an educational visual novel.[97] They argue that a game that walks a player through a recipe but asks them to cook along with the game is non-diegetic because the process of learning is happening totally outside the game; by contrast, diegetic works focus entirely on the learning experience as happening in the game world, such as answering questions that are then graded right or wrong by a non-player character. This distinction is not made to privilege one over the other (and the authors are clear that it's often a both/and rather than an either/or), but they do use this for grounding a taxonomic approach to educational visual novels and the various strategies those games deploy to foster education in a player. The authors identify five teaching strategies: teaching through Choice, Scripted Sequences, Mini-games, Exploration, and Non-Interactive teaching. All of these are present in *VA-11 HALL-A*, with a particular focus being put in the barkeeping minigame as a motivator of choice. This leaves us with the sobering fact that *VA-11 HALL-A* is functionally identical to an educational game, and if that's true, we then must ask exactly what it is teaching us.

These various approaches to the effectiveness of games at communicating information and practices to a player is best summarized by Timothy J. Welsh in his *Mixed Realism*. When discussing the reception of the video game about the Columbine High School shooting, *Super Columbine Massacre RPG!* (Ledonne 2005), Welsh notes that the game was positioned rhetorically in two ways. The first was a claim about the inability for video games to properly address the subject of school shootings, and critics argued that the game fundamentally *desensitized* players to the historical reality of the executions, shootings, and bombings they perform in the game, therefore trivializing them. The second, concurrently made, claim made was that this game itself would encourage young people to replicate the events in real life, positioning *Super Columbine Massacre RPG!* as a training tool for violence.[98] This line of argument should be extended to video game discourse in general, which paradoxically regularly argues that video games mean something and can have powerful effects while also constantly asserting that any engagement with what those effects might be is tied to the specter of Jack Thompson's crusade against the Grand Theft Auto games or the video game violence debates of the 1990s. My own argument

97 Janelynn Camingue, Edward F. Melcer, and Elin Carstensdottir, "A (Visual) Novel Route to Learning: A Taxonomy of Teaching Strategies in Visual Novels," *FDG '20: International Conference on the Foundations of Digital Games Proceedings 2020* (2020): 3.

98 These arguments are presented in Timothy J. Welsh, *Mixed Realism: Videogames and the Violence of Fiction* (Minneapolis: University of Minnesota Press, 2016), 4–5.

here centers on an agreement that video games do things to their players while also remaining skeptical of claims about their capability to turn people into killers. However, if video games *do things*, then those things appear to players in the form of interactive structures which perform the work of rule-setting and framing experience. Like all structures, these frames produce both intended and unintended outcomes.

These processes of the production of subjectivity through the generalized technical capacity of the video game and the specific instructional affordances of the visual novel seem accurate to me. Via play, players are subjectivated by a process that encompasses them and demands that they interact with the game in a certain way lest they fail immediately, and across a playthrough that becomes naturalized to the point where that friction is no longer recognized. The moment that I, as Jill, can make a drink without thinking about it so that I can quickly return to my conversation is when I have been brought into the fold in a way that I cannot maneuver my way out of, and with that come some entrained behaviors. This automatic learning process, with the behaviors I have absorbed with them, is subjectivation. I am doing the work of a fictional character in a speculative world. I am operating and manipulating this labor system as if it were my own, and that is because I have fully absorbed it as my own.

There are service industry workers who work at bars at the time I am writing this. While some percentage of their job is manual labor (carrying things, manipulating stock, etc.), an equally large part of their job is emotional labor (managing the emotional experience of the customer) and immaterial labor (the inputting of information into order systems, managing payment, etc.). While there are already service workers who have the same rhythms and pressures of emotion, affect, memory, and mechanical mastery that Jill does, a bartender in 2021 does not experience a bar as pure interface. They have not taken on the visual perspective of the bar software, seeing the customer and the manipulation as two halves of the same affective and material system. They do not inhabit a literal cybernetic structure that affords them the capability to do their job within a cyberpunk hellscape. While being a bar worker produces a subjectivity, for Maurizio Lazzarato there is a spectrum of subjectification that must be attended to. In its most extreme form, the production of subjectivity under capitalism eradicates the individual when a person comes in contact with the necessary functions of their job. As he puts it, “if one knows how to drive, one acts without thinking

about it, without engaging reflexive consciousness, without speaking or representing what one does."[99]

The subject that a player becomes through *VA-11 HALL-A* is one who can perform the affective labor of a caring companion, attentive to the smallest details, while doing machinic manual drink mixing. The ideal player, the player one becomes by playing through the entire game, is one who can only see the world through the perspective of a bar. We become subjects whose entire relationship to the world is determined by the interface we use and how it asks us to labor. Like Hochschild's flight attendant, we begin to understand the world as the manipulation of digital interfaces that provide certain services that manipulate the affects of others. This concept should not be strange for anyone who has ever spent time on social media, and what *VA-11 HALL-A* provides for us at the level of the subject is not merely an experience in the now but a ground for an economy entirely predicated on these relations. In other words, if an educational game turns us into a subject who can better pass a test in the future and a military game allows us to be better soldiers, then what does a game that teaches us how to labor more effectively prepare us for? We perform labor now to prepare ourselves to be better workers in a world where interface manipulation is the process through which a substantial amount of labor occurs.[100]

In the previous chapter, I argued that mechanics of speculation were ones that enacted a kind of radical possibility that demonstrated the groundlessness of empiricism; the conditions of the now might not be the conditions of next year, tomorrow, or one minute from this moment. Becoming a subject who performs potential labor is one of the ways that these radical breaks in the coherent universe can instantiate themselves, making something that was thought to be impossible actual by virtue of taking a fictional scenario and making the labor conditions that undergird it real.

These mediated transformations in our cultural and economic statuses are common in the history of science fiction. We see these transformations taking place regularly. Take, for example, James Tiptree Jr.'s Delphi and her existence as a person who uses products and elevates them with her celebrity in order to skirt advertising law.[101] In 2021, we call this figure an influencer, and advertis-

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99 Maurizio Lazzarato, *Signs and Machines: Capitalism and the Production of Subjectivity* (New York: Semiotext(e), 2014), 89.

100 Our preparation for this this happens elegantly at the level of the interface in *VA-11 HALL-A* since the work we do is accomplished via mimetic interfaces. See Jesper Juul, *A Casual Revolution: Reinventing Video Games and Their Players* (Cambridge: The MIT Press, 2009).

101 See James Tiptree Jr.'s short story "The Girl Who Was Plugged In," in *Her Smoke Rose Up Forever* (San Francisco: Tachyon Publications, 2004).

ing law across the planet has attempted to shift and morph to capture and control these people. Philip K. Dick's door software that will not open without a fee being paid prefigures the internet of things. Harlan Ellison's supercomputer at the end of the world that hates all of us gives us a good handle for responding to social media. These science fictional concepts did not predict the future, nor did they uniquely produce it, but they set an appropriate groundwork for considering possible social and economic relations. They allowed us to envision and consider a mode of life, and those modes happened to come into being. The difference between the fictional representation and its eventual economic condition is speed and extensibility. One does not read "The Girl Who Was Plugged In" and learn how to be an influencer, warping reality around oneself with concepts and abilities rendered into reality via hyperstition. And yet that is exactly the process through which *VA-11 HALL-A*'s subjectivation mechanism works and proliferates. We do the work, and give ourselves the skills, and when the opportunity arises we will already have been prepared for them.[102]

Potential Labor Beyond the Workplace

VA-11 HALL-A's first-person gameplay segments and their effects on player subjectivity have dominated my discussion so far, but a significant part of the game are the moments when the first-person perspective is abandoned. Each bar shift (or "level" in the parlance of video games) is split in two, with a break happening between each half, giving the player an opportunity to save their progress, and in these moments all perspective is abandoned in favor of showing a splash image of the game's characters. I see this as a reprieve from subjectivity at all; the player is not "being" someone in relation to the game, and that's because Jill is neither working (the predominate activity a player performs as her) nor is she consuming, which is her major activity outside of her job at the bar. The other third-person scenes have to do with moment of "non-work": checking her phone in her apartment; standing outside a shop to make a purchase; drinking beer with her boss. When Jill is off work and at her apartment, it presents us with a third-person perspective of Jill sitting in her apartment and looking at her phone. These moments are fleeting, and they come with a change in interface. Instead of the customer on the left, we have a smart phone screen. Instead of the bartending apparatus on the right, we have a third person perspective of

102 We might also extend this into contemporary discussions of the "metaverse" and how VR gaming created a fertile ground for these ideas to repeat themselves with more political power.

Jill. At first glance, we might glean from this that there is some kind of fundamental difference in perspective and subjectivity at play in these two arenas. Perhaps Jill can see herself for herself when outside of work, or maybe she is framing herself as a whole being rather than the highlighted medium shot that frames the customers in the game. However, this reading is troubled by the smart phone screen, which we directly manipulate as Jill by holding our finger (cursor) to unlock and access its apps. In these scenes, much like in the bar sections of the game, we are Jill in *operating* in the first-person. One part of the screen is what she sees, and it is dependent on what she experiences. However, we can also see her in the third-person, confusing the location of action and how tightly we are meant to be bound up in a subjective relation with her. This visual split realizes the bifurcated reality of subjectivity that I have discussed throughout this chapter: we are both the character and we are not, but the *experience* we gather *as* that character carries over. We have "adopted the simulation's modeling of the general situation in the act of becoming the user" and begun to author the "production of the experience."[103] We are the operator and the operated.

The reason that the first- and third-person switches are so fascinating in *VA-11 HALL-A* is that each time they reveal something additional about what we take for granted in the game's interface and how that shapes our experience with and of it. "Cultural constructions of visibility operate like magic," as Wendy Pearson explains, because "they make certain things disappear or appear only in certain contexts."[104] What appears in these contexts within *VA-11 HALL-A* is a recognition that there are not moments where Jill (and the player) is not doing some form of labor. Using downtime and using a phone to make purchases uses the same action economy and visual language as the machine that makes drinks. Additionally, during the night segments of the game, the player is also able to purchase objects like posters or tchotchkes in order to make Jill happier and more focused. Doing so has a direct gameplay effect in that it allows her to remember orders after someone is done speaking, allowing a player to both look at the encyclopedia with the desired drink visible on the screen. When we select that shop option, we can see Jill peering through a shop window in the third-person perspective, but we can also choose objects from a menu for her to purchase. Again, we are the selecting apparatus and Jill herself, a kind of composite player-worker (who does the selecting) and wage earner (Jill) all at once. This is in sharp contrast to another third-person segment in which Jill and her boss spend time

103 Patrick Crogan, *Gameplay Mode*, 167.

104 Wendy Pearson, "Alien Cryptographies: The View From Queer," *Science Fiction Studies* 26, no. 1 (1999): 9.

together drinking beer. There is a large button on the right side of the screen that allows the player to direct Jill to continuously drink beer, and a player like myself who hammers through twelve beers early in the conversation is given an inappropriate conversation brought on by too much alcohol. Again, *VA-11 HALL-A* blurs the line between the player and the character performing these actions by putting the direct choice of drinking into the hands of the player, although it is abstracted in a way that many choices are not. These are not just moments of confusing the player and their avatar. Instead, these are moments where *VA-11 HALL-A* is constructing a particular form of subjectivity for the player. Jill's entire existence is based around her job and doing the emotional and manual labor of talking to people and assembling drinks for them. Her subjectivity is assembled from this material reality and the conventions that make up that material reality: the riots in the streets of Glitch City mean her life really is just work and home; her life at home is dominated by reading news, yearning after commodities, and purchasing those commodities; her social circle is entirely predicated on her job.

While the visual field tries to create a firewall between these two parts of Jill's life, the mechanical interactions demonstrate that the firewall is impossible within a system of immaterial labor. Even the purchase of desired items is a kind of work on the treadmill of life in that they make the job doable and feasible. The better Jill does at her job, the more items she can purchase in her downtime; the more items she purchases, the more energy and capability she has at her job. Leisure and work are a closed loop, each dependent on the other. The purchases, the conversations, and the drink mixing mechanics work properly because they are wrapped together into one system of interaction and labor. Thus, Jill is built up out of the ways that she can either perform consumer behaviors or facilitate the consumer behaviors of others, and no place is this more clear than the moment that Jill steps in front of the bar.

Subjectivity in Third Person

Late in the game, Valhalla regular Alma hacks the bartending station and displaces Jill from behind it. Now we are ostensibly looking through the "eyes" of Alma and seeing the visual novel pixel portrait of Jill. This moment is used for some narrative introspection, allowing Alma (and the player) to use all of the methods and tricks that Jill uses on her customers, and the mechanics of bartending stay exactly the same. The order of operations remains stable, despite the change in which character the player is "embodying": conversation happens, a drink is ordered, the drink is looked up, the drink is assembled, and the customer approves or disapproves. While playing the game for the first time, I experienced this

scene as pure revelation, and in truth it is probably the root of this entire chapter. My reaction was so strong because I already knew everything that I needed to do without being instructed or told.

What I mean by this is that I had learned how to operate the bar to the extent that the "player character" no longer mattered. I was able to automatically go through the order of operations. More than this, I knew what Jill's temperament was, so I was able to accurately serve her drink without looking it up. In that moment of gameplay, I realized that I was not playing the game "as" Jill or seeing the world through her eyes. Instead, both Jill and I were seeing the world through the perspective of a bartending station. The entire time, I had been training myself on this information manipulation station, performing potential labor by operating this interface-only bartending game. In playing, I was being subjectivated, but my subjectivity was not *being* Jill. Instead, the fictional Jill and myself (who is mostly real) were being operated on by the same process that captured, shifted, and produced our labor in new ways.

Before ending this discussion of *VA-11 HALL-A*, I want to return to my initial description of the characters at the opening of this chapter. Jill is our protagonist character, and she is joined by a limited cast of additional characters, such as Alma the hacker and Dorothy the sex worker robot. These characters are broad types, written in a tone that communicates their comfort with each other and a willingness to talk about "improper" topics such as their cup size in a series of conversations that led Katherine Cross to call these conversations "a man's fantasy of what women talk about to each other."[105] Similarly, Dorothy's existence as a robot with the digital body of a tween calls on a number of tropes in media where "real" age and visual age are not correlated. In the case of *VA-11 HALL-A*, the writers make it clear that Dorothy has built this body out of a kind of brutal realism in that it creates a wider market for herself as a sex worker; in the fiction of the game, there is a viable market for everything, no matter how distasteful.[106] I bring these things up again not because I want to belabor the point, but instead to point out that even if it is morally repugnant, the game is still framing both experiences and social encounters through the logic of the market. If Jill's social experiences, and the experiences of her attending cast of characters, are framed through gender, then how is it transferred over the mechanics of speculation in *VA-11 HALL-A?*

105 Katherine Cross, "Body Talk: Why The Sexy Dialogue in VA-11 HALL-A Goes Tits Up," *Gamasutra*, July 5, 2016, https://www.gamasutra.com/view/news/276422/Body_Talk_Why_the_sexy_dialogue_in_VA11_HALLA_goes_tits_up.php.

106 It is also, outside of confines of narrative, just plain gross.

The simplest answer to this is that subjectivation is a process that comes with entrained ideologies; the absorption of this set of discourses about these women and their place in the world comes with a gendered structure. This is not shocking to anyone familiar with the genre that the game is operating in. For instance, it is hard to see Dorothy without thinking of William Gibson's Chrome and her voluntary child's body; the blonde hacker Alma is in the framework of the stereotypical cyberpunk woman Nicola Nixon artfully criticized in 1992.[107] The development team has also commented on these issues of writing and the framing of issues, noting that the dialogue is "based on personal experience and that of those around us" and claiming that in the experience "females have always been more open about those topics than males."[108] When we encounter these situations in the game, they are obviously a part of the designed identity in that they are part of the container that interprets the player and pulls them into a system of interaction. A familiar argument in relation to games might position these ideological and cultural posts, and how much we do or do not enjoy them, in terms of immersion, or the ability to "lose" oneself in a game. However, the process of subjectivation I have developed through this chapter does not require one to lose anything. Instead, the transformation of subjectivity in the face of the game can be afforded by a myriad number of affects, discomfort and rage included. That is to say that finding Dorothy beyond the pale of acceptability in art or finding the constant breast talk from Alma is its own form of subjectivation, a settling of the self in relation even if that relation is *bad*. Like Amanda Phillips argues in her critical reading of the play and reception of *Bayonetta*, I understand the formation of linkages between Jill, her visual field, and the player not as merely about who the game is made *for*, but instead the "recursive gamic system that kinaesthetically entangles the body of the gamer via technological peripherals and the demands of play."[109] While there are obviously differences in how kinaesthetic these games are, and the peripherals used are different in form, what is critical for me in Phillips' analysis is that while we cannot fully account for all sites of reception, we can talk about the mechanical systems that afford the affects that make up the subjectivation

107 Nicola Nixon, "CyberPunk: Preparing the Ground for Revolution or Keeping the Boys Satisfied?," *Science Fiction Studies* (1992), 57, https://www.depauw.edu/sfs/backissues/57/nixon57art.htm.

108 Adi Robertson, "A talk with the creators of cyberpunk bartending simulator VA-11 Hall-A," *The Verge*, July 12, 2016, https://www.theverge.com/2016/7/12/12159480/va-11-hall-a-cyberpunk-bartender-simulator-sukeban-games-interview.

109 Amanda Philips, *Gamer Trouble: Feminist Confrontations in Digital Culture* (New York: NYU Press, 2020), 132.

system from game to player. In this way, while *VA-11 HALL-A* is certainly controversial, it is not *unique*, and it provides an example of a generalized process that is paradoxically *common* despite all of the ways it could be said to stand out in the field of games. This, in many ways, is the core of the subjectivation process when it relates to games: it is always happening, but it is the particular forms that produce useful moments of analysis.

Thinking Like A Chicken Fryer

This chapter's theorization of potential labor as produced by mechanics of speculation is not purely a thought experiment. There are ethical and political concerns at play here in relation to what speculations we make, how they are captured and transformed, and the labor we produce that naturalizes extractive ways of being in the world. After all, my claim here in the end is that playing a video game turned me into a laborer who is efficient at pushing buttons effectively. This is a dim view of human potential.

As I have made plain in this chapter, however, the claims that I am making about *VA-11 HALL-A* are not conceptually unique. Game studies and science fiction studies routinely construct their media objects as *doing something* to their audiences, with various explanations of how that happens and what it means. As I have claimed so far, *VA-11 HALL-A* is unique in the way that it figures labor and interfaces together, producing a subject in the moment of gameplay who labors to produce a ground on which an accelerated interface economy could be produced: potential labor, or the labor that produces economic possibilities around it. In its figuration here, I do not see it as liberatory. Instead, I understand it as an intensification of extractive economic conditions that are constantly accelerating. Before ending this chapter, I will briefly sketch the cloud of ideas around the emergence of games like *VA-11 HALL-A:* where they came from, where they are at the moment of writing, and where those potentials of potential labor could create the ground for economic developments in the actual world.

One of the most compelling pieces of writing on the relationship between labor games and their players was published by critic Ian Williams in the fall of 2014.[110] Remarking on the then-recent successes of games like *Spintires* (Oovee 2014) and *Euro Truck Simulator 2* (SCS Software 2012), Williams argues

110 Ian Williams, "Rise of the Simulations: Why We Play Hard at Work," *Paste*, September 15, 2014, accessed via Internet Archive, https://web.archive.org/web/20141119013716/http://www.pastemagazine.com/articles/2014/09/rise-of-the-simulations-why-we-play-at-hard-work.html

that these games intersect with labor through the Marxist frame of alienation, writing that

> The factory worker of fifty years ago could at least touch the things he or she was creating, even if it was only a piece or two of a larger whole. Now, we're coders, pounding out lines of a foreign language we might only partially understand in order to create intangible end products for companies skimming more and more of our compensation. Or we call an order to production, only for it to go halfway around the world for quick delivery to the stores we work at, with nothing produced or even handled by anyone we will ever know by processes we're never really privy to.

From this perspective, the "work" of games like *Euro Truck Simulator 2* is a kind of affective reclaiming of the conditions of work. Doing a long-haul, real-time drive between European capitals carries a sense of material accomplishment with it afforded by the recognition that these tasks are arduous and that we are sitting through pseudo-accurate representations of them. As Williams puts it, "maybe the work simulations and their simple, blue collar vision of work which is increasingly vanishing in large sections of the country speak to a deep dissatisfaction in how and why we work. It's a way of connecting with a way of life well on its way to going away." This framework gives us another way of understanding games involved in labor, which is that they provide some kind of affective supplement in the stage of advanced capitalism that exists in the video-game playing parts of the world. Anecdotally, my conversations with players who enjoy these genres of working games have echoed this claim. Retired truck drivers who play *Euro Truck Simulator 2* in their free time have claimed the experience of the game and the real job are relatively the same, as Richard Moss reported in 2016: "I ask him what it's like being a real trucker. 'It's kind of like what I'm doing right now,' he says. 'You're looking at it through the windshield. You're seeing stuff that's different all the time. Even though you go up and down the same road all the time it's always something different.'"[111]

However, we might also read this analysis of these games as a supplement for a lost economic condition as more thoroughgoing nostalgia. It is easy to see them as an example of what Sebastian Möring and Ollie Leino call a "Romantic" conception of play that attempts to revivify the liberal subject within

111 Richard Moss, "Hitting The Virtual Roads Of Euro And American Truck Simulator With Retired Truckers," *Rock Paper Shotgun*, June 23, 2016, https://www.rockpapershotgun.com/2016/06/23/american-truck-simulator-real-life-trucker/.

the space of play.[112] Mounting a critique of some of the classical figures of game studies, like Johan Huizinga and Roger Caillois, Möring and Leino argue that the construction of the voluntarist gaming individual is a byproduct of the liberal subject as much as it is the product of games themselves. This argument recasts these "Romantic" theories not as claims about the ontology of games or the philosophical structure of the player and game relations, but instead the naturalization of liberal ideology about individuals, markets, and independence into the structure of games. To read these games through Möring and Leino's analysis, the production of games based around working-class labor could simply be yet another intellectual absorption of a mode of play into the logics of work that are familiar to us in the twenty-first century; to create a theory of games about labor might simply be the re-entrenchment of values in the guise of analysis.

It is also impossible to ignore that while I have focused on *VA-11 HALL-A* for the majority of this chapter, it is clearly a subset of this wider genre of games. When Williams wrote his piece in 2014, the games that simulated or gamified work were fairly delimited and had similar aesthetic and mechanical registers. *Euro Truck Simulator 2*, and other simulators like it, put players into professional careers and gave them access to a limited set of mechanics to make that simulation work: they could attach and detach trailers, drive their truck, turn the headlights on and off, listen to the radio, use the GPS, and so on. Where this genre and *VA-11 HALL-A* meet is in the proliferation of games about specific real-world jobs: *The Red Strings Club* (Deconstructeam 2018), *Coffee Talk* (Toge Productions 2020), *Neo Cab* (Chance Agency 2019), and *Cloudpunk* (Ion Lands 2020) are core to the new form of work game. These games are all heavily invested in narrative over simulation, but their core gameplay is about doing service labor in the moment-to-moment in order to access the long arc of the story. If Williams is correct about simulation games and their relationship to nostalgia, then I argue that what this new genre formation of service-based labor is performing is a nostalgia for purpose beneath this labor. In the sim games, the fantasy of getting your hands dirty is enough. In the immaterial labor game, the fantasy is that all these skills I have developed will lead me down a meaningful narrative life and bring me into contact with interesting people. My service work will take me along for a ride. The terminus is not the terminal, but a world beyond.

112 Sebastian Möring and Ollie Leino, "Beyond games as political education—neo-liberalism in the contemporary computer game form," *Journal of Gaming & Virtual Worlds* 8, no. 2 (2016): 145–161.

As I have argued throughout this chapter, I do not see this as producing a rosy picture of the future. As I have repeatedly stated: while science fiction does not produce the future, it does create conditions under which we speculate about possible worlds, and when combined with the normalization of certain techniques, it creates a ground upon which potential futures emerge. In the case of *VA-11 HALL-A* and this wider genre of games, I see it as a platform to hone technique and to perform immaterial labor in the moment of gameplay that makes players a better fit for labor conditions in the future. The demand to work as you play, not for preparation for a real job but instead inside of a speculative fiction scenario, produces a broken time in which skills and capabilities become immanent for potential fits in emergent economic conditions. After all, it only takes reading through one forum thread of users figuring out how to best represent their *World of Warcraft* experience on a resume to see that there is no such thing as a clear divide (at least for the user) between "in game" learned skills and "real world" skills if the techniques of operation and control are shared across them.

This is already a logic understood by industries invested in training their workers in work that requires the operation of limited systems in repetitive, predictable ways but that also blur the lines between game object and training tool. In 2017, the fast food chicken chain KFC released *The Hard Way: A KFC Virtual Training Escape Room* (W+K Lodge 2017). Pitched as a training simulation to teach players how to fry chicken like a real KFC employee would, the game puts the player in front of a comical frying station while the mascot Colonel Sanders and his robot team walk them through the steps of fast food preparation. Both a gag and an instructional tool, *The Hard Way* sits in the uncomfortable zone between parody and absolute sincerity. As one journalist wrote when sampling the VR game at a press event, "the 10-minute VR trip won't make you a master chicken fryer, or even a competent employee."[113] Though the game takes the player through basic tasks around chicken inspection, preparation, and frying, any experience or video of the gameplay makes it painfully clear that this is a comedy outing as much as it is an instructional device.

My exploration of *VA-11 HALL-A* in this chapter, and the attending conversations about both speculation and immaterial labor, gives us additional tools when it comes to understanding *The Hard Way*. Much like how abstracted bartending and affective labor transform you into a type of player, the KFC training

113 David Lumb, "KFC's bizarre VR game isn't ready to revolutionize work training," *Engadget*, August 25, 2017 (https://www.engadget.com/2017/08/25/kfc-bizarre-vr-game-wont-revolutionize-work-training/).

game gives the player a certain perspective on the world: KFC is a fun brand that doesn't take itself too seriously; frying chicken is fun and comedic and fast instead of hot, dangerous, grueling service industry labor; the relationship between the worker and the KFC brand is one of lenient silliness and not one of behavioral control. Play is being "sent back to work."[114] Much like *VA-11 HALL-A*, *The Hard Way* is about constructing a context for potential labor to happen and a subjectivity that will take on that labor both happily and willingly. It is my hope that the tools of analysis laid out here will allow us to better ascertain the relationship between politics, aesthetics, and the players who are fed into the grist mill of the oncoming economy.

Coda: Radicalizing the Subject

I'd rather be accused of being a pessimist than a nihilist. With that in mind, I want to end not with the abyss of capitalism, but the hope of something beyond it. If subjectivation in the video game space is ultimately about games intervening in and manipulating a process that is ongoing all the time, then there must be a possibility for augmenting that process to draw it out into something more liberatory and less violent and constricting. After all, when Lazzarato reads Guattari to understand the role of the cinema in the process of subjectivation, he reveals that the image is "an iconic mapping that both registers and creates possibilities."[115] By recognizing what is happening with the cinema, both creators and viewers can warp the apparatus to generate "new processes for subjectivation" as long as we "abandon the anthropological and humanistic perspective that imbues so much of critical thought."[116] Creating liberatory cinema, then, is a dual process of recognizing that narratives about the classical subject and its relationship to media objects is incorrect *and then* taking our newfound tools of production and analysis to produce new modes of subjectivation. I see a similar process as being possible within games, and much like I argued earlier in this chapter, the concept of mechanics of speculation gives us the additional capability to discuss the multiple ways that these new practices and modes of subjectivation occur.

I will end here with a discussion of *A Hand With Many Fingers* (colestia 2020) and another, more liberatory, valence of potential labor. Played in the first-per-

114 Dyer-Witheford and de Peuter, *Games of Empire*, 31.
115 Lazzarato, *Signs and Machines*, 137.
116 Lazzarato, *Signs and Machines*, 137.

son and set in an archive during the 1980s, *AHWMF* is like many of the games that I have discussed in this chapter in that labor is at the forefront of its mechanical and thematic concerns. You play a researcher who is helping their supervisor with a new article, and this takes the form of operating a large, manual database to uncover a vast conspiracy between banking operations, arms dealers, and the CIA to galvanize conflicts in the developing world while controlling, and in some cases murdering, agents in the imperial core. The player has a world map, a cork board, a card catalog, and a large archive of boxes in a storage room; from this, they can assemble a story of intrigue that is loosely based on true events.

AHWMF is not the only game to task players with manually making their way through a database. *Her Story* (Barlow 2015) and *Telling Lies* (Half Mermaid 2019) are both games of database manipulation. However, a key difference is in the difference between the digital and the analogue. *Her Story* gives players a computational platform, and it is through the discovery of keywords and manual experimentation that that game allows the player to put together a murder mystery. The work of that game is about finding affinity terms (like shared names, locations, and concepts) and then using the database to find video clips where those terms are used. By contrast, *A Hand With Many Fingers* makes the entire process manual. The play of the game goes like this:

1. You open an archive box. It has a newspaper clipping in it. That clipping will have some combination of a date, a person, and a theater of operations. One clipping might mention someone named Michael Hand. The clipping might be from a 1985 issue of the paper, and Angola might appear in the text of the story.
2. The player then navigates to the next room, which contains a card catalog. They first locate the section for Africa and then the drawer for the year 1985. Within that drawer, they then have to find the listing that mentions the last name "Hand."
3. That listing card contains the box number for information relating to that name on that continent during that year. The player then has to manually write that box number down outside the game (there is no in-game system for this) and travel down a flight of stairs.
4. Now in the archive space, the player navigates to the correct row and box. They pick up that box, walk back upstairs, and place it on the table in front of their corkboards. They open it, and inside are more clippings. The process repeats.

It is a remarkably accurate representation of doing any kind of scholarly activity within an archive, but for my purposes here I want to consider this process as

being part of a similar affective economy as *VA-11 HALL-A* in the sense that the work you are performing in-game is the work you are performing as a player. When I am playing *A Hand With Many Fingers*, I myself am using a notebook to write down all of this conspiratorial information. I am cross-referencing names and locations, and the "story" of the conspiracy is almost entirely generated within my own mind. The game itself becomes something like a meta-corkboard in that it provides a platform for me to store the information I have gathered, but it does not provide any tools for that information's analysis. All of that work is going on cognitively, and like many games I have discussed in this chapter, it is afforded by immaterial labor; my capability to do this work is entirely predicated on my ability to use multiple interfaces and to sort through different regimes of knowledge within my own mind.

What is happening within *A Hand Within Many Fingers* is not strictly what I have termed potential labor. It is not asking me to form a subjectivity that puts me in a speculative economy. In fact, it works oppositionally to that, putting me in a subjectivity position in an economy that no longer exists. As archives tend toward digitization, and with stronger controls on who can access them, the manual work of fetching archival boxes is decidedly *in the past*.

However, I think the manual logic of *A Hand With Many Fingers* demonstrates a possible world for games of potential labor. Despite being a historical game, I would still argue that *Hand*'s basic operation is predicated on mechanics of speculation in the sense that there is a radical openness to what can be discovered about the CIA operation in the game. While the clues and information can be exhausted, the interpretation of that information, and its visual organization, is radically open to interpretation and transformation. We are not led to a logical extrapolative conclusion, but instead an interpretive impasse to the extent that it's unclear when one has completed the game.[117] This ambiguity is not just a postmodern moment of reflection on the incompleteness of all explorations; it is a demand on the player to do the interpretive work of what is in front of them in the same way that *VA-11 HALL-A* asks players to read between the lines of drink orders to be a better bartender. It demands that the player naturalizes their role (in this case, a researcher) and then pursues that with their full capability. It demands they adapt a subjectivity.

The process of subjectivation *A Hand With Many Fingers* puts the player through and the process that *VA-11 HALL-A* puts them through is roughly the same. However, the key qualitative difference is in what that subjectivity looks

117 Sgt. Slaughter, July 14, 2020 (7:50 p.m.), "Did I Finish the Game?," discussion on Steam Community Page, https://steamcommunity.com/app/1229030/discussions/0/2782612683732647652/.

like. In that case of *VA-11 HALL-A*, a player is meant to act totally in response to the world in front of them. They are a reactive force, fundamentally operating as a mediator between the demands of the market (the customer) and the capabilities of the programmable bar machinery. They are an intermediary force whose entire job is being a connector who can read the emotional content of a customer and translate that into the machine codes of the bar. Contrasted with this, *A Hand With Many Fingers* asks players to adopt a subjectivity of depth and reflection. Certain information leads to a dead end. Some of it requires more expansive comparative work, reading from one source and then another to find a third fact found in the gap between two pieces of information. It also requires the player to assemble that knowledge to figure out what happened in the past, bit by bit, and at each step the player is invited to reflect on that knowledge. It is difficult to play through the game and not recoil in horror at the many-fingered operations of the project of American imperialism.[118] And, importantly, the lesson learned is about research and confirmation. The technical skill being discovered here is not how to become a bar, but instead how to assimilate data, confirm it, and then define the machinery of operations that make the world tick.

As long as science fiction games continue to appear and offer us subjectivities that afford potential labor, we will continually kick our capabilities forward in time, aimed toward an economy to come in which our skills will make us fit perfectly.

118 Like many of colestia's games, *A Hand With Many Fingers* is obviously a critique of both capitalism and imperialism.

Chapter 3
Anti-Blackness and the Aesthetic Grounding of Speculation: On the Last of Us and the Last of Us Part 2

Introduction

Naughty Dog's *The Last of Us* franchise is often characterized by its brutality and "real-world" grittiness. It takes place in a near-future where the world has been overrun by people infected with a specific form of the *cordyceps* fungus that turns them into murdering monsters. The plots of *The Last of Us*, its expansion *Left Behind*, and *The Last of Us Part II* circle around characters attempting to eke out a life between the rock of enraged zombies and the hard place of other people. The game bids at every turn for a post-apocalyptic political realism, although it is most often the "realism" of the common dystopia that simply unmasks our prevailing ideologies: the protection of self and property is a virtue above all others; the State is a compromise at best and an evil at worst; we all exist in a competition for resources in the war of all against all; thinking the best of others is a pathway to getting hurt. As Tom Moylan writes in *Scraps of the Untainted Sky*, all dystopias engage "in an aesthetic/epistemological encounter with [their] historic conjuncture" that either "recasts the present in mythic traps of consolation or takes the reader epically beyond the order of things" to some form of critical or conceptual point beyond the one they live in.[1] Straddling a line between the contemplative wonder of something like Cormac McCarthy's *The Road* (2006) and the exploitation-adjacent *The Walking Dead* (2010-) television series, *The Last of Us* games present a compelling and popular test case for understanding what pieces of the social fabric that science fiction dystopian games hold onto the tightest.

This chapter looks to the way that blackness is cinematically framed and mechanically captured within *The Last of Us* video game series. The purpose behind this analysis is twofold. First, I want to trace the line between cinematic aesthetics and video game aesthetics to demonstrate how racial frameworks are easily imported from one domain to another. Second, I want to focus on how anti-black structures appear at a formal level within a video game, prompting the player at both the generalized aesthetic level as well as a specifically me-

1 Tom Moylan, *Scraps of the Untainted Sky* (Nashville: Westview Press, 2000), 181.

https://doi.org/10.1515/9783110719451-005

chanical level. These two purposes are attached to this book's broad theorization of mechanics of speculation, meaning the moments in video game interaction in which players are prompted to consider different arrangements of the world. However, as I have written in the previous chapter, these moments of speculation are often shut down by the weight of the past; history appears to corral and control what *could be* into *what is*. This chapter will proceed by arguing that *The Last of Us* presents its players with anti-blackness as a fundamental structure (grammar, rebar) that propels its characters forward. In the words of Lindon Barrett, I want to analyze the precise ways that these games produce "circumstances in which the sense-making capacity of vision, the significance of vision, is monopolized from a hostile perspective" that summons up black characters only for them to be killed.[2] Both games deploy black death as white character development, and the formal ways that this is accomplished achieves a disavowal of black life that structures the experience of the game in fundamental ways.

In my analysis, I focus on the hinge that exists between interaction and noninteraction in these narrative-heavy games. In their cinematic form, when players have no control over what is happening in front of them, they engage in a formal anti-blackness that depicts a world in which black lives are unlivable and forced quite literally off-screen. In their mechanical form, when players have limited control of the narrative movement forward, those interactive capabilities inherit grammars for how black characters can be brought before the player. In all, I am interested in how these particular science fiction dystopias both avoid and then deploy mechanics of speculation in order to passively and actively produce futures where black life is rendered formally impossible.

This chapter will progress first through how I understand these games in their contexts and then through a close analysis of the games themselves. I address how game studies has conceived of representations of blackness in games, with a particular focus on how and under what conditions "race" appears within games themselves. I will then walk through some key ideas within science fiction studies for understanding how blackness has been represented structurally within science fiction texts and film. The bulk of the chapter is dedicated to a reading of the *The Last of Us* games in chronological order, looking to how they cinematically and mechanically operate within a grammar of anti-blackness that sees black characters solely as fuel for white stories. Using both formal cinematic analysis and a deep focus on how the second game prompts its players,

2 Lindon Barrett, *Seeing Double* (Cambridge: Cambridge University Press, 1999), 215.

I build an argument specifically about how these games align us with a white supremacist structural viewpoint.

A Note On This Chapter

I am a white man who lives in the southern United States. I live within a hierarchized racial society. I am pretty well attuned to the mechanisms through which this hierarchy is enforced; I have been taught about them informally since birth. I say this not as a kind of confession or disavowal, but instead as a particular kind of claim to expertise when it comes to ways that whiteness structures our world. I know when an image hails me as a white person. My desire to write this chapter came from playing these games several times and noticing who had to be killed along the way to the narrative's end. I noticed who was being mourned, and under what condition, and it was through extensive play and replay that I came to the formal analysis that you find in this chapter.

One of the reasons that I am saying this in a clear way at the beginning, rather than obscuring it or abstracting it into an argument, is that the process from idea to publication for this chapter is one of the strangest experiences I have had. One reviewer noted that the argument here was interesting, but ultimately the violence enacted in these games is merely attached to the dystopian genre and has no racial element to it. When I delivered a lecture on parts of this chapter, with ample content warnings at the outset about what would be discussed, I received the feedback that speaking to these scenes and discussing them was a replication of whatever their harms might be. By asking an audience of scholars dedicated to the study of images, games, and texts to consider the precise way these games structured their violence, I was told that I was doing the violence myself. I'm sympathetic to this argument, and I understand it through its relation to how Saidiya Hartman and Fred Moten each regard the reproduction of the beating of Aunt Hester from Frederick Douglass's autobiography. In the opening of *Scenes of Subjection*, Hartman writes on the violence but declines to reproduce it textually for many reasons: to "call attention to the ease with which such scenes are usually reiterated, the casualness with which they are circulated, and the consequences of this routine display of the slave's ravaged body" as well as to counter "the spectacular character of black suffering" that these repetitions often reground.[3] In these games, violence against black

3 Saidiya Hartman, *Scenes of Subjection*, 3.

characters is certainly routine and casual. This violence is, after all, part of a video game, ostensibly something that someone does for leisure and fun.

Fred Moten's response to this is double. He writes that Hartman cannot so easily extricate herself from the beating of Aunt Hester simply by choosing not to depict it. He writes that she reproduces the event in her "refusal of it" and claims that the beating is "reproduced in every scene of subjection that the book goes on to read."[4] For Moten, everything in *Scenes of Subjection* contains the trace of the beating narrative, which was summoned up by declaring its absence. However, Moten does not position this as a critique, but rather as a way of articulating one of the goals of *In The Break:* "Is there a way to disrupt the totalizing force of the primality Douglass represents? Is there a way to subject this unavoidable model of subjection to a radical breakdown?"[5]

In this chapter, I reproduce the scenes of violence from these games in detail. This book is broadly about the analysis of small things within large contexts, and I believe that understanding the micro-maneuvers of the cinematic and mechanical strategies in the *The Last of Us* franchise is critical to learning how not to reproduce these self-effacingsystems of structural domination. My intent here is not to revel in the violence, but to show how it is pieced together and what the implications of that piecing are. I am not concerned about uniquely replicating the violence or trauma of playing these games, if only because they are so ubiquitous on the PlayStation family of consoles. *The Last of Us* has sold more than 17 million copies, and *The Last of Us Part II* sold four million copies in its first week. When the PlayStation 5 launched, Sony gave everyone who purchased it a free copy of the former. These games are so mass that they constitute a keystone element of games culture, and I think analysis of them is both warranted and necessary, especially in detail. My hope is that this chapter provides perspectives and tools that justify the explicitness of the inquiry and allow for the cultivation of Moten's radical breakdown within the contexts of game studies and science fiction studies.

Game Studies and the Racial Imagination

My analysis here operates alongside long-standing conversations in black studies, science fiction studies, film studies, and game studies. I am attempting to

4 Fred Moten, *In the Break: The Aesthetics of the Black Radical Tradition* (Minneapolis: University of Minnesota Press, 2003), 4.

5 Moten, *In The Break*, 5.

weave through these (sometimes) disparate fields to find points of contact that allow for a more full explanation of the two video games in front of us. My broad relationship to racial analysis here is in agreement with David Leonard, who writes that racial representations in games can act as a "compass" for our daily racial interactions; the things we are seeing have some kind of impact on our conduct and thinking.[6] However, beyond the level of representation, I think that games have the capability to index and model the operations of race and racism beyond the characters they depict or the situations they present. In Tara Fickle's phrasing, games have the capability to model the run-time behavior of race by presenting us with the raw elements from which race is constructed and re-presented moment to moment in our lives, replicating within clear boundaries the way that the social creates rules and conditions under which race is summoned, delimited, and policed.[7] These conversations about the way that race operates within games are often difficult for the reasons that all conversations about race are often difficult, but that difficulty is compounded by the way that video games often disavow race while simultaneously depending on it. It is assumed that the default video game player is white, and video games subtly assert that in aesthetic, mechanical, and cultural ways.[8] As I will explore later in this chapter, both *The Last of Us* games feature prominent black characters whose race is never remarked on by the game in a bid for something like "post-racial" diversity that still rests on a racializing structure. Within that paradigm, it is not surprising to find the concept art in *The Last of Us Remastered* shows an alternate white version of the brothers Sam and Henry, suggesting that their race was not conceived of as integral to their characters from their conception.[9]

Within this reality of the relationship between race and games, work by scholars Samantha Blackmon and Kishonna Gray has been critical in constructing methods for drawing direct lines between the lived experience of black players and the video games they are interacting with. In 2007, Blackmon wrote

6 David J. Leonard, "Not a Hater, Just Keepin' It Real. The Importance of Race- and Gender-Based Game Studies," *Games and Culture* 1, no. 1 (2006): 85.

7 Tara Fickle, *The Race Card: From Gaming Technologies to Model* Minorities (New York: New York University Press, 2019), 7

8 See André Brock, "'When Keeping It Real Goes Wrong': Resident Evil 5, Racial Representation, and Gamers," *Games and Culture* 6, no. 5 (2011).

9 This art is not reproduced in the official *The Last of Us* art book, which I read as a kind of revisionism. In the art book, it is easy to imagine that they emerged fully-formed as black brothers in a dystopian world. The actual trajectory is far less clear.

on the relationship between *Grand Theft Auto: Vice City* (Rockstar North 2002) with the help of teenager Daniel Terrell, who Blackmon interviewed to understand his perspective as a young black man on the racial representations of the game.[10] The result is a sprawling piece that complicated then-current game studies notions of player-character relations, where race "exists" in a game, and how disparate backgrounds make for different player experiences. Most of this emanates for Terrell's own willingness to delve into his feelings about the games that he is playing and how they intersect with his identity and opinions. However, as Blackmon explains at the beginning of her piece, there was an initial hurdle: "[Daniel] told me that he would be glad to talk to me about video games, but that he was not sure that he had too much to say about race in games because it was something that he had not thought much about."[11] When I read this for the first time, I was struck by the relationship between this moment and Kishonna Gray's later interviews with Tyrell, a 26-year-old black man, who is a critical figure in her *Intersectional Tech*. When introducing him for the first time in that book, Gray explains that the players she spoke and played with for her research spent "significant time just discussing identities —gaming identities. When I began uncovering how they made sense of their racialized identities, constructed gendered identities, abilities, and more, there was little or no reflection on how those identities affected their overall experiences in digital and physical realms."[12] As Gray goes on to explain, when she first met Terrell, "he did not even identify racially as black," although that changed substantially over the years as they returned to these questions.[13] While these interviews are valuable for what they tell us about young black men and their relationships to games, they also tell us something about the aesthetic effects of games in a "post-racial" era in which blackness can appear in games but also be untethered from any real-world conception of racialization. As Tyrell tells Gray, this is largely a psychic benefit:

> Kishonna Gray: "Are there times where you have to think beyond just being Black or Man?" Tyrell: "I'm a person. Point blank. But gaming lets me ignore all that. That's why I am here."

10 Samantha Blackmon and Daniel Terrell, "Racing toward Representation: An Understanding of Racial Representation in Video Games," in *Gaming Lives in the Twenty-First Century*, ed. Cynthia L. Selfie and Gail E. Hawisher (New York: Palgrave MacMillan, 2007).

11 Blackmon, *Gaming Lives in the Twenty-First Century*, 207.

12 Kishonna L. Gray, *Intersectional Tech: Black Users in Digital Gaming* (Baton Rogue: Louisiana State University Press, 2020), 9.

13 Gray, *Intersectional Tech*, 9.

Gray's book provides ample evidence that Tyrell's understanding of being able to leave things like race or gender behind while gaming is not exactly accurate, and in doing so joins Lisa Nakamura in tracing how race transforms and operates in new ways when it makes its way to new media forms.[14]

At the same time, Tyrell is not *wrong* in the sense that video games are a place where race is often evoked pictorially but ignored within the plot and action of a video game. While video games now often feature characters who are visually diverse, it is rare for culture to be represented within the game space. In this way, epidermal blackness comes to exist in video games while anything resembling the realities of the lived experience of being black in the world are left out of the game scenario. *The Last of Us* franchise follows this common pattern. Non-whiteness in general, and blackness specifically, is transformed into a purely visual phenomenon where black people exist but all culture from the African diaspora apparently disappears overnight when the zombie fungus went live. As TreaAndrea Russworm phrases it, the black characters of *The Last of Us* "are all presented without a diegetic awareness of their racial and cultural backgrounds" which "most evidently satisfies an uncritical multiculturalist imperative to merely include diverse characterizations in game worlds."[15] In its world, there is no "black experience," or at least we're never given a moment where it comes into focus.

This is especially notable given the character Manny Alvarez from *Part 2*, whose Mexican heritage is highlighted in both dialogue and in his regular use of Spanish.[16] Manny is given room to develop, and is the only non-white character in the two games to be granted complexity and the full weight of a cultural tradition behind him. We see him take care of an ailing relative, we learn about his sexual experiences (in a painful reproduction of the "Latin Lover" trope), and we take on multiple risky missions with him while learning about his unique perspective on the world. Of course, like many characters in these games, Manny Alvarez dies. He's shot in the back of the head by a rifle, in gory detail, without pause in action or much ceremony. *The Last of Us* franchise continually asserts that life is cheap, and follows the now-ubiquitous prestige television drama format in which anyone can be killed as gruesomely as possible. One might argue that Manny's death, or any of the deaths in the game, as simply a consequence of

14 Lisa Nakamura, *Cybertypes: Race, Ethnicity, and Identity on the Internet* (New York: Routledge, 2002).

15 TreaAndrea Russworm, "Dystopian Blackness," in *Gaming Representation: Race, Gender, and Sexuality in Video Games* (Bloomington: Indiana University Press, 2017), 112.

16 This is not to say that Manny is somehow "good representation," since he's positioned as a Latin Lover stereotype straight out of the 1950s.

dystopian storytelling. If life is truly so cheap that no character is safe and murder is the only law of the land, then what does it matter who dies and under what condition? My argument in this chapter depends on a more thorough analysis than this one, which is to say that I cannot play these games and believe that all people die *equally* within them due to the aesthetic, mechanical, and narrative ways that these deaths are produced, depicted, and mourned. Manny dies as a full character whose perspectives on the world are fully understood in multiple dimensions. The other characters I discuss in this chapter do not.

There is an active divestment of historical being for the black characters in the *The Last of Us* games. When Henry, Sam, Marlene, Nora, and Riley appear, they do so as a kind of guarantor of the world, a proof that things are as bad as they seem. For Frantz Fanon, this is a long-running maneuver on the part of whiteness that makes blackness a part of the world and sets whiteness' "acquisitive relation" between them so that black people are always available as a resource to be learned and appropriated from.[17] What we're left with is a narrative universe in which race does not exist but within which "procedural logics of race," as TreaAndrea Russworm terms them, remain unquestioned.[18] Returning to the question of who dies and under what conditions in science fictional dystopias, what is revealed here is a replication of a liberal humanism that sees black characters as "included" without discussing the anti-black terms under which that inclusion occurs. As Zakiyyah Iman Jackson writes in *Becoming Human*, this system is coextensive with the "history of blackness's bestialization and thingification: the process of imagining black people as an empty vessel, a nonbeing, a nothing, an ontological zero, coupled with the violent imposition of colonial myths and racial hierarchy."[19] Black characters in *The Last of Us* are figured into a brutalizing equation of violence and affect while also being denied the cultural and developmental contexts of full human beings.

There are several concepts from science fiction studies that provide useful, genre-specific articulations of these ideas from game studies. Isiah Lavender III's concept of "blackground" is helpful for understanding how the racial imagination of the science fiction video game operates both in general and in the context of the *The Last of Us* games. Developed in order to speak to the operations of race as they inform the creation of a fiction and its conceptual coherence, black-

17 Frantz Fanon, *Black Skin, White Masks*, trans. Charles L. Markmann (Paris: Éditions du Seuil, 1967), 97.

18 TreaAndrea Russworm, "Computational Blackness: The Procedural Logics of Race, Game, and Cinema, or How Spike Lee's Livin' Da Dream Productively 'Broke' a Popular Video Game," *Black Camera* 10, no. 1 (2018): 209.

19 Jackson, *Becoming Human*, 1.

ground is a term that addresses the "embedded perceptions of race and racism—intended or not—in Western sf and criticism."[20] Blackground is the racial equivalent to background radiation, a constant hovering set of assumptions and ideas that appear in myriad places and forms and which emanates from everywhere and nowhere within a set of cultures set up along a black/white racial binary.[21] Crucially, it is rarely (if ever) a question of whether a given text has a blackground; instead, it is about exploring how a blackground is presented and maintained by both representational and formal elements. As Lavender puts it, "science fiction often talks about race by not talking about race, makes real aliens, has hidden race dialogues. Even though it is a literature that talks a lot about underclasses or oppressed classes, it does so from a privileged if somewhat generic white space."[22]

An accessible example of this from popular video games is the Arbiter from the *Halo* franchise. Introduced in *Halo 2* (Bungie 2004), the Arbiter is a religious functionary who exists to be the vanguard of violence for the religiously-oriented collective of species known as the Covenant. Although he begins the game being punished for a previous failure in his role as a commander in the Covenant, the Arbiter slowly "makes good" in the eyes of his superiors as the player guides him through first-person shooter levels. However, eventually the Arbiter encounters a betrayal. His species, the Elites, are no longer favored in the hierarchy of the Covenant itself, and they become something like a second-class species under the Brutes, a species which has been promoted in the hierarchy. It is very easy to read this entire scenario as one predicated on a liberal conception of social oppression: real-world racial ideology is abstracted and then allegorized into the operations of the Covenant, with arbitrary promotions and demotions of species (read: racial) belonging ordering the world. Read in this way, we could see the *Halo* games as defenders of a liberal universal humanism that shows the fickle nature of racial ordering. The Arbiter is a good person, he does good work, and yet the system is aligned against him.[23]

The story of the Arbiter's individual actions and his species' collective fall from grace functions as one of Lavender's hidden race dialogues, an allegory

20 Isiah Lavender III, *Race in American Science Fiction* (Bloomington: Indiana University Press, 2011), 6.

21 Lavender pairs this concept with another, "otherhood," which addresses forms of combination of real-world events and sf imaginings that "map" these relations. I am more interested in the specificity of blackground in this chapter.

22 Lavender, *Race in American Science Fiction*, 7.

23 Another layer to this reading is that the Arbiter is played by Keith David, one of the most prominent Black actors in America.

that asserts there is a structure to race and racism and yet which divorces it entirely from any real-world register of it. If literature and film construct their science fiction blackgrounds in particular thematic ways, then I argue that we should be attentive to specific modes in which video games construct them as well. What are the differences, for example, between *The Thing*'s (Carpenter 1982) cinematic production of a raced world that never discusses race versus *Halo 2*'s production of a racial allegory that, similarly, avoids a discussion of real-world racism in order to abstract it into a problem of alien social relations? Some of these differences are aesthetic: the Arbiter is experienced in first- and third-person modes, and we see the world "through" him and understand the narrative in that way. Other differences are formal, in that a viewer of *The Thing* will be seeing its characters through the cinematographic and directorial choices that guide their perspective of the world at every junction. The editing of the film creates a visual universe that is highly controlled, as opposed to the player-direction of the first-person viewpoint in the moment-to-moment gameplay of *Halo 2*. What we see in a film is planned for us, and in the context of a first-person game, what we see is more often controlled by where we are. The geological and architectural control of visibility is achieved by putting players in buildings or surrounding them with mountains or forests, giving them a sense of freedom in control that is bracketed by the 3D space that they exist within.[24]

Through thinking about how vision works, and therefore how visual elements structure the blackgrounds of both *Halo 2* and *The Thing*, we can develop an understanding of what Adilufu Nama terms the "structured absences" of science fiction media.[25] For Nama, science fiction is often an abstracting force that, when it provides racial commentary, often does so through the figure of a racialized Other. In many ways, structured absences are one of the baseline apparatuses through which a blackground can be discerned, and Nama's explanation of *Star Wars* (Lucas 1977) and the "Star Wars Bar" skit on the *Richard Pryor Show* (1977) makes that clear. Focusing on the famous cantina scene from the former, Nama discusses the "point-of-view shot that scans the interior and permits us to gaze at a fantastic display of difference" that is an "alien wonderland, even though the scene blatantly draws on cliches from western saloons and film noir speakeasies."[26] The viewer of the film is meant to take all of the alien weirdness of the shot as emblematic of the world that they are entering into, which is full

24 Henry Jenkins, "Design as Narrative Architecture," *electronic book review*, July 10, 2014, http://electronicbookreview.com/essay/game-design-as-narrative-architecture/.

25 Adilfu Nama, *Black Space: Imagining Race in Science Fiction Film* (Austin: University of Texas Press, 2008), 4.

26 Nama, *Black Space*, 29.

of difference to a degree that some of the creatures have no cultural or conceptual referent for the viewer. Nama reads this scene through its remediation on Richard Pryor's sketch comedy show. Working as a bartender in the sketch, Pryor reacts in his characteristic manner to all of the alien patrons he has, dropping one-liners as he makes his way around the space. For Nama, the sketch turns on a single joke in which Pryor tells an alien with "a grotesquely large head and protruding flat nose" that he looks just like a black man from Detroit who Pryor knows.[27] Nama writes that

> "The studio audience erupts into boisterous laughter. What Pryor is able to exploit for comedic effect outside of *Star Wars* is ultimately informed by the structured absence of blackness within *Star Wars*. In other words, even though there are no black people in the film, the punch line of Pryor's comedic exchange relies on the transparent racial statement the film is ostensibly trying to hide but the audience clearly recognizes: the aliens of the film signify black people."[28]

In the same book, Nama extends this reading of racial structure to *The Thing* itself, aligning the film's narrative hunt for an alien creature that exists within the social fold but exists only to destroy it. Focusing on the end of the film, in which MacReady (a white man) and Childs (a black man) sit beside a smoldering, blown-up Antarctic research facility and wait to see if the other reveals himself to be a mimic, Nama explains that this is full of "racial antagonism."[29] From a formal perspective, these last moments are built from cuts that take us back and forth from MacReady to Childs, and in these closeups they speak to each other, never both in the frame at once. At the level of editing, *The Thing* is producing a space of unknowing; when we are looking at MacReady, we are *not* looking at Childs, and vice-versa. As the film has taught us, when we're not looking at someone, they could be transforming into something inhuman. For Nama, especially in the context of the film's production during the early 1980s, there is no way to see this as anything other than "a racial standoff" that pays off the structural absence of the film.[30] This is to say that *The Thing* presents us with an alien threat from within, which is structurally about racial antagonism, but it is only at the end that it is clearly re-settled in visual terms.

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27 Nama, *Black Space*, 29. As viewers of the sketch will know, Pryor's punchline deploys the n-word in a way I found difficult to reproduce here for obvious reasons. I believe this rephrasing captures the content of the joke.

28 Nama, *Black Space*, 29.

29 Nama, *Black Space*, 55.

30 Nama, *Black Space*, 55.

A reading of *Halo 2*, or indeed most commercial science fiction video games, does not get us to visual presence of racial antagonism. Instead, we are presented with a highly allegorical situation in which the connection between the science fictional world and our own is extremely abstracted. Video game science fictional worlds give us structured absences and blackgrounds that are so embedded, and therefore so far from representationally readable, that an equivalent of Richard Pryor's *Star Wars* joke would struggle to find purchase. To put this in the context of *Halo 2*, the Covenant's narrative of species hierarchy and their relationship to the war machine of the human population and its Master Chief has drawn comparisons to the War on Terror that began around the same time as its production.[31] The developers disavowed this relationship, but what is worth noting is that they disavowed it via abstraction. In a response to a discussion about an *Entertainment Weekly* piece that aligned *Halo 2* with a political message, the game's Head of Cinematics, Joseph Staten, explained that whatever political message could be read into the game was always going to be in the mind of the audience alone: "Any meaning you ascribe to it is yours alone. And remember, at the end of the day, whatever some journalist says I said really doesn't matter. The proof is in the pudding. Play the game, and I think you'll see it's just that: a fun game with a good story."[32] From the perspective of this developer, there is very little "in" a game politically, and whatever racial, religious, or geopolitical message that could be taken from it has to be activated in the mind of the player.

This is a naïve understanding of how images and narratives work, and it is one that allows anyone to draw political cover in order to dodge responsibility. I follow Alessandra Raengo in my understanding of how race comes to exist in the visual field. It is a "visually rendered social contract, a meta-image, a world picture" and a "structure of visuality."[33] Following from that, it is crucial that we understand that "race still inhabits the picture" even when what we are seeing is not racialized, and that systems of racialization "avisually structure our visual field."[34] As the discussions I have cited in game studies and science fiction studies have shown, any moment in a media object where race seems to not be present is simply a moment in which a dominant (white) mode of racial represen-

31 Gerald Vorhees, "Play and Possibility in the Rhetoric of the War on Terror: The Structure of Agency in Halo 2," *Game Studies* 14, no. 1 (2014): http://gamestudies.org/1401/articles/gvoorhees.

32 Staten quoted in Vorhees.

33 Alessandra Raengo, *On The Sleeve of the Visual: Race as Face Value* (Hanover: Dartmouth College Press, 2013), 23.

34 Raengo, *On the Sleeve of the Visual*, 23.

tation and imagination has become dominant. A structured absence of blackness can only emerge in a context where a white imaginary has dominated the aesthetic field.

I have discussed the concepts of the blackground and structured absence here in order to understand how blackness, specifically, exists and operates within *The Last of Us*, its expansion content *Left Behind*, and *The Last of Us Part II*. Each of these games feature black characters, but in each instance the games lean into traditional strategies of navigating race within the science fiction genre. These characters are epidermally raced, but race does not appear as a social phenomenon to be commented on. Each of these games suggests that the moment that the end of the world *happened* was a moment in which racialized systems of existence in America were wiped away. In this fantasy, race and racism are things of the past, left in the "before times" with plentiful food and warm beds. The differences that exist in the post-apocalyptic world of the *The Last of Us* franchise are political and organizational in their most abstract sense, and raced oppression (although not gendered) has been totally forgotten about in this new world. As I will argue, this is simply a displacement, and the inclusion of black characters without any mention of the reality of race is merely a way of having a diverse cast without reckoning with the realities of hard-won struggles in a social context constantly being navigated on racial terms. This post-racial or "color blind" mode is, in fact, simply another regrounding of racism in slightly obfuscated terms.[35]

Following Lavender's and Nama's claims about how race is displaced in science fiction, I argue that the *The Last of Us* games deploy cinematic techniques in their cutscenes and specific kinds of gameplay prompts to constitute a blackground that is unique to video games. In keeping with the argument of this book, I am focused on how the workings of science fiction are extended and transformed when they enter into the medium of the video game. In the following close analysis of the *The Last of Us* games, I note how player attention and affect is drawn to certain relations. Sometimes this comes with a prompt for interaction. Mechanics of speculation, the driving term of this book, appear in both situations, although they are perhaps more strongly drawn in the interactive moments. The science fictional premise of the games ask players to constantly consider what is happening next, and the sudden and spectacular violence that produces a condition within which "no one is safe" is also one in which players are asked to speculate about what is on the other end of every scene, conversation,

35 See Eduardo Bonilla-Silva's *Racism Without Racists* for an extensive elaboration on this process.

and gameplay action. Mechanics of speculation proliferate through these games for this reason, and it is my hope that the close readings that follow make it clear where speculation is grasped and curtailed by an anti-black aesthetic impulse that extends through these games. Players are asked to consider the future, but it is a future for specific people who exist under specific conditions. I will return to this through the three key scene readings of this chapter.

The Last of Us: Henry, Sam, and the Void

Other than a short opening scene in the first game, *The Last of Us* franchise takes place in a post-apocalyptic world 20 years after the onset of a fungal plague that turns human beings into roving, murderous creatures. This science fictional post-apocalypse is predicated on disease and contagion, but it is also constructed from a fantasy of the response to that disease. On one hand, plague zombies hunt the living through the decaying ruins of the old world. On the other, the remains of the military, large groups of survivors, or paramilitary organizations like the Fireflies jockey for position and limited supplies against the backdrop of plague pressure. The fungal nature of the contagion also creates opportunities for infection that simply do not exist in other forms of zombie fiction. While *Dawn of the Dead* (Romero 1978) offers up the "classic" zombie and its bite-based transmission and transformation, or *28 Days Later* (Boyle 2002) gives us the bodily fluid transmission, *The Last of Us* combines the bite with the fungal spore as its two primary modes of infection. Wherever dampness or darkness can flourish in this apocalypse, the fungus that creates infected humans can grow and fruit, packing basements and boarded-up buildings with spores that will transform anyone who breathes them into bloodthirsty Roamers.[36] For Gerald Farca and Charlotte Ladevèze, it is this relationship between the player, the fungus, and dense urban space that qualifies *The Last of Us* as a critical dystopia by clearly demonstrating how this world came to be and then giving the player the ability to struggle within that narrative framework.[37] When we play *The Last of Us*, especially in the opening parts of the game, there is a strong push and

36 There are several types of Infected enemies in *The Last of Us*. The fungal infection progresses in stages. The first is Roamer, the second Clicker, and so on. Each comes with particular abilities and must be dealt with in specific ways, creating a setup in which mechanical diversity of gameplay is generated by the science fiction logic itself.

37 Gerald Farca and Charlotte Ladevèze, "The Journey to Nature: The Last of Us as Critical Dystopia," *Proceedings of 1st International Joint Conference of DiGRA and FDG*, 2016. 1.

pull relationship between classic philosophical ideals like freedom versus security, and the game stages that directly within the context of an existential threat.

The bulk of *The Last of Us* is about the characters Joel and Ellie making their way across a dystopian United States so that Ellie can be delivered to a medical facility where her immunity to the fungal plague can be used as the basis to develop a vaccine. Players control Joel for the majority of this experience, with a few hours dedicated to playing as Ellie, and much of the published scholarship on *The Last of Us* has focused on their relationship and how it intersects with patriarchal norms around control and violence.[38] This focus emanates from the ending of the game, which reverses much of the standardized heroic narrative that exists in video games. Once Joel and Ellie make it to the hospital where the Fireflies are positioned, Ellie is taken from Joel and anesthetized. Captured by the Fireflies, Joel learns that the key to developing a vaccine from Ellie's immunity will be fatal. Her immunity emanates from a fungal bloom in her brain, and the only way to experiment on it would be to kill her. Joel rampages through the hospital, killing many Fireflies, the doctor who is operating on Ellie, and finally slaying the leader of the Fireflies, Marlene, before driving away with Ellie in tow.[39] When she awakes, she asks what happened, and he lies to her and explains that she is not needed because there are many more immune people than they originally believed. The game ends shortly after, with Ellie confirming what she's been told, clearly doubting Joel's story. "Swear to me," she says. "Swear to me that everything that you said about the Fireflies is true." Joel pauses for a moment, then responds with "I swear." The game cuts to black and then

38 See Shannon Lawlor, "Your Daughter Is in Another Castle: Essential Paternal Masculinity in Video Games," *Velvet Light Trap* 81 (2018); Sarah Stang, "Big Daddies and Broken Men: Father-Daughter Relationships in Video Games," *Loading...The Journal of the Canadian Game Studies Association* 10, no. 16 (2017); Marc Cruea, "(Re)reading Fatherhood: Applying Reader Response Theory to Joel's Father Role in The Last of Us," in *Masculinities in Play*, ed. Nick Taylor and Gerald Vorhees (New York: Palgrave-MacMillan, 2018).

39 Players of these games will note that I leave Marlene out of my analysis of anti-blackness within the series. Ultimately I chose not to write a section on her for both space constraints and uniqueness issues. While she is a major character from a broad narrative point of view, she is maximally marginalized and treated almost identically to the other black characters in the game: she appears, she provides a context for whiteness to understand itself within, and she is spectacularly executed by being shot in the head. Much like Sam and Henry's death, this is followed by a cut to black and a time skip.

the credits, leaving the ambiguously broken trust radically open for players to resolve themselves. We will return to the politics of this kind of cutting.[40]

The Last of Us' narrative pacing is similar to that of a television show in that it moves through geographically different spaces, each with their own short-term goals, along its runtime. One of these "episodes" from late in the beginning of the game takes place in both urban Pittsburgh and a local suburb, and it centers on a discovery and alliance with another pair of survivors trying to make their way out of the city: Henry and Sam. Like Joel and Ellie, Henry and Sam are an adult and teenager pairing. Like Joel, Henry is both proactive as a survivor and extremely protective of his ward. Like Ellie, Sam appears immature against the gritty backdrop of the genre the story takes place within, and another parallel between them is that they are both children of the fungal dystopia in that they were born into the dystopia rather than before it. Both duos are being hunted through the streets of Pittsburgh by a group of marauders with a military-grade vehicle, and they come together to force their way through a checkpoint so that they can escape the city. In doing so, they fall into a river and are swept downstream. They wash ashore, have to crawl through a failed sewer encampment together, and end up in the suburbs still harrowed by marauders. Eventually making it through several desperate situations and longform gameplay sections, they make it out and, happily, find shelter for the night.

After they make camp, Joel and Henry share a conversation about the future. They have hopes and dreams about what could happen if they can just survive a little longer. At the same time, in an adjoining room, Sam and Ellie have a conversation about the science fiction dystopia they live in. Sam asks if the infected are still trapped in their bodies. Ellie tells him that they are not, that whatever makes them "people" is long gone. As she leaves the room, the cutscene camera reveals that Sam was bitten at some point during the last encounter. When everyone wakes up the next morning, Sam has become a Roamer and attacks Ellie. Joel and Henry struggle against each other, deciding what to do. Eventually, Henry shoots Sam, his own brother. The scene slows down, and Joel tries to take the gun from him. Rather than hand it over, Henry turns the gun on himself. He fires and falls to the ground. The screen cuts to black, and when visuals return, Joel and Ellie are a thousand miles away in Colorado.

My interest in the game sections with Henry and Sam emerge from my focus on understanding how these games generate their blackgrounds in specific

40 The cut is a crucial way that cinematic time and space are constructed. For an extended analysis of how this works, see Mary Ann Doane, *The Emergence of Cinematic Time* (Cambridge: Harvard University Press, 2002).

ways. In the case of *The Last of Us*, I understand this process as happening through the decidedly cinematic apparatus of the video game cutscene, a non-interactive portion of the game in which control is taken from the player and the visuals presented are entirely the product of motion captured performances from actors as well as the manipulation of those performances by animators. Moreover, it is the use of traditional cinematic editing in this scene, or the remediation of the cinematic mode of visuality, that delivers a politics of the visual field within *The Last of Us*.

These visual strategies, of course, are informed by the creative and conceptual "purpose" of Henry and Sam within *The Last of Us*' tightly-wound narrative between Joel and Ellie. In the final scene of the game I discussed above, Ellie mentions Sam as someone she remembers as having died in their journey. He and his brother are a part of the long train of the dead that lie behind Joel and Ellie when the game ends. One reason for reflecting on these characters at the end of the game has to do with a parallelism that is set up between Joel/Henry and Ellie/Sam.

In the official podcast dedicated to the game series that launched before the release of the second game, a conversation between host Christian Spicer and co-director Neil Druckmann turns to Henry and Sam, with Spicer suggesting that the brotherly relationship is one of the "strongest parent-child relationships in the game."[41] Druckmann agrees that it is a "paternal relationship," and later in the conversation sets up a direct lesson-based relationship between Henry and Joel, calling them a "cautionary tale" for Joel in that they're a demonstration of the potential for losing the person that you love. The mirroring of this character pair, and the fact that Henry fails to protect Sam, is imagined by the development team as a kind of object lesson for Joel about the right way and the wrong way to go through the world. Additionally, Druckmann's listing of other "cautionary tales" in the opening of the game (the characters Tess and Bill) suggests that Joel's own alignment with Henry is critical fuel for his actions at the end of the game when he murders the Fireflies and removes Ellie from their facility. The deaths of these two characters, then, function as what Frank Wilderson calls the rebar, or the "unspoken grammar," of the game's understanding of how Black representation, life, and death operates in order to support an implicit white structuring of the world.[42] It is a sorting of the world into objects who provide

41 Christian Spicer, "'What are you scared of?' – Summer part 2," *The Last of Us Official Podcast* (Sony 2020).

42 Frank B. Wilderson III, *Red, White, and Black: Cinema and the Structure of U.S. Antagonisms* (Durham: Duke University Press, 2010), 5.

lessons and subjects who learn them in framework that Saidiya Hartman calls the "translation of Black suffering into white pedagogy."[43]

This point is made even more sharply in the "Definitive Playthrough" of *The Last of Us* that appeared on the Retro Replay YouTube channel.[44] In a traditional let's play video format, Troy Baker, the actor who plays Joel in the game, and Nolan North, who plays a late-game character named David, work their way through the game bit-by-bit. The program allows them to do some commentary and to discuss their experiences during production. Along the way, they are joined by guests who also worked on the game. In eighth part of the series, Brandon Scott, who plays Henry, joins them for the first half of the portion of the game where Henry and Sam are present. Unfortunately, other than the general banter that comes with talking about the game, Scott reveals very little about the decisions he made when portraying Henry or how he understood the character. He explains some of his own internal backstory for the character pairing, and he notes that he played Henry as a character that is centered on hope and "faith," presumably about the potential for the future to be better than the past.[45] Scott is not present for the final scenes with Henry and Sam, which take place in following episode of the let's play and where the guest is the actress Ashley Scott (who plays Maria in the game).[46]

The event that occurs in part nine of this let's play series is odd to the extent that I need to describe it schematically. Video game footage plays across the screen while two white men and a white woman sit overlayed at the bottom of the image. They watch the scene between Joel, Ellie, Henry, and Sam play out. The scene ends with their deaths, as I described above. The actors make pained facial expressions while watching the scene of spectacular violence, emoting heavily at what is happening in front of them. Baker and Scott both look like they're on the edge of weeping openly, and in the moment after Henry kills him-

43 Saidiya Hartman, "Saidaya Hartman on insurgent histories and the abolitionist imaginary," *Artforum*, July 14, 2020, https://www.artforum.com/interviews/saidiya-hartman-on-insurgent-histories-and-the-abolitionist-imaginary-83579.

44 The playthroughs appear in part 8 and part 9 of The Last of Us Definitive Playthrough, "The Last of Us | The Definitive Playthrough – Part 8 (ft Troy Baker, Nolan North, Brandon Scott)," YouTube Video, 1:13:54, "RETRO REPLAY," January 7, 2020, https://www.youtube.com/watch?v=4eGHzqNYRig&ab_channel=RETROREPLAY.

45 Brandon Scott's internal backstory for Henry and Sam is puzzling in its absolute bleakness. He explains that he mentally acted as if Sam was born after Henry's mother was raped, and that Henry wanted to abandon Sam because he reminds Henry of everything that had been lost. Slowly, that relationship evolved into the stable state that we see when they're introduced in the game. I don't know what to do with this information.

46 Ashley Scott and Brandon Scott have no relation to one another.

self, Nolan North fumbles out a pseudo-question: "Oh my god—is the?" When the screen cuts to black, Baker puts down the controller with an audible *thunk*. North says "Dude, you did it to me again!" referring to the cut structure of the game that breaks time on these emotional beats. This is the short conversation that follows:

> Ashley Scott: "This is awful." [scoffs]
>
> Nolan North: "This is beautiful, but it's awful. This is that movie that you go 'do you want to keep watching this, honey? Let's watch a *Golden Girls* and go to bed. My god.' By the way, that is a quote from my house a number of times."
>
> Troy Baker: [repeating for effect] "Do you want to watch a *Golden Girls* and go to bed?"
>
> Ashley Scott: "Yeah, I like it. Now we're talking. [gesturing at the game screen] We don't need this in our brains. I mean, we do, we do, sorry. Everyone buy the game."
>
> Baker and North: "They did [buy the game]."
>
> Nolan North: "You know what's interesting, is the cut. So we don't have to know what happened right after that because I don't—[sighs] oh man."
>
> [There is a short discussion about the intro of the game, and then Baker returns to talking about the Henry and Sam scene.]
>
> Troy Baker: "We had long conversations specifically about that scene. It's like 'What does that mean?' For me, this was [Henry's] purpose, and now that he doesn't have that he doesn't have a purpose."
>
> Ashley Scott: "Yeah, it makes sense."

Since the trio is commentating the game as they go on, they quickly move on to a discussion of the next environment of the game, its mechanics, and the upcoming story beats. This short scene of reaction is instructional because it presents us with something like the "intended" reception case for how this scene plays out. The three actors, informed by their positions inside the production as well as the desire to make a good show out of the let's play video, present us with mournful emotions that are almost immediately recovered from so that they can continue the game. We can watch, in real time, the transition from reaction to total emotional recovery; in a few moments, they are back to business and discussing a floating box game mechanic that is used to traverse part of the next level. An additional layer here, of course, is that these people are professional actors, and many of their reactions within the video feel "canned" and overtly performed for the camera. They are producing an image of how we are intended to feel when encountering these game events. Yet even that performance, of "knowing the right reaction" to what is being represented, is something I understand as being a part of how this scene is written, directed, and depicted.

It is obvious here that this is dependent on structured absences within the genre framework that *The Last of Us* operates within. These characters are not unique in their deaths, and while it takes on a somber tone, the game (and the actors in the let's play) do not give over to any deeper thoughts about the racial elements at play; the game is also dependent on a blackground that sees black characters and their lives as expendable in the structuring of a narrative that holds out for the guarantee of life for a white subject. After all, Henry and Sam are ground beneath the treads of the plot (and the other major black character, Marlene, is brutally murdered by Joel at the end of the game) so that these characters can go make lives in the aftermath with Joel's brother Tommy and sister-in-law Maria, the de facto leaders of some of the last vestiges of humanity.

Like Soraya Murray, what is interesting to me about this ending state of the game is not the ethical implications of Joel's murder to "save" Ellie, but instead in how it serves as the endpoint of a narrative about "desperate whiteness set against ruin and abolished social structures."[47] The work of *The Last of Us* is about asking us to empathize with Joel and the choices he makes, or at least to understand them, and it is in this context that we should understand Druckmann's comment that Henry is a "lesson" for Joel and therefore the audience. Henry and Sam die so that an audience will empathize with Joel's position, and that position carries with it a logic of imperiled whiteness under stress and duress. As Murray writes, whiteness functions in this game, and others like it, in "duplicitous ways as both a universal expression of humanity—which has ideological consequences—and as a specific form of identity politics that goes unrecognized as such."[48] To develop this argument specifically in relation to Henry and Sam, I want to return to the scene of their deaths with more detail in order to understand the aesthetic strategies involved in the production of their deaths and the politics that emerges from that production.

Their final scene begins with a shot of Ellie asleep in the ground. Henry is in the foreground on the right, with only his hands and the food they are making visible within the shot. Keeping the same framing, Ellie wakes, sits up, and comments on the food. The next shot widens to show everyone in the small room: Joel, looking out a window; Henry, sitting and cooking, and Ellie, standing up now. Henry and Ellie have a conversation about waking Sam, which follows a traditional shot-reverse shot structure. Ellie goes to the door, and we cut to

47 Soraya Murray, *On Video Games: The Visual Politics of Race, Gender and Space* (New York: IB Tauris, 2017), 119.

48 Murray, *On Video Games*, 137.

the other side of the door, following her movement through it. As she moves past the camera, it pans with her, revealing a hunched Sam standing in the shadows of the room. Our perceptions are brought into distinct alignment with Ellie's here; we see what she sees when she sees it. The cut that follows is back to Joel and Henry, who hear her shout and react to her falling through the door with Sam on top of her. This maneuver from close focalization via Ellie to the reactions of Joel and Henry is subtle, but it is these two characters that we stay with through the rest of the scene. Recalling Druckmann, this is ultimately about Joel's *reaction* to the entire scenario as it plays out.

From this point, we are given a shot of Joel, and he runs toward the camera as it dollies backward, revealing his pack in the foreground and Henry in the far background. When Joel removes his gun from the pack, Henry points his own at Joel and fires. Again, the camera is making specific alignments, this time with Joel's perceptions. Notably, we know that Ellie is being attacked by Sam off-screen, and the player is inundated with the sound of it, but our visual apparatus is focused on the new threat of Henry, the non-infected man who has a gun drawn on Joel. The cinematic cuts to Ellie, who screams, and Joel says "screw it" before diving for his gun. Again, the point cannot be belabored enough: we are following Joel's train of thought now, and perceiving the things he does. The cut to Ellie is a cut that aligns us with Joel's state of mind and what he is most worried about here. As Joel looks for his dropped gun, the camera pans to the left, and as it does so Henry fires his gun in the background, killing Sam. Without cutting, the camera pans back right to show Ellie pushing Sam's body off of her.

Again, our entire perceptive apparatus is aligned with Joel. He is looking for his gun, he doesn't know what happens when his back is turned, and the pan reveals to him (and us) what happened off screen. In practical terms, Sam's actual death is treated as a punch of perceptive drama. We're meant to wonder who Henry shot, and we're clearly meant to feel relief when we realize he "did the right thing" and saved Ellie. The scene cuts again, this time into a reverse shot that pans over a gurgling and dead Sam and stops on a shot of Joel comforting Ellie. After pausing there a few moments, it moves to a mourning Henry before cutting to a closer shot of his grief. Joel stands up, slowly moving toward Henry and asking for his gun, and then we get another shot-reverse shot series that cuts back and forth between Joel and Henry as they get closer together. These are not equivalent shots, however; when we look at Henry, we see him without Joel in the frame, connecting us again to Joel's perceptions as if we're looking out through him. When we see Joel from Henry's angle, Henry himself is in the frame and out of focus, keeping Joel's reactions and movements clearly in focus. In these reverse shots, the camera's perceptions are entirely bound up

with Joel again, either in what he sees or letting us understand how he is reacting. However, the shots change again, allowing us to have a more traditional view from Joel's perspective (with Joel in the frame) as Henry threatens with a gun and tells Joel that all of this is his fault.

As they speak, the camera cuts back and forth more quickly, until Henry turns the gun on himself. The moment that the gun touches his temple, the camera cuts away from him and into a reverse shot that shows Joel again in full focus. Henry's body takes up the right side of the screen, and the gun fires across the cut. We are *close* to Henry when we see the blood spray and his body fall, but our perceptions are *aligned* with Joel's startled jump and crestfallen reaction when the gun fires. We're still with Joel when Ellie says "oh my god" off-screen, and then the game cuts to black and sits in that blackness as a melancholic guitar begins to play.

While this play-by-play of formal analysis is admittedly decompressed, I think that the formal structuring of this scene is critical for understanding how the operation of the game camera figures the relationship between these characters. At every turn, in every moment, the camera is aligned with Joel's feelings and perceptions; there is not a single image here in Henry's final moments that is not about making us perceive the world through Joel's concerns and feelings. Ultimately, then, this moment of death and destruction of a black man and child is exactly about what Troy Baker says it is about, but not in the way he intended it. Henry's death is shunted into the absolute black space of the cut because he no longer has a purpose. He exists to provide a lesson for the white masculine ideology that Murray points to, and then he is ejected from the entirety of the visual representational universe because to consider him or Sam as anything *other* than existing to serve as a lesson would invite us to critically examine this post-racial apocalyptic fantasy.

It is also impossible to experience the let's play of the actors talking their way through the game without thinking about how Brandon Scott is unable to speak about or over his own significant death scene, leaving it to Troy Baker to explain the significance of everything through the lens of Joel's feelings. While this was undoubtedly the end result of production schedules for a YouTube video series, it still creates an uncanny moment of the commentary reproducing the text over again. The moment of explanation and unpacking that the let's play accomplishes still, as the discussion above demonstrates, centers on reactions from an external position to the spectacular tragedy and how it informs the next steps in the game journey. There is no reflection or speculation about Sam and Henry's lives, their dignity, their difficulty, and how their journey could have played out. They are an emotional beat to be reacted to and forgotten about.

Structurally, I understand what is happening here, both verbally in the case of Baker's explanation and visually in the case of the operations of the image, in terms of Ed Guerrero's discussion of the erasure of the black voice as a historical mode of domination. Reading through science fiction films that position black aliens as unable to communicate with others, Guerrero argues that the elimination of the ability to speak "reveals ideological boundaries the director and writers are unable to transcend" and creates a situation in which "vocalizing claims for self-representation, justice, and freedom are eradicated."[49] There is no system of recourse, and what happens to Henry and Sam is part of a long legacy of violent black death in which, as bell hooks argues, "there is no grief, no remembrance."[50] There is generalizable regret, of course, and there is even a sadness about what happens. But in the same way that the players in the let's play are able to transition almost immediately from grief to mechanical analysis, Henry and Sam are replaced in the player's memory by ever-newer content. On a structural level, both Guerrero's analysis of eradication and hooks' conception of griefless representation of black death occur here in a doubled way. Henry's death and the immediate cut create a situation in which there can be no reflection on grief or the possibilities of black life.

Up until this point I have discussed the formal maneuvers of this scene in order to demonstrate how the game structures the player's vision to align with whiteness and to reduce black death to an instructional encounter. However, the scene ends with a cut to black, and I want to shift focus now to talking about that cut.

The cut to black and the surgical removal of Henry and Sam from the core concerns of the game (other than as object lessons) calls to mind David Marriott's analysis of the murder of Damilola Taylor through the representational system of CCTV. Discussing the fragmented, disparate footage captured by the public surveillance system in South London, Marriott claims that the pieces of footage "do not tell a story; there is no story to be passed on."[51] Instead, story is imbued on them by context. CCTV captured Taylor walking, full accounted for, and shortly after he leaves the surveillant eye, Taylor was found bleeding in a stairwell from a stab wound. He died, and his murder sparked discussions and a scandal about the effectiveness or use of the CCTV system.

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49 Ed Guerrero, *Framing Blackness: The African American Image in Film* (Philadelphia: Temple University Press, 1993), 47.

50 bell hooks, *Reel to Real: Race, Sex, and Class at the Movies* (London: Routledge, 1996), 35.

51 David Marriott, *Haunted Life: Visual Culture and Black Modernity* (New Brunswick: Rutgers University Press, 2007), xiii.

For Marriott, it is impossible to see the footage without the outcome in mind: "Where do we see it? At first sight it seems untraceable, impossible. The freedom to replay, freeze-frame, or enlarge the video image only realizes the following: these images are empty and inaccessible; they cannot act as witnessings to what we know (or imagine) as the death of this boy, a death which remains outside the time and processes of the televisual image."[52] From this recognition, Marriott argues that ultimately it is the gap in the image, the space beyond it, that tells us the most about that mode of recording the world. CCTV captures as much as it can, constantly, producing hypervisibility, especially in groups of people deemed worthy of surveillance by state and private interests. We cannot see the system that *produces* the conditions of Damilola Taylor's death in the footage. These things are not simply unshown, but rather rendered invisible and into a place of "nonvision."[53] This leads Marriott to a question fundamental for understanding Taylor's death: "What kind of gaze are we being asked to identify within the tranquil flows of CCTV; what kind of mourning or penalty is at work when the subject is either dead and/or raced?"[54]

The operations of the camera, of the let's play, and of the official podcast of *The Last of Us* have a similar relation to Marriott's CCTV system. We are asked to identify with a character through intensive cinematic techniques that are reinforced by a cohort of paratexts.[55] We are given a visible world in which familiar models of representations of black death are produced for white characterization, and at the end of it we are ejected into a black space, a condition of nonvision, in which we are asked to work through whatever feelings we have on the topic before being dropped back into regular gameplay. The entire representational function of the video game breaks down to ask players to consider, to process, and then to move beyond the death that we've just been shown. After all, there is more game to play.

The cinematic cut to black is a way of cleanly dispersing with the material details of Sam and Henry. In a game that is so invested in the gritty reality of living after the apocalypse, the cut to black, and a time skip that takes the characters into the next season of the year, is a way of representationally obliterating Henry and Sam (they are no longer there) while rendering visible the process of creating their absence. We see a black screen. We sit with it. When it returns,

52 David Marriott, *Haunted Life*, xiii.

53 David Marriott, *Haunted Life*, xiv.

54 David Marriott, *Haunted Life*, xiv.

55 Some of the official concept art for *The Last of Us* shows a pair of white brothers who appear to be earlier versions of the characters who eventually became Henry and Sam.

we're ready to move beyond the death, either by focusing on the next puzzle or, as Nolan North suggested, watching *Golden Girls* and going to bed. The willingness to let this scene be heavy in its general misery is an extension of what Kishonna Gray and David Leonard name "the pleasure in and normalization of Black Death" and is not just a clueless error or an inability to see the racial elements for what they are.[56] Instead, it is an inability to admit or note that black death is a constitutive part of *The Last of Us*' narrative mechanisms.

In this section, I have focused on the operations of the video game camera to discuss the deaths of Henry and Sam and the politics of alignment within that scene. An attentive reader might be concerned about where mechanics of speculation are in all of this. After all, in these scenes there are no opportunities for a player to interact or move the state of things forward. There is no prompt for a player to engage and therefore open up the lines of speculative inquiry that science fiction games tend to offer. While I will address this more directly later in this chapter, I do want to say two things about speculation in this scene. The first is that the cut itself is a purposeful imposition of a moment of speculation. It seems clear to me that a player is meant to reel at the violence, to wonder if things could have gone another way, and to summon up thoughts about where Ellie and Joel and going to go from here. The second is that the formal capabilities of the image itself, the way that visuality is structured in the scene, is a constant process of evoking speculation and then dissolving it. Joel and Henry talking about the future, Sam looking at his wound, Joel scrambling for his gun, and Henry considering what to do after he killed his brother are all micro-moments in which split-second speculations are drawn from the player. The tension of the scene ratchets up due to our ability to wonder what is happening next and how this could have been prevented. However, in line with the rest of this book, there are no mechanics here. We are simply watching. In the next section, I will look to a very similar scene in *The Last of Us Part II* that adds a mechanical interaction, showing fully how mechanics of speculation can be produced and then nullified.

56 Kishonna L. Gray and David Leonard, eds. *Woke Gaming: Digital Challenges to Oppression and Social Justice*, Seattle: University of Washington Press, 2018, 13.

Left Behind: Riley's Bite

In 2013, following the release of *The Last of Us*, developer Naughty Dog released a short downloadable expansion pack named *Left Behind*. Functioning as a standalone story, *Left Behind* takes place during one of the cuts between seasons in the game.[57] In the main plot of *The Last of Us*, Joel falls onto a large piece of rebar, rendering him unconscious and punching a massive hole through his abdomen. After Ellie rescues him and they make their way past some enemies, a cutscene plays in which Joel falls unconscious and the game "cuts" much like it does after Henry dies. When we return, we are Ellie without Joel, hunting through the forest for food. The game goes on from there. *Left Behind* takes place in that gap of time and walks the player through at least some of the events Ellie went through during that period. Completable in about three hours, *Left Behind* bounces back and forth between Ellie's present, where she is searching for antibiotics for Joel in a ruined shopping mall, and her past, which has her exploring an abandoned mall in the Boston Quarantine Zone with her friend and romantic partner Riley. The present day situations are by-the-numbers *The Last of Us* light puzzles and combat encounters. What I am interested in here is the past.

Riley is a black teen girl who is slightly older than Ellie, and *Left Behind* itself is light on details about her. To understand the plot threads of the expansion, it is almost required for a player to have read the canonical tie-in comic book *American Dreams*.[58] Co-written between Neil Druckmann and illustrator Faith Erin Hicks, the comic explains the background of the relationship between Ellie and Riley: Ellie comes to a military school in the Quarantine Zone and strikes up a friendship with Riley, who suggests that there is a life beyond the brutality of the military and civilian relationship in the Zone. Riley also aspires to join the Fireflies, providing context for Ellie's own interest in helping the movement in her later years. This groundwork of shared dangers and aspirations sets the stage for *Left Behind*, which begins with Riley returning after having disappeared for several weeks and tasking Ellie with a little bit of exploration. The reason for this adventure, which is only explained near the end of it, is that Riley is going to be leaving the Quarantine Zone for good in order to join the Fireflies. What seems to be a fun time is actually one last ride, a goodbye from a teenager who can't quite work up the courage to say it.

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57 In this way, all of *Left Behind* happens "in the cut."

58 Neil Druckmann and Faith Erin Hicks, *The Last of Us: American Dreams* (Milwaukie: Dark Horse Books, 2013).

While all of the games in the *The Last of Us* series have been critically acclaimed, the praise that has surrounded *Left Behind* emanates from a slightly different arena. *The Last of Us* was valorized for its gritty, hyperviolent realism, but *Left Behind* was praised for a realism of a different sort. Riley and Ellie cavort around a mall, putting on masks in a Halloween store, taking selfies in a photo booth, and playing a game of breaking windows in a car. As critic Keza MacDonald wrote at the time of release, there is a brittle feel beneath these acts: "Their horsing around on the merry-go-round and in the photobooth is a retreat, a regression back to childhood to avoid facing the realities of growing up: separation, change, probably pain."[59] As MacDonald notes, the effectiveness of the game for her hinged on its specific video game form, as a player enacts choices of how they want Ellie to interact with Riley. One can choose to sulk, for example, or lean in to the experience and have more fun. "It's active, not passive," MacDonald explains, implicitly aligning the value of the experience with the ability for these things to be *mechanically expressed*. One gets the sense reading MacDonald's essay that having this relationship experienced purely through cutscenes, for example, would be insufficient for truly showing the depth of this teen relationship.

Players can make whatever choices they want in these scenarios. No matter what they do, the narrative funnels them toward a scene in which Ellie and Riley are dancing to music while standing on a lit-up box that might once have been used to show off the latest fashions. During a conversation, Ellie leans in to kiss Riley. After kissing, she draws back with a smirk on her face. This is a cutscene, and during the kiss, when the teens' lips are touching, there is no reverse shot. We hold on Ellie's face as she leans in, as they kiss, and as she moves away after in the same close up. While dialogue before and after make it clear that Riley is excited and emotionally invested in the kiss, *for us* it is only about Ellie and her joy. We are intensely focalized around her, not Riley. Perhaps unsurprisingly, this kiss was controversial within the gaming community, and a Reddit AMA is instructive for understanding the creative decisions behind the kiss. On one hand, Druckmann claims that the teen romance was almost functional in its implementation, explaining that "Their characters needed somewhere else to go. If it was just about friendship, their arc would be over as soon as Ellie forgave Riley for leaving (in the Halloween store) and they were friends again. By having a romantic relationship it gave another layer of subtext to the performances and al-

59 Keza MacDonald, "The Significance of The Last of Us: Left Behind," *IGN*, February 19, 2014, https://www.ign.com/articles/2014/02/19/the-significance-of-the-last-of-us-left-behind.

lowed the story to still evolve as Left Behind went on. We also wanted to create a meaningful/moving kiss in a game—which is super rare."[60]

On the other hand, the development team clearly thought through the implications of what it means for Ellie to be attracted to women in the universe of the game as a serious part of her character. When asked in the AMA about whether the kiss was platonic in nature, Druckmann answers that it wasn't his intention for that to be the case.[61] Within his explanatory apparatus, there seems to be no difference between dramatic necessity (what makes for the best plot) and character coherence (who a character is). What the Naughty Dog developers give us, then, is a kiss between two girls that "pays off" many of their plot beats and sets up the context through which we will know Ellie in the future.

Not long after this kiss, fungal zombies explode into the scene and pursue Riley and Ellie. They escape up some scaffolding, but Ellie falls, and is attacked by an Infected. Instead of leaving her to die, Riley jumps down from her place of safety to save Ellie. Once they're out of trouble, both of the teens reveal that they have been bitten by the zombies. Recognizing that they're going to die, Ellie asks what they're going to do, and they have a short conversation.

> Riley: "The way I see it, we got two options. Option one: we take the easy way out. It's quick and painless. I'm not a fan of option one. Two: we fight."
>
> Ellie: "Fight for what? We're going to turn into one of those things?"
>
> Riley: "There are a million ways we should have died before today, and a million ways we can die before tomorrow. But we fight for every second we get to spend with each other, whether its two minutes or two days. We don't give that up. I don't want to give that up. My vote... let's just wait it out. You know, we can be all poetic and just lose our minds together."
>
> Ellie: "What's option three?"
>
> Riley: "Sorry. Come on, let's get out of here."

There are two formal moves that are critical in this scene. The first is that during Riley's longer lines, the game cuts from this memory to Ellie's present, where she

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60 Neil Druckmann and Bruce Straley, "Hi, we're Neil Druckmann (Creative Director) and Bruce Straley (Game Director) of The Last of Us and The Last of Us: Left Behind at Naughty Dog. AUA!," *Reddit*, accessed March 26, 2021, https://www.reddit.com/r/IAmA/comments/1ykno8/hi_were_neil_druckmann_creative_director_and/cfldkan/.

61 Druckmann, AUA; Jason Dunning, "The Last of Us: Left Behind Plot Point Explained by Druckmann; Ellie's Job Revealed," *PlayStation LifeStyle*, February 24, 2014, https://www.playstationlifestyle.net/2014/02/24/the-last-of-us-left-behind-plot-point-explained-by-druckmann-ellies-job-explained/.

is placing a wounded Joel on a travois pulled behind a horse. The camera is close to her face, clearly showing that she is reflecting on these moments, that they are phenomenologically *happening* at the same time for her. The second is that the scene, predictably by now, cuts to black in the end. Before it does, Riley stands and leaves the frame, giving us Ellie's pained expression before cutting and then rolling the credits. The cut functions exactly the same way that the other two do. Riley is consigned to death. Ellie has an immunity, so she will live. While Riley's death is significant for Ellie as a character, any consideration of it on the part of the player must happen through speculation; we cannot know if Riley fought hard before dying. Any possible reflection on black death is kicked into the void, and it is done so to deliver emotional gravitas for white characters and to maintain the blackground of this dystopia that deploys black death as a structuring principle.

What is notable, though, is the way that the player is asked to fill in information after the cut. Across definitions of science fiction, from Samuel Delany to Joanna Russ to Darko Suvin, there is an assumption that an audience member has to fill in some details with their minds after they have been provided with certain baseline assertions by words or images.[62] Narratively, we know that this is how Ellie discovers that she is immune. Riley becomes infected and she does not. But we're forced to speculate about that eventuality, asked to imagine the moments of transformation that happen outside of the visual evidence we're given. What marks Henry and Sam's death as different from Riley's is that the cut is specifically used in the latter case to ask us to *imagine* the violence, to summon it up from thin air. This is a strategy Naughty Dog expands on *The Last of Us Part II*, which I will discuss in the next section.

The Last of Us Part II: Nora, The Basement, and the Prompt

Despite being a game about a plague-induced post-apocalypse released during the lockdowns and deaths of COVID-19, *The Last of Us Part II* was a critical and commercial hit in 2020. Picking up the story of Ellie and Joel a few years later, *Part II* continues the aesthetic and narrative themes of the first game. It is about hardened people living in the shadow of a fungal plague in a world gone to ruin. Urban spaces overgrown with plant and animal life and slowly de-

62 Samuel Delany, "About 5750 Words," in *The Jewel Hinged Jaw- Notes on the Language of Science Fiction* (Middletown: Wesleyan University Press, 2009); Joanna Russ, "The Image of Women in Science Fiction" (1974), n.p.; Darko Suvin, *The Metamorphoses of Science Fiction* (New Haven: Yale University Press, 1979).

caying are the most common environments. Extreme violence, whether in gameplay or in cutscenes, is also on display, now in the higher graphical fidelity of a newer console generation. The mechanical experience remains unaltered, still focusing on getting from location to location based on narrative goals and predicated on stealth and action gameplay. Ammunition is rare, materials for crafting items are scarce, and players must navigate tough situations with many humans and fungal zombies regularly. The game's story is also in the same mode. *The Last of Us* opened with Joel losing his daughter and then, many years later, after much struggle that we played and watched, facing the same situation again and violently rejecting the possibility of loss. He kills the future to save his adopted daughter.

In *Part II*, we play as both Ellie and a new character, Abby. Abby is a former Firefly, the group who was attempting to create a vaccine for the fungal plague from Ellie's immunity. The game reveals that Joel killed Abby's father in his bid to rescue Ellie from the Fireflies at the end of the previous game. Several years later, at the start of *Part II*, Abby and a small group of her friends make their way from their home base in Seattle to where Joel and Ellie are living in Jackson, Wyoming. Eventually, Abby's group finds and captures Joel. She wounds him and begins torturing him by beating him with a golf club. The cut to black appears again; with the camera focused on Abby, she delivers a short line before bludgeoning Joel in the side of the head, with the game cutting to black on the strike.

In the scenes that follow, Ellie finds the cabin where Abby and her team are encamped, and creeps her way down into the room where Abby has been beating Joel. It is unclear how much time has passed between the cut and the new scene, but Joel remains alive. Without reading the scene as closely as Henry's death scene, it is safe to say that it broadly follows a similar classical cinematic structure: the game transitions from a third-person following camera to one that is predicated on reverse shot relations and closeups of facial expressions. In this case, though, we are not aligned with Joel, but instead Ellie. The camera lingers several times on her face in close up, revealing her surprise and rage at what is being done to her adopted father figure. In Joel's final moments, we cut from shots of Ellie pinned to the ground by Abby's cohort and then to Joel's bloody and bruised face in close up. We cut back to a shot that's aligned with Ellie's perspective from the ground, and Abby raises the golf club above her head. We cut to the reverse of this shot, with Ellie's face framed between Abby's feet and Joel's head on the left of the screen, as the golf club swings down and impacts his head. In this moment, we are not given something like Joel's shudder from *The Last of Us* and the cut to black. Instead, the game holds on Ellie's face as she lets out a deep scream of "no!" As Abby shifts her body, the club covered

in gore drifts into the frame. We stay in the scene. A character spits on Joel's body, and we cut back to Ellie, still on the ground screaming "I'll fucking kill you" as a ringing tone resonates through the audio mix. Finally, one of Abby's team walks toward Ellie and kicks her in the face, knocking her unconscious, cutting to black.

If the relationship between whiteness and the visual representational strategies was ambiguous in *The Last of Us*, then that ambiguity has been completely flushed out in *Part II*. What we have is another scene where death is managed and depicted. However, here it lingers, sticking with the characters so that we might learn about the actions and reactions of the characters in the wake of this major death. This form of cinematic staying-with, with the political and personal reactions to it, is something *The Last of Us* was disinterested in with Henry and Sam. This beloved white and male character cannot be kicked into the avisual void, the space of the cut, because to do so would be to cut short the emotional reactions that audiences are meant to identify with. When Henry and Sam are killed, the black screen appears in a move to wash away or move beyond the dramatic and spectacular moment that preceded it. By contrast, Joel's death operates by way of aligning the audience with Ellie and asking them to feel, in real time, the same set of regrets and pains that she feels. These two death scenes are different in kind, each being represented and processed through their visual strategies.

I am comparing these two scenes not simply to show the racial regime of representation at play, although these two scenes in comparison do that clearly, but rather to set the stage for talking about another moment of death in relation to a cut that operates differently from these two in minute, but crucial, ways. When Ellie is being forced to witness Joel's death, she is being held down by a character named Nora, a medic who, along with the rest of Abby's team, is a part of the Washington Liberation Front militia occupying Seattle. Later in the game, Ellie hunts for Abby during her own mission of revenge. In this quest, Nora becomes one of several "bread crumbs" along a path to finding her.

This journey to find Nora is a narrative version of what game designer Steve Swink would call a "high-level rule."[63] In his formal system for understanding the creation of games, high-level rules are those that "focus players on a subset of mechanics and, in so doing, change their perception of the game's feel."[64] His examples, such as cutting grass in the *Zelda* franchise or world loot drops in

63 Steve Swink, *Game Feel: A Game Designer's Guide to Virtual Sensation* (New York: Elsevier, 2009), 180–182.

64 Swink, *Game Feel*, 180.

the *Diablo* games, are based on broad, general principles that often interlock with medium- and low-level rules in order to create a tapestry of different player interactions with rule systems. I am bending Swink's intention here a bit, as his theorization purposefully holds narrative at arm's length in order to get at the expressive capabilities of mechanical game design. That said, understanding the goal-oriented nature of finding Nora seems like an appropriate high-level rule to me in that is provides context and coherence to the action, stealth, and navigational gameplay segments that surround it. While playing as Ellie in *Part II*, the player's journey is largely dictated by finding Abby and seeking revenge for Joel's death, and the hunt for Nora is a portion of that journey. If I translated this general narrative context into a written Swinkian high-level rule, it would be something like "find Nora to unlock additional story components," and along the way you will develop the skills that will take you further along in weapon and character upgrade paths.

My reason for evoking a concept like high-level rules here is that *The Last of Us Part II* puts us into the same scenario as the first game: a dying world with sparks of vitality and a shallow appreciation for human life. Again, much like the first game, *Part II* creates a situation that has an obvious racial component and then disavows any real operations of race as a social system. What we have is another black character, a woman, whose world is never discussed in terms of either racial belonging or racism. In contrast to her own compatriot Manny, who I wrote about earlier in this chapter, Nora is not socially located in any way other than being Abby's friend. Within this paradigm of epidermal blackness-without-race in the game's fiction, we could read Nora's existence as a story goal as totally apolitical. She is just a cog in the game's machine, a way to get from here to there, a goal in a daisy chain of other goals that the narrative floats with. We might even call her function in the game as something akin to an inverse damsel-in-distress, as if the player of *Super Mario Bros.* was seeking to kill a Princess Peach who always escapes to another castle. Unlike Henry and Sam, who are incidentally encountered and who are never turned into "game objectives," Nora fits even more snugly into the video game logic and structure than Henry and Sam did.

When Ellie finally finds Nora, she works toward an interrogation. Ellie has murdered several members of the Washington Liberation Front at this point, and she is very willing to pull a gun on Nora to threaten her life. Nora navigates the situation, and when given the opportunity, sprints away to escape. Ellie chases Nora through the heart of a hospital structure. This specific gameplay form, in which the player is incentivized to navigate space quickly and efficiently rather than stop and fight, first appears here. It is pulse-pounding gameplay, completely abandoning the methodical pace of the rest of the game. After a few minutes

of navigation, the chase ends with Nora trapped in a dead end, a gaping hole to the center of the hospital yawning behind her. After a short fight, Ellie captures her, and a couple Washington Liberation Front soldiers enter the room, demanding that Ellie let Nora go free.

The hole that is behind them leads down into the depths of the hospital. Within the fiction of *The Last of Us*, this hospital has particular significance. It is the first hospital where fungal plague victims were taken during the initial outbreak decades previous. The most advanced forms of the fungus exist there. What is down in the hole is a disaster that stretches back to the days when the world ended. Rather than give Nora up, Ellie drags Nora down into the hole. While this fairly simple act is not spectacular, it is one of the most cruel events that takes place in these games. Ellie is immune to fungal spores. Nora is not. By falling into the depths of the hospital, Ellie has immediately consigned Nora to a choking, hacking death that will end with her reanimated corpse scrabbling around in the dark. There is no cure, and no going back.

In his *Red, White, and Black*, Frank Wilderson analyzes what he, following Hortense Spillers, calls the "grammar" of life that positions blackness within the world.[65] Synonymized in his scholarship with the words "structure" and "rebar," grammar for Wilderson is a way of articulating the conditions under which social positions can be understood within civil society.[66] As he explains,

> Semiotics and linguistics teach us that when we speak, our grammar goes unspoken. Our grammar is assumed. It is the structure through which the labor of speech is possible. Likewise, the grammar of political ethics—the grammar of assumptions regarding the ontology of suffering—which underwrites film theory and political discourse (in this book, discourse elaborated in direct relation to radical action), and which underwrites cinematic speech (in this book, Red, White, and Black films from the mid-1960s to the present) is also unspoken.[67]

Red, White, and Black is largely committed to understanding the ontological and political maneuvers available to black people within a social structure that positions them as outside the Human and, in fact, as the guarantor of the humanity of others through their ontological degradation that begins with the forcible capture and enslavement of Africans. Wilderson performs the majority of his analysis through paying attention to "cinematic strategies" such as cinematography, shot structure, and editing in order to demonstrate that there is a difference be-

65 Frank Wilderson, *Red, White, and Black*, 10 – 11.
66 Wilderson, *Red, White, and Black*, 2
67 Wilderson, *Red, White, and Black*, 5.

tween the depiction of blackness and a narrative impulse that might claim that it is more liberal or progressive; in other words, Wilderson is interested in the tendencies and strategies of anti-blackness that images reveal which narrative might otherwise attempt to cover over or hide.[68]

In my reading of the scenes of Henry and Sam earlier in the chapter, I am obviously pursuing a set of formal strategies that emerges from black film studies in general and the work of Wilderson in particular in the sense that I have worked through a grammar, deployed through a specific set of cinematic strategies, that centers whiteness by obliterating black life. The key difference I see between the representational strategies that surround Henry and Sam in *The Last of Us* and the ones deployed around Nora in *Part II* is that the second game is no longer content to *solely* deploy cinematic strategies as a vehicle for anti-blackness. Instead, it develops a new strategy, predicated on mechanics of speculation, to enliven anti-blackness in new ways that are unique to video games.

Before I can explain how this occurs, I have to finish the story of Ellie and Nora. After they fall down the hole, Ellie and Nora separate, with the latter running through a doorway as the troops that backed them into a corner drop down the hole in pursuit. There is a tense combat encounter triangulated between Ellie, the WLF troopers, and several Infected, and after that is complete, Ellie follows Nora through the door and tracks her through the hospital basement. She eventually finds her with her back against a metal door, struggling to open it while undergoing a transformation into a Runner, the first stage of infection of the fungal plague.

In a familiar move, the back-and-forth of the scene aligns us with Ellie. We look down at Nora over Ellie's shoulder, and we look up at Ellie from a position that's perspectivally aligned with Nora but not directly from her point of view. Then we see the two of them framed from the side, Ellie towering over Nora with a pipe in her hand and Nora gasping for breath on the ground. When Ellie leans down to explain to Nora that she can make her death quick if Nora reveals Abby's location, we're positioned somewhere under Nora's ear, better to see Ellie's facial expression while the threat is being made. A reverse shot structure proceeds until Ellie stands up and warns Nora that this is her last chance; we cut to a view of Nora from directly above her, aligned with Ellie's vision, and we see her struggle to sit up and then fall back against the door. Unable to stand, and unwilling to give up her friend, she gazes at Ellie as a condemned woman. The camera turns around, facing Ellie, and we're much closer

68 Wilderson, *Red, White, and Black*, 5.

than we have been before. She grits her teeth, and a representation of the PlayStation "square" button appears, floating, beside her head.

In the game so far, the vast majority of the "cinematic" moments of the game have been what are generally known as "cutscenes." Cutscenes are moments in a game where the player is not asked for input, and pre-planned narrative moments play out like a film in front of them. This is the main narrative mode that the *The Last of Us* franchise deploys, and it is the strategy that most "blockbuster" or "AAA" games depend on. Cutscenes have been controversial in the history of video games, sometimes being construed as a distraction from the real interactive content that a player could be engaging with. Responding to these arguments in 2002, Rune Klevjer wrote that cutscenes are "configurative experiences" that fit within a rhythm of gameplay; in this calculus, they do not impede gameplay, but rather give it context and texture.[69] For Geoff King and Tanya Krzywinska, cutscenes can be used as a way of challenging a player to realize "the pre-existing narrative structure and make sense of the narrative context in which gameplay occurs."[70] In this register, part of the gameplay that cutscenes afford is that they are ways of orienting ourselves to events. As I have argued already, the position of the camera and the cinematic language of *The Last of Us* is used in order to entrain the audience into a system of racial representation, and that visual regime is context for the rest of the post-apocalyptic world we enter into.

The use of cutscenes as a narrative delivery device is standard in games, and in the case of games like *The Last of Us Part II*, it is a substantial selling point that these cutscenes feature incredibly detailed characters and environments that are treated as a technical marvel. When these cutscenes are interrupted by prompts to press a particular button, we call this a "quick time event," or a moment in which the player has a direct impact on how the automated scene might play out. In her analysis of *Until Dawn* (Supermassive Games 2015), for example, Tanine Allison writes that quick time events are skill-based challenges where the only skill is making a hurried action like pressing a button.[71] It is the "quick" that most often matters in games like *Bayonetta* (PlatinumGames 2009) or *Until Dawn*, where a missed button press either equates to a game over screen or the death of a character. As Phoenix Simms has made clear,

69 Rune Klevjer, "In Defense of Cutscenes," in *Proceedings of Computer Games and Digital Cultures Conference*, ed. Frans Mäyrä (Tampere: Tampere University Press, 2002), 195.

70 Geoff King and Tanya Krzywinska, *Tomb Raiders and Space Invaders* (New York: IB Tauris, 2006), 45.

71 Tanine Allison, "Losing control: Until Dawn as interactive movie," *New Review of Film and Television Studies* 18, no. 3 (2020): 290 – 291.

the economy of opinions around quick time events and their use suffuses contemporary game discourse, with some uses of the mechanic being understood as "inconsequential action prompts" while others are accepted as more fundamental or critical.[72] An example of a more fundamental use of the quick time event is in *Shenmue* (Sega AM2 1999) when a character trains the player character, Ryo, in a special martial arts technique that requires no reaction. The trainer puts a razor to Ryo's throat, and a button prompt appears, and a player who is experienced with the game has the impulse to press in order to fulfill the challenge. As critic Heather Alexandra points out, the challenge here is not to react, creating what she calls a "mechanical subversion" of the quick time event.[73] The ways that we become accustomed to pressing, or not pressing, the buttons have significant impacts on how we interact with the games that include them.

As these explorations of the quick time event show, as a game mechanic it sits at the edge of a game's cutscene (or cinematic) grammar and game mechanics more broadly. Quick time events demand reaction speed, but they also ask you to remember the context within which the mechanic appears, asking the player to do the *appropriate* reaction within a delimited set of narrative constraints. Sometimes that is pressing the button, like in a cinematic in the *God of War* franchise, and other times it is simply doing nothing.

The appearance of the button prompt beside Ellie's head, then, is a moment where grammars, discourses, and expectations collapse into each other: it summons up the specter of quick time events of previous games the player has experienced; it tells the player what they need to do; it asks the player to think about what they believe is appropriate to do in this narrative context; it deploys itself as a mechanic of speculation. It demands that the player consider what is on the other end of that button press.

In contrast to the games I just mentioned where doing nothing is a possibility, *The Last of Us Part II* will not move from this image of Ellie's face without the player pressing the square button. Robert Yang, commenting on the ending of *Bioshock Infinite*, highlights the temporal weirdness of the staging of these kinds of moments: "If you don't do anything, [the two characters struggling against each other are] just locked in this scripted animation loop, forever, waiting for your input to continue. Two digital actors, play-fighting and mugging for the camera all at once, making sure they're not blocking each other from the

72 Phoenix Simms, "Press X To Disparage Game Design," *Third Person*, June 18, 2018, https://medium.com/@phoenix.simms/press-x-to-disparage-game-design-d77069e0c5f9

73 Heather Alexandra, "Shenmue, QTEs, and Mechanical Subversion – Minicrit," YouTube video, 5:33, "Heather Alexandra," August 15, 2015, https://youtu.be/NJV1gj6g9Zc.

light."[74] This is the strange position that a player of *The Last of Us Part II* is put into. The world will not go on if they do not press the button, but pressing the button will cause Ellie to strike a dying woman who can't even stand. Pressing the button will inaugurate a torture regime. Pressing the button will transform the only black woman in this game into the dead, into meat.

When the player presses the button, Ellie steels herself and swings the pipe in her hand slightly below the camera. We do not cut away from her face. Blood flies into the frame, emanating from the place where metal met flesh and we could not see it. It dots Ellie's clothes, and Nora coughs off-screen. The prompt appears again, and Ellie swings the pipe backhand, splattering more blood and causing Nora to cry out. The prompt appears a third time, and Ellie screams as she lunges forward at Nora. When the pipe makes contact, the game cuts to black.

Sam dies, Henry kills himself, and the camera cuts to black. Nora is beaten, and her death happens in the void of the cut.

This is, of course, an extension of many conceptual themes within science fiction. In her book-length analysis of the position of black women in speculative fiction films, Diana Adesola Mafe argues that "the black female body in speculative cinema risks even greater fetishization and exoticism because the genre (perhaps more than others) has been ubiquitously white and male in both authorship and audience."[75] Within the context of *Part II*, it is not just fetishization (the demand to attain Nora) nor exoticism (her being a part of this different society), but also a desire for extreme violence to be done to her through a cinematic system that aligns itself with a mechanical demand for action, a Swinkian low-level rule in that it demands we interact at the level of the button press.[76]

Crucially, pushing these moments of death into the cut, into the black space of nothingness, is not a dismissal. It is not a simple disavowal that refuses to think about Nora any longer. Instead, like the gaps in CCTV coverage, the void between representational images is constitutive of the entire experience. One is left to imagine and speculation about what could be happening in these gaps of time and space. Shawn Michelle Smith, writing about Eadweard Muybridge's studies of motion, notes that it is the gaps between singular images that allow them to *work* as images of movement: "Muybridge's marvelous motion studies are full of gaps and contradictions. The subject of the experiments, mo-

74 Robert Yang, "Press 'F' to Intervene: a brief history of the Use Key Genre," *radiator*, June 21, 2013, https://www.blog.radiator.debacle.us/2013/06/press-f-to-intervene-brief-history-of.html.
75 Diana Adesola Mafe, *Where No Black Woman Has Gone Before* (Austin: Texas University Press, 2018), 7.
76 Swink, 183.

tion itself, slips out of view and remains invisible, caught between frames. Indeed, Muybridge's photographic evidence depends on the viewer's imagination to fulfill is promise. Movement is only inferred. It is suggested by the logic of the sequence but remains unseen in the space between frames."[77]

While the cut to black is not a gap between photographs, its function in these games is remarkably similar to what Smith describes in relation to Muybridge's famous photograph sets. The images before the cut (Nora being bludgeoned) and the images after (Ellie stumbling back to her base of operations) are tied together through an operating logic that we can all fill in without any explanation: Ellie tortures Nora to death. That operating logic, its grammar, is predicated on us understanding what happens generally in these science fiction dystopias and specifically what happens to black women. The cut to black operates as an efficient speculative shortcut within a tapestry of post-apocalyptic anti-blackness that operationalizes the cut as a space that deploys our imaginations in order to "fill in" the gaps of the specificities of anti-black violence. The spectacle of black pain and death is privatized and offloaded into the audience's speculative faculties.

The prompt to press X to bludgeon Nora to death is a mechanic of speculation in that it prompts us to consider possible roads beyond the moment we are in. Ellie will stand, grimacing, forever if we do not press the button. The future will not follow the present if we do not engage with the game by pressing the button.[78] What this illustrates, though, is the capacity to which speculation and possibility can be utterly constrained within the grammar through which black life is articulated within certain uses of the video game medium. To recall Meillassoux, there is a contingent possibility that the world might radically break from its constituting forces, but it is overwhelmingly unlikely here. Every possible strategy in the video game development toolbox has bent toward a system that objectifies, tortures, and kills Nora. The mechanic of speculation can help us articulate possibility or potential, but the narrative, mechanical, and representational strategies that have been brought to bear in this scene constrain the outputs of speculation.

Importantly, this is not a moment of traditional racist image production in which blackness is pathologized or where representation is reduced to a stereotype or caricature. This is not solely an issue of "black visuality."[79] The prob-

77 Shawn Michelle Smith, *At The Edge of Sight* (Durham: Duke University Press, 2014), 77.

78 A player could turn the console off and never engage with the game again, forestalling the future.

79 See the introduction to Nicole Fleetwood's *Troubling Vision* for an excellent summary of these issues and how they have been addressed in scholarship.

lem here is not one where Nora is somehow "wrong" in a broad sense. Instead, what is at issue here operates at the level of the structuring logic in which white violence against a black woman is the only outcome, the only possibility, and the only way to make the next empirical moment follow from it. Time stops until you, the player, the person holding a controller, commit to beating a black woman to death with a pipe, and at the end of it you are asked to imagine what the specifics of that killing might have been. Then the adventure continues, with this event safely tucked into the past as one more cruel event that Ellie took part in.

In the most positive possible reading of this scenario, how the mechanic of speculation could be seen to work, the speculative quality of video games might provide us with a way of rethinking the structural anti-black construction at the heart of the *The Last of Us* franchise in that it prompts us to hope that the world might function in a different way. The possibility of pressing a button itself provides a moment of reflection, and a moment of rage that decouples us from Ellie's perception and surveys the entire scenario. Refusing to press the button, or even thinking about *why* we are doing this, is certainly more opportunity for reflection than we received in the scene with Henry and Sam. This stalls out the operations of a racial ordering of the world. However, this world could have been produced in any way, and these developers chose to do it this way, regrounding the basic racial logics that civil society is built from, precluding any recognition of black humanity. I understand this physical act of pressing a button to produce the future of fundamental exclusion of Nora as coextensive with what Saidiya Hartman outlines as "the persistent production of blackness as abject, threatening, servile, dangerous, dependent, irrational, and infectious."[80] After all, within a narrative and formal structure, we are aligned with Ellie, who has "offered" Nora the ability to save her own life by giving up her friend. Nora's position here is a video game version of what Hartman names "the burdened individuality of freedom" that followed chattel slavery and continues into the present. Reading through documents from the period following emancipation, Hartman notes the double bind that former chattel slaves were put in: "As a consequence of emancipation, blacks were incorporated into the narrative of the rights of man and citizen; by virtue of the gift of freedom and wage labor, the formerly enslaved were granted entry into the hallowed halls

80 Saidiya Hartman, *Scenes of Subjection: Terror, Slavery, and Self-making in Nineteenth-century America* (New York: Oxford University Press, 1997), 116.

of humanity, and, at the same time, the unyielding and implacable fabrication of blackness as subordination continued under the aegis of formal equality."[81]

The player of *The Last of Us Part II* is the guarantor of that violence in that we are formally aligned with Ellie's motivations and, through pressing the button and producing the next moment, we punish Nora for exercising her right to be a full human being. The abstract mechanic of the button press, bound up in an entire system of "press button to do violence," is an extension of modes of both game logic and racial logic that are bound together in this moment of the demand to interact and reproduce a racially hierarchized world that can only conceive of black womanhood as abject and already-dead.

My analysis in this chapter has focused on the relationship between black game characters, the aesthetic modes that the *The Last of Us* games represent them with, and the anti-blackness that that representational schema is entangled with. It is perhaps the most pessimistic chapter in this book. The games evoke mechanics of speculation within them, but the speculation that is prompted is so tied in with an assertion of plot-related black abjection that I am unclear if they can ever be overcome. From my vantage point as a player, the aesthetic field of *The Last of Us* is so coextensive with an anti-black grammar that I cannot see around it.[82] The way that visuality, and the non-representational space of the cut, is structured functions as a mode of subjugating black characters as fuel for white stories of conquest and tragedy. This is obviously not the totality of how blackness functions, is represented, or is understood within games, and if there is any hope present here it is that *The Last of Us* games are not the last word in how to build a video game world.

81 Saidiya Hartman, *Scenes of Subjection*, 119.

82 As discussed in a previous note, I have left out any analysis of Marlene here. I also do not discuss Isaac from *Part II*. I leave this valuable work for others.

Chapter 4
The Politics of Design in Climate Change Games

Introduction

In the previous two chapters, I have argued for two different ways that mechanics of speculation do things to players. In one, I walked through how specific mechanics can entrain us into certain subject positions as players and workers. In the other, I argued that the inheritances from other media modes created an anti-black context for specific interactive and non-interactive moments in the *The Last of Us* franchise. Where both of those chapters were focused on low-level interactions with games to understand how they afford particular forms of speculation, this chapter zooms out slightly to look at some structural positions that some contemporary games take that are angled toward the current climate crisis.

What I am after here is a typology of ways that games communicate concerns about these issues, and my focus is on three different approaches through which video games present issues of climate change for a player. All of these are afforded by mechanics of speculation, or the ways that video games generate interactions that ask us to consider the ways the world could be different than it is. The first approach is via modeling, which holds that the conditions that generate climate change in our world can be simulated or reduced to a process that can be understood and then gamified. The second is via affect, which demonstrates that games can generate feelings or emotions around climate and climate change for players to work through in an allegorical mode. The third is via direct intervention, which is a unique combination of the two that provides both a simulation and the general affective register of climate change in order to allow players to both make decisions in a simulated climate and to generate affective responses to those decisions. I believe that this latter mode has some of the most potential for creating engaging political game objects in the face of climate change.

If mechanics of speculation are modes of interaction that afford speculation about potential existence after that interaction takes place, then this chapter is perhaps the limit to which this concept can be stretched. What I am interested in here is developing a schematic of the different ways that mechanics can be bundled that lead toward particular outcomes. To put it another way, I am interested in how a multitude of micro interactions can be entrained within specific aesthetic modes to create a wave of speculative thought in particular directions. Within this, then, I see modeling as an *indirect* mode of mechanical manipulation that asks us to think about how certain options develop toward certain po-

https://doi.org/10.1515/9783110719451-006

sitions in open systems; games hinging on affect work in a *contextual* mode that ask us to think of ourselves in a certain spectrum of collapse that's easily allegoricized to the climate catastrophe; and direct intervention games are, well, *direct* in the way that they compound these other methods and add their own implications. All three are mechanical in that they deal with game rules, internal interactions between those rules, and the way that we interpret them, but they do not live solely within those rules and interactions. What unites them is that they all produce particular mechanical horizons in which players make decisions within contexts that purposefully exercise their speculative capabilities to make them consider the reality of climate change. They are all fundamentally ways of achieving estrangement and of positioning players in such a way that they need to consider the political outcomes of decisions, the contexts that decisions are made within, and their ability to (or not to) directly interact with them.

In many ways, I am following Alenda Chang's description of games as mesocosms, or "experimental enclosures intermediate in size and complexity between small, highly controlled lab experiments and large, largely unpredictable real-world environments."[1] For Chang, this is less a metaphorical description and more of an elaboration of the potential of how we can understand our engagements with games as players and thinkers, explaining that "games and scientific experimentation are cut from the same cloth."[2] Both are constant negotiations between observers and the conditions they are observing, creating opportunities for feedback loops that can be adjusted and augmented to understand the causes and effects of certain phenomena. This allows us to take into account the "subtle negotiations" between players and game elements while also discussing "diverse situational and interpretive contexts."[3] It is this ability to look at games as a series of mixed inputs and outputs that makes them so intriguing to use as objects to think with.

This chapter is also the furthest that I will stray from science fiction games directly. While previous chapters have spoken to specific examples that emerge from games that are undeniably science fictional, the games that are addressed here have a decidedly more ambivalent relationship to the genre. Is *Civilization VI: Gathering Storm* (Firaxis Games 2019) a science fictional game? On one hand, like the other games in its series, it masquerades as a weird human history simulator, taking us through an ideological and uniform past. On the other hand, the games always take us one moment beyond our own time, involving technologies

1 Alenda Chang, *Playing Nature* (Minneapolis: University of Minnesota Press, 2019), 17.
2 Chang, *Playing Nature*, 20.
3 Chang, *Playing Nature*, 20.

and, in the case of *Gathering Storm*, predicted but not-yet-actualized global impacts of climate collapse. My understanding of the relationship between science fiction and history here is informed by the complex reading of Margaret Atwood's novel *Oryx and Crake* performed by Darshana Jayemanne in his *Performativity in Art, Literature, and Videogames* and in which he "reads" the complicated temporal system of extinction in that novel.[4] Within this analysis, Jayemanne demonstrates the strangeness of a science fiction novel that hinges on a process that is already occurring in direct ways in our own real world; an in-novel game requires players to guess extinct species, and the species they choose from are not all dead in our own world.[5] For Jayemanne, this is a moment where "none of these processes require science fiction" because they are "ingrained in our own contemporary mode of destruction," but I want to stop short of that and push the claim slightly further.[6] What is being asked of readers in this novel is to perform some basic work of what Darko Suvin called "cognitive empiricism," or the capability to put one's empirical processes into a fictional situation and extrapolate from that position to build out a conceptual world.[7] It is a world that is co-extensive with our own, and in texture and tone it feels much closer to the science fictioning moments that proliferate through our own world, much like the aesthetic borrowings between the video game *Crysis* (Crytek 2007) and actual military-grade research.[8] In some ways, then, the borderline games that appear in this chapter have an ambivalent status that aligns with how we ideologically frame the future and its possible pasts, a kind of Bergsonian virtuality that asks us to speculate about potentials that stretch forward and backward from any given moment.[9]

Before turning to the games themselves, and the different modes through which we access climate change in those games, I want to orient us in relation to the way that climate change operates within the academic and public intellectual video game spheres. Critics have generally approached the question of how, in the words of Robert Yang, "we play with climate" from a political angle, pointing to the intersection of game content with broader issues of climate aware-

4 Darshana Jayemanne, *Performativity in Art, Literature, and Videogames* (London: Palgrave Macmillan, 2017), 207–219.

5 Jayemanne, *Performativity*, 210.

6 Jayemanne, *Performativity*, 210.

7 Darko Suvin, *The Metamorphoses of Science Fiction: On The Poetics and History of a Literary Genre* (New Haven: Yale University Press, 1979).

8 Colin Milburn, *Mondo Nano: Fun and Games in the World of Digital Matter* (Durham: Duke University Press, 2015), 173–200.

9 See Paulo Virno, *Déjà Vu and the End of History*.

ness.[10] In public writing (as opposed to scholarly work) about games and climate, there is often an implicit argument about the relationship between that content and some kind of nebulous political outcome. For example, in a piece for *IGN*, J.R. Burgmann asks a direct question of the video game industry: "when are video games going to begin to say something about the defining crisis of our time?"[11] As the piece develops, it becomes apparent that this isa supply-side political project. If games build it, Burgmann seems to suggest, then public opinion will come around to more awareness or political activism. Lewis Gordon puts both the actual ecological cost of games (as in the pollutants generated from their development, distribution, and play) up against their potential capability to make players reflect on climate change through their diegetic content, suggesting that games can provide "the dissolution of anthropocentrism—a human-centric perspective—that ecological crisis and climate change demand if they're to be tackled meaningfully."[12] Despite my agreement with these positions, and my general belief that this mode of critical intervention is necessary, I also think that the ideologies of climate change skepticism and denial are perhaps more robust than we generally give them credit for.

Along these lines, Bruno Latour has argued about the emergence of a general distrust of science over the past few decades. While historically European and American rationalism has suffered from a tendency to naturalize ideology and render it into fact, in 2004 Latour wrote that our contemporary problem is one where we suffer "from an excessive distrust of good matters of fact disguised as bad ideological biases."[13] Responding to 9/11 conspiracy theories and climate deniers, Latour vocally laments the "instant revisionism" of events in our mediatized and conspiratorial age, claiming that our critical moments of distrust have gone too far.[14] Latour's broadside attack on critique and conspiratorial thinking is well-taken where I sit in 2022. At this point, political conspiracies drive an entire segment of the American electorate. It is important to take

10 Robert Yang, "How 'climate crisis games' could better model our problems and our future," *Rock Paper Shotgun*, July 8, 2019, accessed October 20, 2019, www.rockpapershotgun.com/2019/07/08/how-climate-crisis-games-could-better-model-our-problems-and-our-future/.

11 J.R. Burgman, "Opinion: Why it's Time For Video Games to Address Climate Change," *IGN,* July 23, 2019, accessed October 20, 2019. www.ign.com/articles/2019/07/23/opinion-why-its-time-for-video-games-to-address-climate-change.

12 Lewis Gordon, "Gaming's Climate Dread in a 4K Streaming Ecosystem," *Vice Games,* June 21, 2019, accessed October 20, 2019, www.vice.com/en_us/article/wjvkby/gamings-climate-dread-in-a-4k-streaming-ecosystem.

13 Bruno Latour, "Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern," *Critical Inquiry* 30, no. 4 (2004): 227.

14 Latour, "Critique," 228.

seriously the charge made by Latour here that the rhetorical power of critique is efficient and ruthless, often allowing adherents to ground their beliefs in their own intuitions rather than any kind of verifiable information in the world. Moreover, it has more purchase in games and their manipulability, as one of his key complaints is that another scholar had recently compared the laws of physics to the rules of baseball.[15] Games are seen as flexible and untrustworthy, bending to the desire and will of players and the mutable desires of those who craft their very-human rules.

Within those parameters, despite my misgivings about many of the arguments made by Latour in his critique essay, I think that we should take the negative thesis seriously: what if climate denial cannot be rationally argued against? What are the tools that become available when science or rational, empirical work is simply not a guarantor of generalizable truth? What happens if games cannot provide a linear pathway to knowledge in any kind of predictable way? The critics quoted in the above paragraphs, after all, seem to simply have an implicit faith that games will *do something* to help their players understand climate change despite having no clear conception of what that will be. For them, art in its broadest forms simply *works* to change the person who engages with it. As the previous chapters of this book have demonstrated, I have looked to specific mechanisms of visual and game design to determine how certain games work on their players; one cannot simply take the mechanism for granted.

One way of reading this chapter, then, is as a typology of mechanisms for understanding what the problem is and how these things might work. It is a sketch of how speculation about the climate is trained to run in harness.[16] Other scholars have also pursued this path, and my work here is both in conversation with them and builds from their arguments. Ben Abraham and Darshana Jayemanne have addressed this ideological problem within an academic context.[17] As they see it, there is a problem becoming apparent in contemporary climate change debates: "the significant remaining resistance to the acceptance that climate change is occurring."[18] Tracing through contemporary work from scientists and climate fiction advocates, the authors question whether games are even *attempting* what climate fiction is doing in the sense of presenting realistic scenarios of climate change. From their perspective in 2017, Abraham

15 Latour, "Critique," 228.

16 This is a phrase I find particularly beautiful from Ursual K. Le Guin's *The Left Hand of Darkness*, and it is used to speak to future-sensing capabilities.

17 Benjamin Abraham and Darshana Jayemanne, "Where are all the climate change games? Locating digital games' response to climate change," *Transformations* 30 (2017).

18 Abraham and Jayemanne, "Where are all the climate change games?," 75.

and Jayemanne see a distinct lack of games about climate change, which puts them in a position of typologizing how games that address the climate at least make their way around to thinking about the environment: as backdrop; as resource; as antagonist; and as text.[19] While the specificity of how each of these works is not pertinent for my argument here, the way that the authors figure the environment suggests a number of positions that climate can have in relation to the player across game genres. In other words, Abraham and Jayemanne have outlined a finite set of modes of address that illustrate how games generate connective tissue between an abstract mathematical concept like "climate" and the experience of play.

Abraham and Jayemanne end their piece with a call for more scholarship in the typological realm that I also read as a call for more theorization of the linkage between the sentiment building that climate fiction supposedly does and political change. They ask how "players and other mobile entities are innervated within game worlds, and how those game worlds affect and are affected in return."[20] This relationship between games and potential political change has long been debated within game studies, with Ian Bogost's procedural rhetoric and Alexander Galloway's concept of allegorithmic experience functioning as early keystones in how games act as a mediator between the self and the world.[21] For both authors, the politics of games become operative at the level of the structure of experience, taking inputs from the player and transforming them through an apparatus into something that is then delivered back to that player. The modes of mechanical interaction highly control this input/output structure, and a key opportunity for political intervention exists at the moment of design itself. For Bogost in particular, the rhetorical capabilities of games provide developers with novel and unique modes of engaging players, allowing them to be brought into structures where they play through an argument rather than simply being recognized or brought into the fold of verbal or visual rhetoric. This basic feedback loop structure means that understanding those transformations, and controlling what is projected back to the player as a result of their actions, gives us purchase on what games can do in comparison to other media.

There are two other general touchstone pillars in broad game theorization that I think are critical for shaping some of the general assumptions that underly the rest of this chapter. The first is McKenzie Wark's concept of gamespace, which builds upon Galloway's work and makes a similar (if more totalizing) argument

19 Abraham and Jayemanne, "Where are all the climate change games?," 79 – 84.

20 Abraham and Jayemanne, "Where are all the climate change games?," 87.

21 See Ian Bogost, *Persuasive Games* (Boston: MIT Press, 2007); and Alexander Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis: University of Minnesota Press, 2006).

to Bogost. For Wark, the world we live in has been transformed in a play space that takes on the general form of a game, and the way that games and reality figure into each other both ideologically and algorithmically is something that must be analyzed and understood. In a section focusing on the way that rules operate within games, she writes that "games are not representations of this world. They are more like allegories of a world made over as gamespace. They encode the abstract principles upon which decisions about the realness of this or that world are now decided."[22] Taking the feedback loop one step further, Wark is arguing that game design and game play are not merely instances of representation of real-world decisions or arguments, but that they are part of an *intensified* feedback loop that is (simulacra-like) a stand in for a stand in for a stand in into infinity. There is no clean divide between the world before games and the world after them, and *Gamer Theory* is full of examples in which gaming logic, which is taken also as capitalist logic, is coextensive with the entirety of the social field within advanced capitalism. This is, after all, the same move that allows Latour's bad critic to liken the laws of physics to the rules of baseball. For Wark, that is not some kind of unforgiveable sin of intellectual failure, but instead a revealing comment about the nature of how we are positioned within an ironclad world constructed from games.

Although Wark does not engage with the book, we can read her argument as a fellow traveler with that of C.L.R. James' in his *Beyond A Boundary*, which sits at the crossing point between several genres.[23] It is a sports biography, a history of cricket, a defense of cricket as art, a collection of historical criticism on cricket, and probably a dozen other genre markers. Weaved through all of these different modes is a clear argument about the inseparable nature of cricket, colonialism, and racial and class conflict. For example, in his chapter "The Light and the Dark," James discusses the different choices of cricket teams he had as a young adult living in Trinidad. As a black man, but also as a solidly middle-class player, James talks the reader through both the external challenges of cricket play (in the sense of colonial domination) as well as the internal class and color struggles that came with league and team formation. Picking the team he wanted to play with becomes a vast map of the social: one team is entirely white or multiracial; one is made of police and always captained by a white person; one is entirely black but poor, and would reflect badly on his own social station; one was entirely made up of black men, but they were middle-class and colorist players who

22 McKenzie Wark, *Gamer Theory* (Cambridge: Harvard University Press, 2007), Paragraph 020.
23 C.L.R. James, *Beyond a Boundary: 50th Anniversary Edition* (Durham: Duke University Press, 2013).

would not accept anyone with skin that was too dark.[24] The navigations of these boundaries proliferate over the chapter, and for Grant Farred, this decision in some ways determined the rest of James' political life.[25] For James, it would come as no surprise that game actions have rhetorical value, as *Beyond a Boundary* is full of analysis of specific cricket plays that operated on other players and the audience in direct ways. He would also be unsurprised that games have allegorical value, that they stand in for something else, since his book rests on an entire system of reputation that follows a player on and off the pitch and which is mediated by a deeply complex apparatus that produces and is produced by players: "Cricket is a game of high and difficult technique. If it were not it could not carry the load of social response and implication which it carries."[26] And, of course, the cricket match seems to permeate everything in Trinidad for James, giving us a perspective on the ways that gamespace (or something like it) emerges much earlier than some of the examples that Wark provides in *Gamer Theory*. The production of gamespace, it seems, is unevenly distributed, operating first as an imperial mode before being unleased everywhere as capitalism transformed during the twentieth century.

In all of these theorizations of games, what is critical is an understanding that games and the social conditions around them cannot be easily separated. Following C.L.R. James, in the following typological analysis I will deploy a rigorous formalist mode that parses out *how* these games accomplish their rhetorical and conceptual effects. The typology is intended to give us some purchase on how games entrain our thoughts, and what aesthetic modes they use to arrest and direct speculation, and as such this is not meant to be an exhaustive model. Instead, I intend this to be a generative mode which is open to further elaboration, addition, complication, and critique. In what follows, I proposed that modeling, affect, and direct intervention are *modes* of innervation that tie into distinct ways of politicizing play and generating some kind of player response around questions of climate. While I refuse to go so far as to suggest direct causation between these modes and politics, I am attempting here to be specific about *how things work* and in doing so suggest that these are mechanisms that should be taken seriously within the aesthetic practice of developing video games around climate.

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24 James, *Beyond a Boundary*, 50 – 51.

25 Grant Farred, *What's My Name? Black Vernacular Intellectuals* (Minneapolis: University of Minnesota Press, 2003), 95 – 100.

26 James, *Beyond a Boundary*, 34.

The Capabilities of Modeling

In *Civilization VI* (Firaxis 2016), players take control of one nation among many and attempt to vie for control of a planet.[27] This control can be accomplished in many different ways. One could use the game's extensive combat mechanics to wage and win wars over land, sea, and air. A player could choose to operate diplomatically, pulling non-player nations into strategic alliances that would allow them to bully or convince allies and enemies to let them have their way. They could choose to accrue cultural and religious points that would allow them to win in ways that are orthogonal to the way that other nations are attempting to win the game, or they could simply push the technology upgrade path of the game as hard as possible in a bid to win through brute force technological advancement. All of these strategies take place against the backdrop of a generalized and universal human history which is mapped to a "year" counter. Depending on the game speed option that a player selects at the beginning of their game, each year or cluster of years is a single turn, giving each game of *Civilization VI* an implicit rhythm of the march of history. In practice, this means that every turn is concerned with choosing research, deciding which units or civilization enhancements to create, moving the units you already have, and making broader decisions about religion creation or diplomacy with other civilizations or city states. All of this takes place on a large map that mimics the terrain of our own world, featuring mountains, oceans, hills, coastlines, forests, deserts, and several other geographic features that have direct impacts on the simulated environment around them. Using their knowledge about these terrain types, players make appropriate decisions about where to locate their cities so that they can be best supported by local resources. As a tile- and grid-based game, much of *Civilization VI* is about managing space over time, and while the player makes crucial choices about which strategic method to use to pursue that management, the game fundamentally returns to its representative arena. Where do I put my improvements to my city? Should I station troops on this tile? What can I do to best prevent my enemy from taking this strategic peninsula?

27 My analysis of *Civilization VI* in this chapter deals exclusively with the game as a single-player experience. It is possible to play it as a multiplayer game, but the vast majority of *Civilization* game play sessions are not performed this way. I would welcome any kind of extension of this argument into the realm of multiplayer *Civilization* gameplay.

Gathering Storm (Firaxis 2019) is an expansion pack for *Civilization VI* which implements climate change as a system in the game. The promotional copy for the expansion presents *Gathering Storm* as a kind of ideological corrective for *Civilization* series as a whole, explaining that it is tackling "the impact that a changing planet has had on our settlements, and the imprints that we have left behind on Earth."[28] Its existence as an expansion, rather than an entirely new game, means that *Gathering Storm* is more of an augmentation of *Civilization VI* than a total rebuilding of it. It rests on the same basic assumptions and the same mechanics while adding conceptual layers to the game in order to create important decision points where players can consider the role of climate. The two major systems that are introduced with *Gathering Storm* are an augmented tile system, with an attending set of weather mechanics, and a Power system that allows players to benefit from the extraction and use of coal, uranium, and ore at the expense of changing the game's climate model. In a move that is familiar to those of us who play video games regularly, the promotional copy does not suggest that any of these systems are political or even educational. They are presented as value-neutral gameplay systems that simply present some new opportunities for gameplay, even as the promo copy itself explains that this climate system emerged because "we felt that a player shouldn't be able to exist in a vacuum alongside the game world; rather we wanted a relationship between the two where every turn and every decision can have lasting —and global—impacts."[29]

Even without specific political framing, the mechanical way in which the political stakes of *Gathering Storm* make themselves known is through play. Both the tile augmentation system and the broader Power and climate change model come into contact with the player through the tile-based control of space that all of the other gameplay systems operate within. Some of the critical gameplay changes have to do with tile discovery. Unlike in the base game, rivers, volcanoes, and other physical features of the world acquire specific names in *Gathering Storm*, and they also become dynamic and responsive to the simulated weather conditions around them. Hurricanes can cause floods in cities near rivers, and these are both algorithmically occurring (in that the game's numbers respond to these states) and they are aesthetically represented (in that a visual tile

28 "Civilization VI: Gathering Storm available now," *Civilization.com*, accessed March 27, 2021, https://civilization.com/news/entries/civilization-vi-gathering-storm-new-expansion-release-date-pc-february-14-2019/.

29 "Civilization VI: Gathering Storm available now," *Civilization.com*, accessed March 27, 2021, https://civilization.com/news/entries/civilization-vi-gathering-storm-new-expansion-release-date-pc-february-14-2019/.

shows its augmented conditions). This set of responsive transformations is put into conversation with the broad climate model that is introduced with the Power system, meaning that the player has access to several if/then scenarios to plan their gameplay experience around. One example of this is the three-tiered sea level rising system that exists within the game's warming model. The game iconographically tells players which coastal tiles will be underwater in the first, second, or third stage of sea levels rising. Tiles without easy access to water can potentially fall victim to drought, and cities built along rivers come with the risk of their improvements (like farms or market districts) being destroyed in a flood. All of these are modes of modeling climate, or at least taking an abstraction like climate change and parsing it up into events that have causality to them; CO2 in the atmosphere increases, and these things begin to happen with more frequency.

The strange part about this climate modeling, however, is that it begins at the start of the game. The first turn of every game of *Civilization VI*, and every game of the series, takes place in a fictional universal prehistory that is both generic and shared by everyone. The mental contradictions of it are truly bizarre. On one hand, the player has chosen a civilization. They are playing as, for example, the "civilization" of Canada and *are* Wilfred Laurier, who lived in the nineteenth and twentieth centuries. At the beginning of time, Canada exists and has a Prime Minister. On the other hand, the technology system of the game tells the player that they are before agriculture, before animal domestication, and before the invention of the wheel, all of which have to be investigated in the teleological journey toward the end of history and the game. McKenzie Wark, writing on the predecessor *Civilization III* (Firaxis 2001), explains that this is a transformation of our relationship to time into the one we have with space: "[time] is homogeneous, empty, but it can be divided into equivalent units, just like space. Thus time can be configured and reconfigured, producing endless variations on the cascading sequences of cause and effect."[30] She continues her argument by claiming that these games replace history, "a storyline in the past tense," with a "history workshop, a model of history as the intuition of algorithms and their consequences."[31] This exploratory design has a double effect on the way the game is experienced by the player. The strange, mixed-up relationship to time creates a context where players can play in the workshop in order to understand how geographical and social factors might play against and with each other within the parameters of the *Civilization* algorithm. They can pursue strategies, turn

30 Wark, *Gamer Theory*, paragraph 071.

31 Wark, *Gamer Theory*, paragraph 071.

by turn, dominating time and space in the pursuit of a victory condition with constant novelty introduced by the difference of each game session. At the same time, these endless variations are bracketed by sharp algorithmic limits. Anything could happen, but Canada exists. Anything could happen, but the stages of climate change will always happen in the same way. Anything could happen, but the technological "progression" of the universal *ur*-civilization undergirds all life.[32]

This relationship between the player and potential futures, or their capacity to speculate, was designed as a part of the *Civilization* experience from the very beginning. As original designer Sid Meier explains in his career-spanning *Memoir!*, the key breakthrough in the design of *Sid Meier's Civilization* (MicroProse 1991) was based on decision points as speculations:

> There was something magical, I realized, about starting from nothing. Even an empty map is still a map, full of mountains, rivers, and predetermined expectations of what the player can or can't do. But a hidden map—a single settler dropped into the wilderness, able to see nothing but the nine squares surrounding them—was quietly grand. It allowed the player to imagine a seemingly infinite set of possibilities in the blackness beyond. There might be treasure just one square over, or an enemy lurking perilously nearby, and that uncertainty made the urge to start exploring both intense and immediate.[33]

This quotation is obviously heavy with implication. Meier describes a pure imperial fantasy of terra nullius that is ready to be transformed through Lockean labor into a world for the player. The "blackness beyond," the space outside of the rational reason of the player, aligns with racial colonial fantasies about unmapped places and the unreasoning people who might dwell there. This fictional place has no past other than its natural qualities, and because of that the future is radically open to any potential. This thrilling encounter with the possible happened within a context, however, of civilizational development. Meier wanted to allow the player to make choices about how their civ developed, and to do so created a technology tree that allowed players to "simulate the overall experience of build-

32 For an analysis of the implications of a universal technological progression in the *Civilization* franchise, see Tuur Ghys, "Technology Trees: Freedom and Determinism in Historical Strategy Games," *Game Studies* 12, no. 1 (2012): http://gamestudies.org/1201/articles/tuur_ghys; Dom Ford, ""eXplore, eXpand, eXploit, eXterminate": Affective Writing of Postcolonial History and Education in Civilization V," *Game Studies* 16, no. 2 (2016): http://gamestudies.org/1602/articles/ford. Here, Ford crucially extends this argument in the context of a postcolonial understanding of the franchise.

33 Sid Meier and Jennifer Lee Noonan, *Sid Meier's Memoir! A Life in Computer Games* (New York: W.W. Norton, 2020), 121.

ing an empire without getting bogged down in the specifics of how existing empires had done it."[34] By developing a technology system that simply created gates for progression (such as requiring iron smelting be developed before gunpowder), Meier offered players a directional scaffolding without making all of their gameplay choices for them; "You were rewriting history, nor reliving it," Meier explains in an strange echo of Wark.[35]

This means that the player who starts a civilization in the middle of all that "blackness" is both able to make serious decisions about the direction of their own civilization while, at the same time, being trapped in a unidirectional march forward from prehistory to the twenty-first century. The moment a hunter-gatherer founds Toronto starts a progressive narrative that will culminate in the development of computational technology, nuclear weapons, and the space-faring capability. From that point, *Civilization VI*, and indeed all of the *Civilization* games, present a teleology that produces the conditions of the twentieth and twenty-first centuries as the logical outputs of history. There is no way to arrest or shape the forces of history to produce a world of cavalry who augment themselves and their horses with biological enhancements or to swerve into a steampunk civilization of tesla-powered Canadian mounties. *Civilization VI* cannot model a sharp turn in the course of world history. As Wark warns, the play of *Civilization* is that of discovering dependent and independent variables along the algorithmic arc of history that unfolds before you, with the end result being that the player is not some kind of mythical Great Man of History but rather a "manager, confronting uncertainty with an inventory of resources."[36]

Gathering Storm does not interrupt any of these core algorithmic and ideological assumptions of the *Civilization* franchise, and instead extends them into its near-future context. Animal husbandry and the creation of the wheel are safely located in the trajectory of human history. By contrast, we live in the midst of the climate catastrophe, and its worst effects are both unevenly distributed throughout the planet and still developing. Sid Meier developed *Civilization* to allow players to experience *re*writing history, but *Gathering Storm* takes that impulse one step further by *pre*writing the extrapolative future of climate change. This set of modeling and speculative practices, each deeply involved with the other, constitutes what Katherine Buse names "speculative planetology," or the dual creation of models and world-building along lines of co-

34 Meier and Noonan, *Sid Meier's Memoir!*, 124.
35 Meier and Noonan, *Sid Meier's Memoir!*, 124.
36 Wark, *Gamer Theory*, 070.

constitution.[37] The same teleological system that propels every tradition and group through the same universal steps of "progress" in the base *Civilization VI* game undergirds its theory of climate change, reifying it as a "natural" part of civilizational progress much the same as the discovery of agriculture.[38] To be human is to warm the planet. During a player's first turn, before the wheel or writing or maps are invented, they know that a coastal tile will flood in a few thousand years during the second stage of sea level rising. Before modern farming exists, players can learn about aridification so that they can choose to build (or not build) in this region. This universal charge toward a warming state in *Gathering Storm* is not simply an incidental development or emergent system of weird tooltips. Rather, as lead developer Ed Beach remarked in a pre-release interview, this knowledge-before-possibility is a feature of the game: "When you're making a settlement decision with your [first] settler, the settler lens is getting a lot of information about where hazardous environmental areas might be. There's a warning saying, 'You can settle on that river, but beware these tiles are all susceptible to flooding'. You might want to be wary about how much you build in terms of structures there."[39] In the same way that nuclear capability is a foregone conclusion in *Gathering Storm*, so are the conditions of climate change and its attending effects. You can rewrite history, but not without accepting climate disaster as a foregone conclusion.

On one hand, this is dismissible at the level of gameplay. Players want to know if they're making a decision in the first ten minutes of the game that will harm them over the next 10 or 15 hours of strategy gameplay. This is a design decision to make the game more accessible to more players and less punishing for those who aren't aware of what might happen further down the line. On the other hand, this is part and parcel with how games like *Gathering Storm* or *Fate of the World* (Red Redemption 2011) conceive of how the modeling of climate is communicated to players. Conceptually, for clarity or politics, the game holds that our fast climb toward a fundamentally altered climate is the telos of the earth, as inevitable as guns and computers and democracy.

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37 Katherine Buse, "The Working Planetologist," in *Practices of Speculation*, ed. Jeanne Cortiel, Christine Hanke, Jan Simon Hutta, and Colin Milburn (Bielefeld: transcript Verlag, 2020), 53.
38 The assumption that all societies move through an agricultural phase is itself an ideological fantasy that ignores the myriad ways that groups have sustained themselves throughout human history. Yet this is still "naturalized" as part of a progress myth of human development.
39 Richard Scott-Jones, "The full Civilization VI: Gathering Storm Interview," *PCGamesn*, accessed March 27, 2021, https://www.pcgamesn.com/civilization-vi/civ-6-gathering-storm-natural-disasters.

Before returning to the basic assumptions of modeling, I will briefly discuss another exemplary game, *Fate of the World*, which presents players with various region-based scenarios in which they are intended to experiment so that they can "save" the world from warming and its disasters. The game gives players unilateral power to place workers and agencies across the globe, giving them a huge number of dials to adjust in order to produce the best outcomes. They can also enact policies that achieve certain warming or cooling goals across different regions, creating social and economic conditions that are more and less favorable and which are responded to in-kind by the simulation. *Fate of the World* acts as a global simulation model that affords many different outcomes, a kind of game design logic that shoots through so-called "serious games" or simulationist arguments like those of Gonzalo Frasca.[40] The basic claim being made, and which is shared across a huge swatch of educational game design, is that making decisions allows for better understanding of systemic interaction. These arguments hold that a player making informed decisions, and seeing the outcomes of those decisions within a specific circumstance, is going to be more effective than what Frasca terms "narrative" education.[41] These arguments resonate with the canonical game studies work of scholars like James Paul Gee and Jane McGonigal, and all of them rest on the idea that creating a sufficient number of decision points and then allowing players to see the outcome of their decisions will allow for more productive education. [42] These kinds of games put the player within a systemic perspective of control, seeing themselves as an agent *of* the system as opposed to a subject *within* the system. In *Fate of the World*, for example, players are almost entirely positioned outside of the system of governance that they are controlling. The win and loss conditions of the game's various scenarios have everything to do with hitting warming targets with the tools at the player's disposal, and the lesson to be learned is centered on how the player is able to internalize those right or wrong decisions.

In both *Civilization IV: Gathering Storm* and *Fate of the World*, the focus is on player decisions intervening in climate change to produce new outcomes via abstracted management. The fact that warming is coming is a foregone conclusion. It sits at the horizon, inevitable, and it is the player's responsibility to masterfully manipulate the world in such a way that they can dodge the extrapolative out-

40 Gonzalo Frasca, "Simulation versus Narrative: Introduction to Ludology," in *The Video Game Theory Reader*, ed. Mark J.P. Wolfe and Bernard Perron (New York: Routledge, 2003).

41 Frasca, "Simulation versus Narrative."

42 James Paul Gee, *What Video Games Have To Teach Us About Learning and Literacy* (New York: Palgrave MacMillan, 2007); Jane McGonigal, *Reality is Broken: Why Games Make Us Better and How They Can Change The World* (New York: Penguin Books, 2007).

come. While *Gathering Storm* creates a new picture of human history from which climate change *must* emerge, *Fate of the World* begins from (roughly) our current moment in world history and moves on from there. However, despite these different ways of systemically getting to the moment where intervention is necessary to prevent climate change, both understand the phenomenon of climate change as something that can be presented, and responded to, via management of abstracted rules and operations. It is remarkable in some ways, then, that *Fate* developer Red Redemption's chairman Gobion Rowlands bragged to *Gamasutra* in 2010 that the developer had secured partnerships with "Oxford University, the World Wildlife Fund, Greenpeace, Amnesty International, a whole bunch of them."[43] By aligning the game with many real-world organizations, *Fate of the World* managed to produce for itself a veneer of political reality, as if one could somehow unilaterally make all the right decisions in exactly the right sequential order to solve the climate crisis. Through modeling the climate and providing explicit points where the player interacts with that model, *Fate of the World* seems to suggest that maybe we should all just have a little more faith in the biggest universities and organizations, as only they have the broadest form of effective tinkering. After all, I personally cannot lobby to change agricultural law in a substantial way, but certainly some corporations can.

From the perspective of the typology in this chapter, both of these games address climate change through the mechanism of modeling, specifically in how they afford visions of the future. In these games, the climate model exists to tell you what is already going to happen. This is an ossification of the future into a stable state, but it is also one that allows for direct political thinking. As Rowlands remarks in the same interview quoted above, in 2010 he understood the relationship between *Civilization* games and *Fate of the World* to be one of shared assumptions: "Just like in any good *Civ* or *Sim*-like game, you need to know what areas you need to focus on; it's all about getting the right data to the player at the right time."[44] Implicit in this thinking is the claim that a player with the right data can make the right choice, and that the attending disastrous effects of climate change would encourage players to understand why it matters that they, or someone, be making the right choice when it comes to accelerated warming. At the same time, I feel when playing these games that

43 I cannot imagine any global organization dedicated to solving climate change that would be thrilled to be lumped into the "bunch" here. Tom Curtis, "Interview: Red Redemption Divines The Fate Of The World," *Gamasutra*, October 29, 2010, https://www.gamasutra.com/view/news/121845/Interview_Red_Redemption_Divines_The_Fate_Of_The_World.php.

44 Tom Curtis, https://www.gamasutra.com/view/news/121845/Interview_Red_Redemption_Divines_The_Fate_Of_The_World.php.

I have entered into something like a nihilistic death pact with the planet. Forced to either furiously tinker with policy at the end of the world with *Fate of the World* or to make choices so far in advance that I forestall the worst impacts down the line in *Gathering Storm*, I begin to wonder how effective games that suggest we're in a postlapsarian, barely-adjustable climate condition are. They certainly possess the capacity for the player to respond and then see the outcome of those responses, but the Warkian dependent variables seem radically out of human favor.

To return to the question of how these games work then, we might understand the implicit idea of "art just works" to echo the oft-quoted sentiments from science fiction writer Ursula K. Le Guin: "We live in capitalism, its power seems inescapable—but then, so did the divine right of kings. Any human power can be resisted and changed by human beings. Resistance and change often begin in art."[45] For Le Guin, the imaginative capacity of art brings about potential ideological change, and critics who focus on systemic games and their capacity for change act as accelerated Le Guins: games provide the art, but they also provide the reflection inside of the experience, suggesting that this medium is more powerful than other ones.[46] However, in contrast to this position, Ben Abraham argues that this mechanistic narrative does not tell the whole story of how a game might come to intervene in climate politics. In reading the 3D world of the war simulation game *ARMA 3* (Bohemia Interactive 2013), Abraham comes to the conclusion that it is potentially more compelling for ideological transformation to present a world in which the climate crisis has simply already been solved. The game is populated with giant solar arrays and wind farms, producing a general effect of locating "the player within a particular vision or idea of the future, one that is not necessarily consciously engaged with, but which is nevertheless sensibly or cognitively apprehended."[47] Much like Le Guin's science fiction novels, *ARMA 3* simply puts the player in a new context and does not waste time explaining how the world changed or how we got from here to there. It simply asserts the positive change, and proceeds from that position.

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45 Ursula Le Guin, "Ursula K Le Guin's speech at National Book Awards: 'Books aren't just commodities'," *The Guardian*, November 20, 2014, accessed October 21, 2019, https://www.theguardian.com/books/2014/nov/20/ursula-k-le-guin-national-book-awards-speech.

46 Shawna Kelly and Bonnie Nardi, "Playing with sustainability: Using video game futures to simulate futures of scarcity," *First Monday* 19, no. 5 (2014).

47 Benjamin Abraham, "Video Game Visions of Climate Futures: *ARMA 3* and Implications for Games and Persuasion," *Games and Culture* 13, no. 1 (2018): 73.

I will return to Abraham's arguments about the effectiveness of aesthetics in the last section of this essay, but for now I want to briefly discuss the affective dimension of climate change within video games before turning to my own favored type, direct intervention.

Affective Climate

The games I discussed in the previous section focus on modeling climate change and allowing players to intervene in that model to generate some kind of education or ideological change. The games that I will be discussing in this section, *Subnautica* (Unknown Worlds 2018) and *Frostpunk* (11 Bit Studios 2018), speak to issues of climate change at the level of affect and allegory. They take place in worlds that are not our own, under political conditions dissimilar from ours, and they position their versions of climate change more as something that is happening to people instead of something to be intervened in and solved. If games that use modeling are about giving players access to playing with the "knobs" of climate change, then what I am calling affective climate change games are more about putting players in a space where their affective capacities are impacted by the general conditions of climate change and collapse, even if that formal maneuver is accomplished under a different guise. The games I discuss in this section are aesthetically different from those in the previous section. Where *Civilization VI* and *Fate of the World* were top-down and relied on the manipulation of numbers and units across vast swaths of space in a managerial mode, *Subnautica* and *Frostpunk* take on strategies that are as different from those other two as they are from each other. *Subnautica* is a first-person exploration and building science fiction game that takes place on an ocean planet at some other time in some other galaxy; *Frostpunk* is an alternate history strategy game in which the player manages a small community organized around a massive furnace as an ice age begins at the end of the nineteenth century. Both contain concepts and ideas familiar to science fiction fans, and each deploys mechanics of speculation that are specific to their scenarios, but they share very little in common other than the way that they ask the player to consider their condition in a rapidly-changing world. In this section, I am less interested in how these games' specific gameplay affordances (such as the first-person view versus the top-down view) accomplish modes of speculation (although I do find that interesting). Instead, I want to explore how games that are so radically different from one another can accomplish a similar affective goal in communicating the oppressive and depressing inescapability of climate apocalypse. I will

investigate how they stage the question of climate on affective grounds to see how they center on what the phenomenon of climate change *feels* like.

Of course, affect is not merely feeling. Here I am deploying affect in a very particular sense that initiates during the seventeenth century with Baruch Spinoza's *Ethics* and has, in the past 350 or so years, emerged as a significant mode of inquiry.[48] Spread across many different academic disciplines, and subject to many interpretations, the fundamental claim of affect theory is that sensation and feeling have a more significant presence that previously accounted for in scholarship, especially that of the linguistic turn of the twentieth century.[49] Experiences, sensations, or moments where things collide or connect with one another are potential moments of charge that can produce feeling, and the reflection of feeling that is emotion, in people. To analyze from the level of affect is to engage with "affectivity as a substrate of potential bodily responses, often autonomic responses, in excess of consciousness."[50] As an abstract theory of energetics, this might be difficult to conceptualize. In the context of art generally, or games more specifically, it is perhaps a little easier. If we imagine affect as a kind of free-flowing connective energy that is made to move constantly, and immanently, through all things, then the moment that a person looks at a game is one in which an affective relationship is established. For Brian Massumi, this encounter is a place where affect is arrested and fit into pre-conceptualized containers, or in his words it is that "human emotion is the royal road to recontainment of lived abstraction."[51] In other words, when we watch a tragic film and feel sad, we are experiencing a collapse of all our chaotic, conflicting sensations into a culturally specific set of received forms: our tears, our scratchy throats, the racking sobs. When I use affect here, then, I am talking not just about the generalized theory, but instead about that connective capacity and almost-inevitable moment of affective relation that is immediately tied into emotional and feeling response, all of which is conditioned by similar experiences we have had in the past.[52] I am discussing the encounter and the response, all of which are bound up in the circuit that is formed when humans come into contact with games.[53]

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48 Baruch Spinoza, *The Ethics; Treatise on the Emendation of the Intellects; Selected Letters*, trans. Samuel Shirley, ed. Seymour Feldman (Indianapolis: Hackett, 1992).

49 Patricia Clough, *The Affective Turn: Theorizing the Social* (Durham: Duke University Press, 2007).

50 Clough, *The Affective Turn*, introduction, 2.

51 Brian Massumi, *Semblance and Event: Activist Philosophy and the Occurrent Arts* (Cambridge: The MIT Press, 2011), 153.

52 Megan Watkins, "Desiring Recognition, Accumulating Affect," in *The Affect Theory Reader*, ed. Melissa Gregg and Gregory Seigworth (Durham: Duke University Press, 2010), 269 – 273.

The concept of affect in video game studies often appears in indirect ways that are reported in relation to particular narrative or mechanical feelings. There are notable direct engagements, though, including Aubrey Anable's monograph on the subject, *Playing With Feelings: Video Games and Affect*.[54] Anable argues that computer research and affect theory are both emergent modes in the twentieth century and draws on the work of Silvan Tompkins to delimit what affect theory is and is not.[55] As she makes clear, the Tompkins tradition of affect theory is often figured as incompatible, opposed, or at least frictional with the Spinozist and Deleuzian lineage I have implicitly aligned myself with above.[56] While Anable and I are in agreement about her baseline definition of affect, that it names "the forces that inform our emotional states," our uses of the concept diverge at the level of analysis.[57] She writes that *Playing With Feelings* is a "critique of Deleuzian versions of affect theory that suggest that it liberates theory from dealing with representation and liberates the sensing body from a grid of signification," specifically footnoting the work of Brian Massumi and Erin Manning as emblematic of this theoretical maneuver.[58] From this position, Anable rejects this version of affect theory in favor of her own Tomkins-aligned form that gives her the capability for "how bodies come to feel similarly through objects and ideas" and "how these shared space-times—or rhythms—have shifted as the rhythms and sensual properties of our media have changed."[59] I am also after an answer to this question, but I remain puzzled at this reading of the Spinoza-Deleuze trajectory that suggests that that is not the heart of the project. Deleuze's monograph on the painter Francis Bacon is a longform analysis of how affect is arrested in relation to specific images, and his two-volume work on cinema is about how particular media forms drive aesthetic experience in specific ways.[60] Anable critiques Deleuzian theory's fixations on becomings and virtuality, charging that it is apolitical (or at least not useful) because that potential "is

53 Cameron Kunzelman, "The Nonhuman Lives of Video Games" (Thesis. Atlanta: Georgia State University, 2014), accessed April 20, 2020, https://scholarworks.gsu.edu/communication_theses/110/.

54 Aubrey Anable, *Playing With Feelings: Video Games and Affect* (Minneapolis: University of Minnesota Press, 2018).

55 Anable, *Playing With Feelings*, xi.

56 For more information on the split between these two traditions, see *The Affect Theory Reader.*

57 Anable, *Playing with Feelings*, xvii.

58 Anable, *Playing With Feelings*, xviii.

59 Anable, *Playing With Feelings*, xix.

60 Gilles Deleuze, *Francis Bacon: The Logic of Sensation* (Minneapolis: University of Minnesota Press, 2003); Deleuze, *Cinema 1: The Movement Image* (New York: Continuum, 2001) and *Cinema 2: The Time Image* (New York: Continuum, 2005).

never actually here."[61] Yet it is difficult for me to read Deleuze's rearticulation of Michel Foucault's philosophy through the concept of the diagram as anything other than a direct explanation of how potential modes of life are rendered into the shape of prisons, asylums, and the forms of knowledge we live within.[62] I am not attempting to belabor this point in defense of the Old Master, but rather to raise a pointed question about whether it is worth dispensing with an entire trajectory of thought if it does, in fact, have tools for thinking about the specific problems at hand with video games and affect. It might be the case that the problem here is not Deleuze's philosophy itself, but rather his interlocutors, but in that case it is unclear why the work of Claire Colebrook on human subjectivity against the wall of extinction or Kara Keeling's articulation of a black lesbian affective film politics does not sufficiently address the relationship between embodied subjectivity and a Deleuzian framework.[63] For many Deleuzian theorists (who are engaging with an implicit form of affect theory at the heart of his philosophy), this version of affect provides a more wide-ranging explanation for how affect arrives in specific forms and produces particular sensations in specific contexts, and it provides a way of accessing forms of politics beyond predictable routes. When Tavia Nyong'o thinks with Keeling's work in order to consider the "affective production" of the manipulation and movement of the black body in cinema, is that a complete disavowal of the stakes of representational politics?[64]

I want to hold Anable's affective game studies in tandem with a Deleuzian form in order to gain purchase on both what is in front of us and the broader system of circulation and reference that subtends that aesthetic representation.[65] The difference between what I have called modeling and what I have called affect here is roughly the difference between looking at a chart that demonstrates rising global temperatures and the feeling you get when you see an image of a starving polar bear on a shard of melting ice. Both are symptoms of climate

61 Anable, *Playing With Feelings*, xviii.

62 Gilles Deleuze, *Foucault* (Minneapolis: University of Minnesota Press, 1988).

63 Claire Colebrook, *The Death of the Posthuman: Essays on Extinction* (London: Open Humanities Press, 2015); Kara Keeling, *The Witches Flight: The Cinematic, the Black Femme, and the Image of Common Sense* (Durham: Duke University Press, 2007).

64 Tavia Nyong'o, *Afro-Fabulations: The Queer Drama of Black Life* (New York: NYU Press, 2018), 172–173.

65 See also Sara Shamdani's, "Affect at Play," *Loading...* 10, no. 16 (2017): https://journals.sfu.ca/loading/index.php/loading/article/view/175/203 for an exemplary application of a Deleuze-informed affective analysis of games.

change, but they are two different modes of symptom. When we discuss the phenomenon of "climate grief," or the intense melancholia of knowing that the planet is moving toward a different state that will include fundamental changes in weather and habitability, we are discussing an affective response to the conditions of warming.[66] The video games that metaphorize or allegorize climate change into conditions in a fictional world are tapping into this form of communication, and they provide us with a context that is slightly different from our own, but which is still informative to our conditions. Again, much like the modeling mode, this is a form of Suvinian cognitive estrangement that holds onto a form of *feeling* that is speculative rather than an empirical mental process.[67] As Sherryl Vint has explored, there is a sense within science fiction spectacles that the "sense-of-wonder," or the explosive affective experience itself, can sometimes be the point of watching films or television shows in the genre.[68] For Kevin Veale, this is part of the affective potential of science fiction games.[69] I will now turn to specific analyses of games in order to work through the specific affective modes they generate within their aesthetic regimes.

Subnautica creates a climate change allegory through its science fictional plotline that takes place on the water-dominated Planet 4546B. Played in the first-person, the moment-to-moment gameplay centers on destroying objects, gathering materials, and then building things with those materials that will allow you to achieve your next gameplay objective. As a crashed survivor of a spaceship accident, the player's tasks in the game are mostly concerned with creating habitable conditions that you can then use to stage the next part of your journey to escape the planet. This requires gathering materials, scanning the environment, and generally acclimating oneself to the conditions around you so that you can make optimal decisions about where to place and expand your underwater facilities. As the player goes about this process, the plot of the game develops in informative text and audio segments, and it slowly reveals why your massive ship crash landed on this planet to begin with. Initially staged as a mystery, the truth is finally revealed: Planet 4546B is a research planet for a long-dead alien race, and there's an orbital defense system that protects

66 Avichai Scher, "'Climate grief': The growing emotional toll of climate change," *NBC News*, December 24, 2018, accessed October 24, 2019, https://www.nbcnews.com/health/mental-health/climate-grief-growing-emotional-toll-climate-change-n946751.

67 Darko Suvin, *Metamorphoses of Science Fiction.*

68 Sherryl Vint, "Spectacles and Seriality: The Entwined Pleasure Potential of Science Fiction Television," *deletion*, August 30, 2013, https://www.deletionscifi.org/episodes/episode-1/spectacles-and-seriality-the-entwined-pleasure-potential-of-science-fiction-television/.

69 Kevin Veale, "Making Science-Fiction Personal: Videogames and Inter-Affective Storytelling."

it. However, this defense system is not there to prevent other species from coming and stealing alien treasure or technology, but instead to operate as a quarantine enforcement system. The player's ship was destroyed by this system to prevent it from interacting with the planet in any way due to a bacteria known as Kharaa that has spread everywhere on 4546B. It is highly infectious, and it was responsible for the deaths of billions since its initial discovery; however, it does not kill immediately, and Kharaa has become functionally self-same as 4546B. The planet is galactic poison. By the time the player learns that Kharaa exists, they are hopelessly infected with it, and their goal becomes ridding themselves of the bacteria and escaping the planet.

They are eventually successful in this endeavor, but my purpose here is not to continue to walk through the game's plot, but rather to talk about the clear relationship between the already-compromised Planet 4546B and our own experience of climate change. Climate change on the planet Earth is not something that you agree or disagree with; it is something that is happening and that we are living within, whether we choose to recognize it or not. It is a field of relations that impacts all of the actors and objects within it. As Amitav Ghosh positions it, the condition of climate change is one in which the improbable becomes likely and our own societal self-narration breaks down due to this interruption of ordered existence.[70] It is a *condition* that *conditions* us, blanketing everything in the same way that Kharaa has sprawled across 4546B. This mode of being completely under the fold of Kharaa brings to mind ways that radiation has been theorized as an emanation of both power and risk or as the geological evidence that humans existed and transformed their environment, and in some ways it seems that nuclear fears of contamination have neatly elided into constant state of transformation that is climate change.[71]

Kharaa permeates all of the beings on 4546B. It operates like a climate, generating an affective register of both generalized panic (it is going to kill the player) and natural calm (there is a whole ocean ecology on the planet that still manages to thrive within the Kharaa infection). This general feeling of the oppressive, murderous environment is heightened by the first-person perspective and the game's goals that push players deeper and deeper into a black oceanic environment. However, where the first-person perspective is generally linked to shooter

70 Amitav Ghosh, *The Great Derangement: Climate Change and the Unthinkable*, E-book (Chicago: University of Chicago Press, 2016).

71 See Kate Brown, "Marie Curie's Fingerprint: Nuclear Spelunking in the Chernobyl Zone," in *Arts of Living on a Damaged Planet*, ed. Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt (Minneapolis: University of Minnesota Press, 2017), G37.

games and their "affective immediacy" of killing NPCs and other players, the first-person perspective in *Subnautica* is slower, more methodical, and often taking on the register of horror.[72] As critic Fraser Brown humorously wrote for *Rock, Paper, Shotgun* in 2017, at every turn *Subnautica* produces conditions that can harm the player, making the player more and more uneasy as they go further into the depths of an alien ocean:

> *Subnautica* doesn't bill itself as a horror game at all, in fact. But this manages to make it feel even more threatening. This is nature that's trying to kill you—primal and elemental and tangible. There are no inner demons to slay; no alien invaders to slaughter. You are the alien invader, swimming around an entire world where you don't belong. I'm sweating again, just thinking about it.[73]

The feelings on display here, contextually created between game world design and the player's access to that world via the first-person perspective, link the player and the game in important ways. How the player accesses the world, and how they solve problems within that world, provides what Anable refers to as the "affective dimensions" of games that are "legible in their images, algorithms, temporalities, and narratives."[74] These specific affordances that allow us to interpret or work through specific affects, which include the dark ocean and the narrative of Kharaa infection, produce what Patrick Jagoda has termed "affective difficulty," or the ways that "video games evoke emotions and generate affects in players that include experiences of anger, boredom, curiosity, complicity, pleasure, and uncertainty, as well as a variety of intensities that accompany gameplay."[75] *Subnautica*'s first-person camera and its narrative of overwhelming infection creates an affective spectrum that mimics our negative affective stance toward the climate disaster by other means, metaphorizing the *cause* while delivering a very similar mode of affective *effect*.

Frostpunk achieves a similar tone as *Subnautica* through a radically different set of mechanics. Instead of performing first-person destruction and creation on the way to a story goal, *Frostpunk* puts the player in a managerial position over a small settlement centered in a giant furnace. The game takes place in an alternate timeline where the British invent "steam cores" in the middle of the nine-

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72 Pasi Valiaho, "Video Games and the Cerebral Subject: On Playing Call of Duty: Modern Warfare 3," *Body & Society* 20, no. 3–4 (2014): 122.

73 Fraser Brown, "Subnautica is secretly a brilliant horror game," *Rock Paper Shotgun*, February 24, 2017, https://www.rockpapershotgun.com/subnautica-horror.

74 Anable, *Playing With Feelings*, 7.

75 Patrick Jagoda, "On Difficulty in Video Games: Mechanics, Interpretation, Affect," *Critical Inquiry* 45 (2018): 201.

teenth century. These steam cores, combined with basic computation, allow for an accelerated early Industrial Revolution. However, at the same time (and it is unclear if these events are causally connected or merely happenstance), an event called the Great Frost began. Characterized by strange weather patterns and general global cooling, the Great Frost quickly accelerated into the destruction of the British Empire, and by the time the game begins the United Kingdom has been evacuated and the status of the rest of the world is relatively unknown. In order to preserve the last remaining people, steam cores are taken into the wastes and sunk into protected positions so that colonies of people might continue to survive, huddled and afraid, until the weather changes. Taking the mantle of a manager of a colony built around a coal-powered generator, the player must direct citizens in their labor, create rules and regulations for the community, and find some way to persevere against the ever-present winter weather of frost, snow, and cold snaps.

While *Frostpunk* is closer to *Civilization VI* and *Fate of the World* mechanically and aesthetically, featuring a top-down view with placement and worker-direction mechanics, it is markedly different from those games affectively. *Gathering Storm* puts players on a trajectory toward a winning condition with very little interest in how a player feels about it, and *Fate of the World* allows for moments of negative affect but only in the interest of education and learning optimal strategies for avoiding it. These modeling games are about transcending difficulty by become a better operator. By contrast, *Frostpunk* openly mourns the world gone by, repeatedly offering up the struggles of coal haulers, wood collectors, and the rest of the freezing citizens united under the player's rule as evidence of the horrors of living in the conditions of the Great Frost. It relies heavily on producing a series of affects like that operate in a negative register, much like the films that E. Ann Kaplan analyzes in her discussion of what she calls "pretrauma political thrillers."[76] In *Frostpunk*, like *Subnautica*, the climate change of our planet is being allegorized into other conditions and other time periods, but these are at least much more recognizable in the sense that the climate itself is the thing that is making life more difficult.

What I want to focus on briefly in *Frostpunk* is how decision making is used as a way of generating negative affect about climate.[77] While the mode of modeling that I outlined above holds decision points as critical opportunities for ed-

76 E. Ann Kaplan, *Climate Trauma: Foreseeing the Future in Dystopian Film and Fiction* (New Brunswick: Rutgers University Press, 2016), 59–78.

77 Part III of Spinoza's *Ethics* is an extensive analysis of how negative affects are part of the affective economy of the human, and a reader who is interested in how this fits into affect theory is encouraged to explore this primary source.

ucation within a simulated climate model, the key decisions in *Frostpunk* are centered around the Book of Laws, a set of social policies that the player chooses from as the game goes on in order to shape their individual generator village. The game presents various laws that the player can choose to enact, and the majority of them interact with two values that show community sentiment toward their lives: Hope and Discontent. A lack of Hope means game loss, as it is a symptom of community ennui and despair. An abundance of Discontent also generates a game loss in the form of the player being unseated as a ruler of the community. It is therefore important to manage these numbers both by building amenities like food production or warm housing as well as bolstering those decisions with laws that support the general mission of the settlement.

These laws are purposefully designed to be emotionally difficult to choose between. For example, an early decision that needs to be made centers on what your society should do with workers who have sustained cold injuries to the extent that they need their limbs amputated. Will you pass a law and create a care house for them, staffing the facility and feeding the attendees at a significant cost to the workforce of your community? In an abstract sense, the obvious choice is yes, you should. Human beings should have dignity. In the context of gameplay, however, there is a direct resource cost that trades off with the settlement's ability to support its entire population at a level they have become accustomed to. Passing this specific law can often stress an early settlement and put the player on the road to collapse in a death spiral of lowered resources, declining Hope, and spiking Discontent. It is not a surprise that Matt Bertz, writing for *Game Informer*, opened his review in this way on release:

> I rule a city in crisis. The next ice age is coming, and people will die as the blizzard worsens. With supplies diminishing and hope fading, discontent sets in and people are talking about my ouster. Backed into a corner, I name myself the supreme ruler, a semi-religious deity whose word is bond. Those who rebel must publicly repent. I feel dirty about this decision, but I'm convinced that if we silence dissent, most of us will do what's necessary to get through this. But what if it doesn't work? Maybe they would have been better off banishing me to the frigid nothingness surrounding our base.[78]

Bertz clearly experienced some bad affects in his decision making. Rob Zacny pushed this even further in his review for *Waypoint*, arguing that the difficult choices around passing social policies comes with the qualifier than many of the harshest options are unnecessary for optimal outcomes, and writing that

78 Matt Bertz, "Frostpunk Review: A Frigid, Unrelenting Survival Success," *gameinformer*, April 23, 2018.

"The game's tagline is 'The city must survive' but in the end the crisis may pass, at which point you and your people will be left with the ramifications of how you survived. You can either fuel the generator or make human sacrifices to it, and perhaps the best thing I can say about *Frostpunk* is that it seems to know the difference."[79]

This is clearly not meant to be a direct educational model to make us think about how we treat those who are crushed under the wheels of production. At best, it is a basic moral problem from the philosophy classroom. In this way, it is another example of Jagoda's affective difficulty, and a load of bad *feelings* are being dumped on the player so that they emotionally struggle through the horrible decision points that a climate turned against the human puts them through. These bad feelings generated by decisions the player is forced to make are at the core of the *Frostpunk* experience, as lead game designer Jakub Stokalski explained in 2020. In an interview with *Ars Technica*, Stokalski presented the difficult choices as opportunities for longer education: "If we ask the right questions maybe they'll stay with you for a while after you turn off your gaming machine. Maybe they'll nudge you into thinking about your fellow humans or the world in general in a more thoughtful, loving way. That would make it all worth it."[80]

In both *Subnautica* and *Frostpunk*, our affective relationship to climate change is processed through an allegorical or metaphorical set of aesthetic and mechanical affordances. In the same way that we can watch the news or read reports and feel a particular set of dissonant or despairing affects, the video games that I have discussed so far give us the smothering, constant presence of the reality of climate change and put us in positions where we experience affects around them. It is precisely through these arguments around the inescapability and complete self-sameness with the environment around us that these games are able to affectively engage with players and "impress themselves forcefully on our psyche."[81] While it is certainly possible to view these scenarios from the viewpoint of an abstract, disinterested player, it seems clear to me that the

79 Rob Zacny, "The Industrial Apocalypse of 'Frostpunk' Is More Truth Than Fiction," *Vice*, April 23, 2018, https://www.vice.com/en/article/pax449/the-industrial-apocalypse-of-frostpunk-is-more-truth-than-fiction.

80 Steven T. Wright, "From Zelda to Civ to Frostpunk—can climate change be fun?," *Ars Technia*, June 5, 2020, https://arstechnica.com/gaming/2020/06/from-zelda-to-civ-to-frostpunk-can-climate-change-be-fun/.

81 Alenda Chang, *Playing Nature: Ecology in Video Games* (Minneapolis: University of Minnesota Press, 2019), 75.

design decisions made in both of these games hinge on the player asking themselves what they would do if they were there and making these decisions. While certainly calling on many forms of interaction, they *hinge* on what Cole Wehrle names "affective entanglement," or the way that rule systems and aesthetics draw a player into a specific affect space and register.[82] These games ask a player to get caught up in a specific affective response to climate change, drawing them into a designed zone where that affect gives rise to specific feelings and emotions about these estranged conditions of climate change.

Games that address climate disaster through affective means approach politics from a strange angle. Rather than ask the player to inhabit a specific position or learn to make optimal decisions within the real-world conditions of climate change, they ask players to sit with their feelings and to hold those feelings in themselves. Like the modeling games in the previous section of this chapter, it is unclear to me what the direct outputs of these methods are when it comes to actual change in our own climate, but it seems clear to me that something is happening in the moment of play because I, myself, experience these. The affective dimension of climate change video games can be fruitfully understood by keeping Bruno Latour's arguments, cited earlier in this chapter, in mind while reading Zadie Smith's "Elegy For A Country's Seasons."[83] In writing about the experience of climate change, Smith states that there are a lack of "intimate words" to describe the actual process of what is happening while living through a global shift happening everywhere and nowhere.[84] While Latour mourns a loss of consensus around scientific process, and sees hope in the restoration of it, Smith instead traces a line of loss through hedgehogs and bumblebees, giving readers a blow-by-blow accounting of microtransitions that, season to season, mark a changing world. For Smith, tidal waves and hurricanes provide headlines, but climate change is affectively *felt* in the cries of an Italian grandmother who mourns "scorched yellow earth and withered roses" for the first time in her life. The Kharaa infection and the decisions made in the wake of oppressive cold take on this character for the players of games. However, it is unclear to me if

82 Cole Wehrle, "Affective Networks at Play: Catan, COIN, and The Quiet Year," *Analog Game Studies* 3, no. 3 (2016): http://analoggamestudies.org/2016/05/affective-networks-at-play-catan-coin-and-the-quiet-year/.

83 Zadie Smith, "Elegy for a Country's Seasons," *The New York Review*, April 3, 2014, https://www.nybooks.com/articles/2014/04/03/elegy-countrys-seasons/.

84 I am unclear on the truth of this statement. It seems that someone whose house is washed away by rising oceans or someone whose sustenance crop field dries up would not have a lack of intimate words to describe what was happening to them.

that is enough to follow Smith from "an elegiac what have we done to the practical what can we do?"[85]

Direct Intervention in the Climate Disaster

With the modeling and the affective modes of climate change games established, I want to discuss the third mode that I see games operating in that borrows from both modes and yet is not fully contained within them. I call this mode *direct intervention*, and it combines both the focus on decision making and player education from modeling as well as the affective relationship with climate. It is my claim that this combined model, which borrows from both modes and deploys their capabilities equally in ways that many games that either directly or allegorically deal with climate do not, is a preferable way for games to make a significant ideological impact on players who might be either neutral or hostile to arguments about the necessity of addressing climate change. My argument here is motivated by accounts from scientists like Kimberly Nicholas who have bemoaned the strong divide between managerial science and affective attachment in real-life climate science.[86] I see *Eco* (Strange Loop Games 2018) as emblematic of this synthetic mode that places players within a subject position within a broader system that models climate change.

The combination of being a specific *subject* that experiences particular affects under the conditions of climate change combined with a broader *context* of mathematical climate change creates a both-and scenario that generates the best of both modes I have analyzed so far. This subject position is what Shira Chess calls a designed identity, or "a hybrid outcome of industry conventions, textual constructs, and audience placements in the design and structure of video games."[87] Although Chess develops designed identity as a way of discussing how women are understood as marketable subjects within game design and culture, the operability of the term extends beyond this. I believe it provides a useful way for understanding how the design of a game (which is a product of designer intention, the legacy of certain modes and mechanics, and cultural factors outside of games) shapes the context of its reception. In other words, de-

85 Smith, n.p.

86 Kimberly Nicholas, "Scientists need to face both facts and feelings when dealing with the climate crisis," *The Guardian*, accessed March 28, 2021, https://www.theguardian.com/commentisfree/2021/mar/24/scientists-facts-feelings-climate-crisis-sadness?CMP=share_btn_tw.

87 Shira Chess, *Ready Player Two: Women Players and Designed Identity* (Minneapolis: University of Minnesota Press, 2017), 5.

signed identity gives us language for discussing how a game thinks its player and how it shapes that player into an "ideal" one. Thinking back to Chapter 2 of this book, I have already established some of the many ways that games can subjectivate and transform how a player interacts with both the game and the world. Direct intervention feeds off of this same media capability.

This is all to say that the mode of direct intervention has a particular way of crafting a player, and I want to briefly return to Ben Abraham's understanding of aesthetics as a method of ideological change in this new context. As previously stated, I agree with Abraham that purely mechanical interventions are insufficient to generate real change. Limited experimental testing seems to support some of our misgivings due to the rationalist and meritocratic projections that some players are able to perform in a game context.[88] Put bluntly, if a real-world situation that is not rationally solvable in actual practice is turned into a rationally solvable game, some people seem to project that gamified version of things into reality. Aesthetic approaches would appear to short-circuit this process by creating a context for other actions to take place in, turning real-world problems into complex scenarios rather than abstracted math problems that can be addressed totally in hypothetical ways. However, unlike Abraham, who claims that aesthetics can reconstruct "the human being in a certain image," I cannot see games accomplishing any significant ideological change without placing them in a subjective context in which visual and audio aesthetics and mechanics produce some kind of change in that subjectivity.[89] Like Abraham, I think that the input-output logic of procedural rhetoric is simply not enough of the whole story, but unlike Abraham I do not think it is enough to change the aesthetic context for action in order to produce real change in players. I am pulled toward the ethical claims of Miguel Sicart, who argues that games that produce a large playspace of possible ethics and then afford multiple outcomes are fundamentally best for ethical education.[90] Rather than a cause and effect model, Sicart argues for a holistic approach that gives a range of contexts and possible points of pleasure and pain, showing the consequences of a panoply of ethical actions. This is in stark contrast to the games that I have discussed so far, all of which have fairly stringent requirements that must be made in order to progress.

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88 Gina Roussos found that students who played a game founded on giving people an understanding of what it is like to live in poverty came away with less empathy for the working poor and a stronger sense that those people should simply spend their money more optimally, which was something the game allowed in order to "win."

89 Abraham, "Video Game Visions of Climate Futures," 86.

90 Miguel Sicart, *The Ethics of Computer Games* (Cambridge: The MIT Press, 2009).

Direct intervention of the type that exists in *Eco* puts the player into a subjective position in a world that experiences climate change in apparent and readable ways. By performing different actions, they can *directly intervene* within climate change from within a subject position, testing out an array of possible actions, determining which are most effective, and then having a *positive impact* on the world around them. Their subjectivity within the game as an individual in a specific context changes as conditions change around them. How they live, and their conditions of possible life, are altered through play. They intervene and they feel. In what remains of this chapter, I want to briefly discuss *Eco* and how it functions as a game of direction intervention.

Eco is a server-based massively-multiplayer game played in a first-person person perspective that is centered on crafting. In the majority of these games, players are given a sandbox world where they have to transform a digital "natural" world into items and building materials in order to create structures, weapons, and other creations that allow them to progress in the game. As Kira Bohunicky writes, crafting games like *Minecraft* (Mojang 2011) create implicit scenarios where nature is not merely a passive object but rather an active agent that stands in as a gameplay-challenge for players.[91] Digging into the ground can uncover underground rivers or lava flows that the player must avoid or stop, exploring the generated level reveals enemies that must be fought, and a hunger meter attached to the player character must constantly be sated to forestall the health-draining effects of starvation. However, base *Minecraft* does not contain a climate model of any kind. Weather events like rain or snow are dependent on game locations, called biomes, and are random rather than simulated. Water levels in the oceans do not rise or fall. The climate does not change as the player burns coal, water systems do not become polluted as they smelt iron, and chopping down an entire forest does not produce soil aridification and erosion. The fiction of *Minecraft* certainly contains lessons about environmental beauty and the limited agential qualities of nature, but it does not contain feedback loops or environmental degradation. *Eco* takes this conception of the crafting game and builds into it all of these things I have just discussed.

In *Eco*, there *is* an environmental cost to chopping down trees or building structures. The game features a robust simulation of its climate, and the game's user interface makes it clear that players can have an impact on the climate model with their community choices to produce or curtail pollution. As the game's description says on the distribution platform Steam, the goal of *Eco* is

91 Kira Bohunicky, "Ecocomposition: writing ecologies in digital games," *Green Letters* 18, no. 3 (2014): 225 – 226.

to "create a civilization capable of stopping a meteor without destroying the ecosystem in the process."[92] The game's progression narrative has an explicit demand for growth and pursuit of technological capability to forestall destruction from the meteor, but players have to hold that growth in balance with the environmental destruction they are capable of while pursuing the development of those technologies. While a game like *SimCity* (Maxis 2013) certainly shows the environmental effects of pollution by giving players a pollution index and measuring the percentage of pollution in a given area due to geographical proximity to sewer outlets or coal power plants, *Eco* happens from the first-person crafting view much like *Minecraft*. While conceptually following the path of what Laura op de Beke names "Gaia games," or builder games which take planetary environments seriously, *Eco* takes a different aesthetic strategy by locating the perspective of the player *in* the world rather than *over* it.[93] Players are not abstract managers, as in *Gathering Storm*, nor are they already-compromised first-person figures who are always on the edge of horror movie victimhood as in *Subnautica*. They are subjects in a changing world who have access to data-driven information about their impact on the climate and aesthetic information about the changing world around them that happens much more directly and quickly than it does in our real world. In this way, *Eco* creates macro feelings about climate and micro feelings about the way that individual or group actions in a local area feed into that larger reality.

This is apparent from reflective accounts of play of *Eco*. As critic Alice Bell writes about her specific feelings on her play style on her local digital environment, after playing the game for a while in a normal, consumptive, *Minecraft*-style mode, she "saw that my little homestead was the centre of a zone of one-woman destruction, glowing on the largely pristine surface like a pimple of shame on the face of a developing world. My tiny home had necessitated the destruction of a surprisingly large swathe of virgin forest."[94] Returning to the game in her next session a day later, Bell saw even more significant changes. Skyscrapers and stuffed elk sat where untouched digital wilderness was before, marking the rapid transformation of the natural environment by the built one, operating on an affective level to reveal something like Smith's loss of seasons

92 "Eco on Steam," *Steam*, accessed March 29. 2021, https://store.steampowered.com/app/382310/Eco/.

93 Laura op de Beke, "Anthropocene Temporality in Gaia Games," *Kronoscope* 20, no. 2 (2020): 239 – 259.

94 Alice Bell, "I played Eco and didn't want to save the world," *Rock Paper Shotgun*, November 13, 2018, https://www.rockpapershotgun.com/2018/11/13/i-played-eco-and-didnt-want-to-save-the-world/.

and hedgehogs, albeit digitally. Bell's account is one of the transferral of action and knowledge across scales, from the personal to the regional and ultimately to the global. And, again, this is not the sum total of *Eco*. It is not a game solely about solving or mitigating climate change. There is a giant meteor in space that is hurtling toward the planet, and players need to build technologies to respond to it while also keeping the climate in good enough shape that they can ward off this existential threat and continue to live after.

What is fascinating about Bell's narrative is that she ends her piece stating that the very work of cooperation, of living with other people who, like her, stomp all over nature in this digital world, "feels like just as bleak an outcome as annihilation."[95] I don't want to claim that direct intervention is somehow a shortcut to solving real-world issues of climate change, and I don't think that the problems of ideology around climate change are short circuited by making someone feel bad about the local cost of building a log cabin in a video game. While Bell's is just one perspective, she does speak directly to the relationship between a broad simulation and the individual's role within it, creating a kind of pocket version of our actual positions in the real world. What is unique in this case is that the direct intervention allows the player to poke and prod at the simulation itself, something that is not possible in the games I have mentioned in the previous sections without external modifications to the game. You cannot play your way to a less depressing climate disaster in *Frostpunk*, and you can't diverge human history to a green utopia through bypassing industrialization in *Civilization VI*. In both of these, the parameters setup by the game developers have room for player actions, but not interventions. Your actions exist within an already-predicted playspace allowed to you.

By giving the player the capability to play with the numbers that simulate the world in front of them, direct intervention games like *Eco* best capture the broad thinking of modeling games and the innervating intensity of affective games. This position of the world being in your hands is perhaps not surprising for a game that was developed in partnership with a university, but it nevertheless operates in a kind of optimal space of multiply-deployed strategies.[96]

I believe that direct intervention games like *Eco* offer useful lessons for players not because they encourage perfect solutions, but instead because they deliver players up to the kind of horror-awe that Bell describes in the piece I have quoted above. While large-scale disasters, from toxic sludge to oil

95 Bell, "I played Eco and didn't want to save the world."

96 Red Thomas, "Eco: Getting Educated," *MMORPG*, April 19, 2019, https://www.mmorpg.com/interviews/eco-getting-educated-2000108299.

spills to dying animals, are easily available for anyone who wants to access them online, it is rare for the less shocking, day-to-day moments of climate collapse to be rendered in front of us. Americans regularly decimate their local and regional climate in routine and easy ways, from planting poisonous bushes to building houses to playing video games, and the only way that those impacts are framed is through individual, capitalist action. Stop trimming your lawn, we might read, and the bees will return. While that focus on individual voluntarism is quite clearly a dead-end for actual political action, we might think about what it means when 20 houses in a row trim their lawns and perform wide-ranging sprays to cut down on insects, killing vital parts of the food chain while producing wildlife food deserts that stretch for miles of urban and suburban landscape. In aggregate, these forces produce radical negative implications for the environment that contribute in direct ways to ecological collapse but are rarely taken seriously for the severity they are. When Alice Bell logged into *Eco* to see skyscrapers where the forest once was, and could read the entailing environmental shift, she was able to connect the local-global chain in a direct way. I would align these moments of shock with Gerry Canavan's readings of the pessimistic character of *The Legend of Zelda: Breath of the Wild* (Nintendo 2017), which continually wraps itself up in environmental collapse and an allegorical relationship with our own world. As Canavan explains, "we find that Hyrule, like our own world, *cannot* be saved" and that it is "governed by an entropic logic of perpetual decline."[97] For Canavan, this is something like an aesthetic and political failure, especially given the unlockable secret ending that suggests that, even in victory, the heroes Link and Zelda are doomed to repeat a entropic cycle of enemies on the horizon and the failure of heroes to defeat them: "we become trapped in a story whose bad ending we think we already know, and know we don't want, but can't figure out any possible way to change."[98] While I empathize with this point, I want to hold out for the possibility that the absolute recognition that the story cannot change, that the *Eco* comet is always coming, that the skyscrapers are getting built, is a useful pessimism that might produce potential action rather than disinvesting players and people in the outcomes of their lives. I think that games of direct intervention, playing into Chang's mesospheres from the beginning of the chapter, might give ample room for affective responses to be worked through so that more broad-based decisions can be reached both in-game and outside of it. The opportunity to indulge in the pessimistic outcome seems valuable to me in the sense that it gives us practice for the climate disaster, and with that practice

97 Gerry Canvan, "The Legend of Zelda in the Anthropocene," *Paradoxa* 31(2019 – 2020): 150.
98 Canavan, 166.

might emerge strategies of mitigation and adaptation that go beyond the managerial.

If rational tinkering or emotional interactions have as much weight as their advocates claim, then I think that a game that can honestly make one engage with both systemic content and affective contexts at the same time, without privileging either, makes for the most effective tool. Games have the benefit of creating existentially terrifying conditions by giving us the tools to despair for the future of an environment. They also give us the capability to work through those things, perhaps not heroically, but instead with a serious engagement and the potential for failure or incapability in the face of the scale or power of the thing we face.

Beyond Intervention

Before concluding this chapter and this book, I want to think about pessimism, or at least ambivalence about solutions, through *Lichenia* (Molleindustria 2019). Playable in a web browser, the game carries this description: "A city building game for the Anthropocene. Reclaim the ruins of a fallen city and create a sustainable human habitat. There are no goals and no endings in Lichenia. Learn about its cryptic ecology. Grow a city like a garden."[99] Like several of the games I have discussed so far, *Lichenia* aesthetically resembles a city builder or strategy game, visualizing its world from an isometric perspective. We are told that this is a city, and yet there is very little visual information that would confirm this. There are no directly representative pieces of tile art in the game, as all of the assets are taken from Everest Pipkin's *Mushy* project in which they procedurally generated new isometric tiles from a data set pulled from other isometric games.[100] Players are able to mechanically interact with it by choosing a tile type on the left of the screen and placing it on the map, which changes the map visually and moves some bars at the top of the screen. Blackened ruins seem to shift into sandstone. Rough, brown squares can become lush and green. Eventually, the capability to introduce a static-inducing tile appears, which scrambles many tiles around it. Without representative art or a clear win and loss state, *Lichenia* plays as an obscure, transforming object, leading

99 Molleindustria, *Lichenia*, accessed March 29, 2021, https://molleindustria.org/lichenia/.
100 "Mushy (2019)," accessed March 29, 2021, https://everest-pipkin.com/#projects/mushy.html.

critic Ondřej Trhoň to claim that the game "favors experimenting, chance, or creating limits for autonomous processes.[101]

While I am sure it is possible to master the game in some way and understand how its environmental tilesets interact with each other, I have no interest in that mode of play, and *Lichenia* does much in its framing and design to discourage that. Instead, it provides a direct linkage between direct intervention and mechanics of speculation. A player experiencing the game for the first time, and even now after I have played it many times, cannot position themselves in a managerial relationship with the game. One cannot tinker one's way to total domination of the environment in *Lichenia*. Instead, a player must give over to pure experimentation, accepting that intents and outcomes might be decoupled from one another. *Lichenia*, then, is a perfect example of the relationship between direct intervention as a mode for climate change games and mechanics of speculation. A player has to be open to the radical articulation of the conditions of semi-fictional planet as it unfolds before them, and they have to be willing to watch as a contextual maneuver they make creates a collapse of conditions around itself. Placing a water tile could flood the entire sandstone city. All your work could vanish in an instance, a Meillassouxian contingency of contingency that, nevertheless, you caused by placing your tile and being radically open to whatever could happen next. The strange affective zone of *Lichenia* is neither one of pure pleasure, nor one of pure puzzlement. One simply watches environments happen, intervening sometimes, and other times trying to determine why what is shifting in front of you is happening that way. There is perhaps no better simulation of our own experiences in the face of the world around us.

My purpose in creating these three typologies of modeling, affect, and direct intervention climate change games is not to bludgeon certain kinds of games or developers with the label of inadequacy. Instead, it is to say that there are multiple ways of approaching what it means to create a game about climate change or to interact with issues around the climate. More than that, it is acceptable to make games that are not about issue-solving or triumphalism. My skepticism around the direct efficacy of procedural or simulationist ways of representing climate change within games should not be taken as a damning critique, but instead as an exaltation of not knowing what will best communicate or produce an ideological change within an audience. Of course, ideology is incredibly ro-

101 Ondřej Trhoň, "Digitální výlet za hranici lidského světa: videohry jako prostor pro spekulativní design," *Artalk*, September 14, 2019, https://artalk.cz/2020/09/14/digitalni-vylet-za-hranici-lidskeho-sveta-videohry-jako-prostor-pro-spekulativni-design/.

bust; strength is its defining feature. But within that framework, I think we can look to a plurality of methods of communication that put pressure on beliefs or ideas about climate. Leaning heavily on feelings, or giving players the tools and capabilities to directly intervene successfully or poorly, might be ways of shaking loose some players' thoughts about the structure of the world and the relation between video games and the material world around them. Even the most celebratory work around games and climate change concedes that there is no firm proof that these kinds of games provide long-term changes in players.[102]

102 Jason S. Wu and Joey J. Lee, "Climate change games as tools for education and engagement," *Nature Climate Change* 5 (2015): 416.

Conclusion

Into the Breach (Subset Games 2018) is a game about time traveling mechs who fail to save the world over and over again. *Breach* asks players to use tactical, grid-based combat to defeat the evil Vek, buglike creatures that destroying the world. This takes place within procedurally generated campaigns made up of procedurally generated levels. Each playthrough of the game is different, and a player is expected to die dozens or hundreds of times before they make a "full clear" that wipes all the alien bugs off the face of the planet.

Losing the game means losing the power grid that is defending humanity, and each mission is about balancing actions that both defend key points on each small game map while also destroying the Vek who are attempting to take those key points. Inevitably, players will fail at this. A game ends when the power grid is destroyed. In those moments, the Vek tunnel out of the ground in mass numbers, finally emerging in their full power to attack an undefended humanity. The mech pilots then use their one option: they travel into another timeline to attempt to save the world again. Critic Alec Meer wrote this about *Breach*'s time travel after the game's release:

> One thing the game does tell us as a hard fact—uttered by either your pilots of the CEOs who govern each island at the conclusion of a campaign, whether you won or lost—is that every time you 'jump', you abandon the timeline you're in and move to a new one. You're not simply moving back and forth through history, but also laterally, across what would be infinite new realities—every time you move back through time, your own changes to it cause it to fork off into a parallel, rather than replacement, reality.
>
> In terms of hooking the inherent suspension of disbelief involved in replaying or reloading a videogame, it's an absolute doozy—a built-in excuse to try again, and again, and again, to escape the tyranny of the Game Over screen and instead combine your every experience of the game into one contiguous tale. But by God there is a darkness to it.[1]

The science fiction concept and the video game mechanic are tightly wound together here. Traveling to new timelines is the same process as beginning the game anew. The speculative act of how this gameplay session will be different is enacted at the same moment as our speculation about how this world, its enemies, and its citizens might be different. They never differ that much, from a gameplay perspective, but each level is always composed in slightly altered

1 Alec Meer, "Why playing Into The Breach makes you history's greatest monster," *Rock, Paper, Shotgun*, March 8, 2018, https://www.rockpapershotgun.com/into-the-breach-story.

https://doi.org/10.1515/9783110719451-007

ways. It is enough to sell the idea that we have made it to another world, one that is not the original one, and that we have a new set of struggles in front of us.

The World Is Born From Zero has been an argument about that double speculation process across many different games and many different contexts. I have attempted to break the speculative act's relationship to games down into some component parts. Every moment of interaction with a game, I have claimed, is an opportunity to imagine worlds in the way that is different from how they are. As Meillassoux teaches us, this is a capability that exists between any given moment and the next. Any time we think about what could happen next, be it a rocket launching or a billiard ball spinning across felt, is a moment where we speculate. Science fiction video games simply operationalize this in their mechanical operations. They operate as highlighters and intensifiers, giving us interactions that are supercharged by their proximity to a mode and a genre that is constantly asking us to think the conditions of the world, why they are how they are, and how they might be different.

It is my hope that this book's theorization of mechanics of speculation offers something like the devil's deal that the pilots of *Into The Breach* have made with the laws of physics. The work of changing the future is difficult. Imagining the way things might be different is much easier than turning that into a reality. Mechanics of speculation analytically help us identify the pressure points where speculation can take hold and present opportunities, but as many of the examples in this book have shown, this is not an automatic way to transform the world in liberatory or anti-oppressive ways. As science fiction across any medium clearly shows, it is easy for speculation to be consumed by the standard operating procedures of the world we live in. The plenitude of virtual realities becomes the corporate-controlled Metaverse. The human potential to exceed the planet becomes yet another tourist marketplace to be dominated by a small number of corporations that are racing to build the first factory in space. Our speculation, the thing that allows us to consider utopia even as it never comes into existence, can so easily be arrested, dominated, and controlled.

I have no solutions for this. I continue to hope, as I believe you do. I hope that the ideas I have presented in this book will allow you to consider how *many* moments of speculative breakage happen in the day-to-day experience of games, and to realize what it might mean to design and critique games with an eye toward encouraging speculations that free rather than imprison.

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